

Diversity, Equity, and Inclusion in Open Source 2021

Key Survey Findings

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Methodology

Methodology

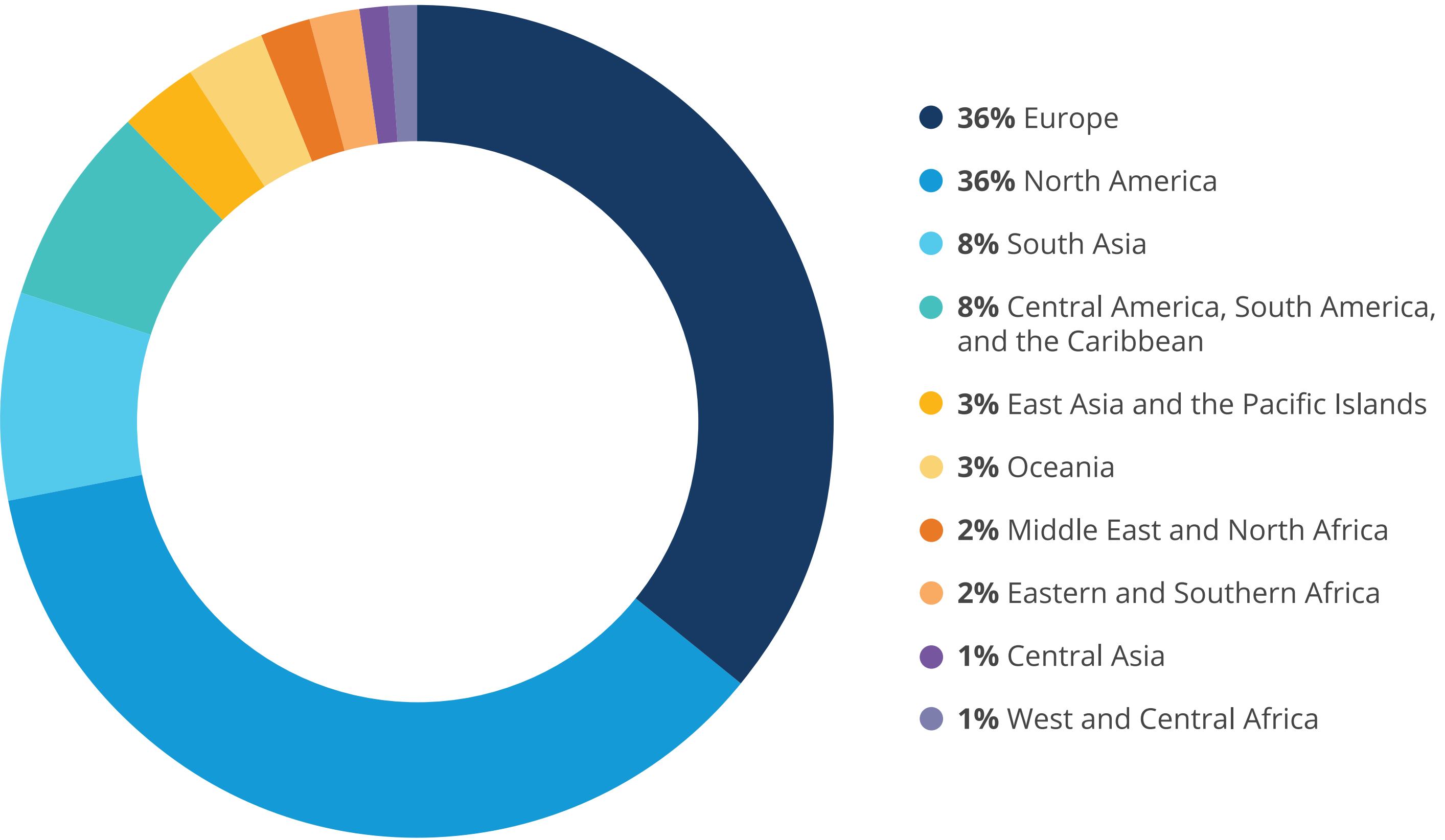
Sample

- Survey fielded: July 2021
- Population investigated: Anyone who uses, contributes to, or thinks about open source software and is over 17 years old.
- Scope: Worldwide, with translated versions in Arabic, Chinese (simplified), French, German, Hindi, Japanese, Korean, Portuguese, Russian, and Spanish. 89% of the usable responses came from the English questionnaires, 5% from the Spanish, and 3% from the German.
- Usable sample: 2,350. Overall, 3,192 participants answered 2 of the 3 initial questions, which included an age-related screening question. Cases with high levels of non-response were ultimately excluded from the sample.

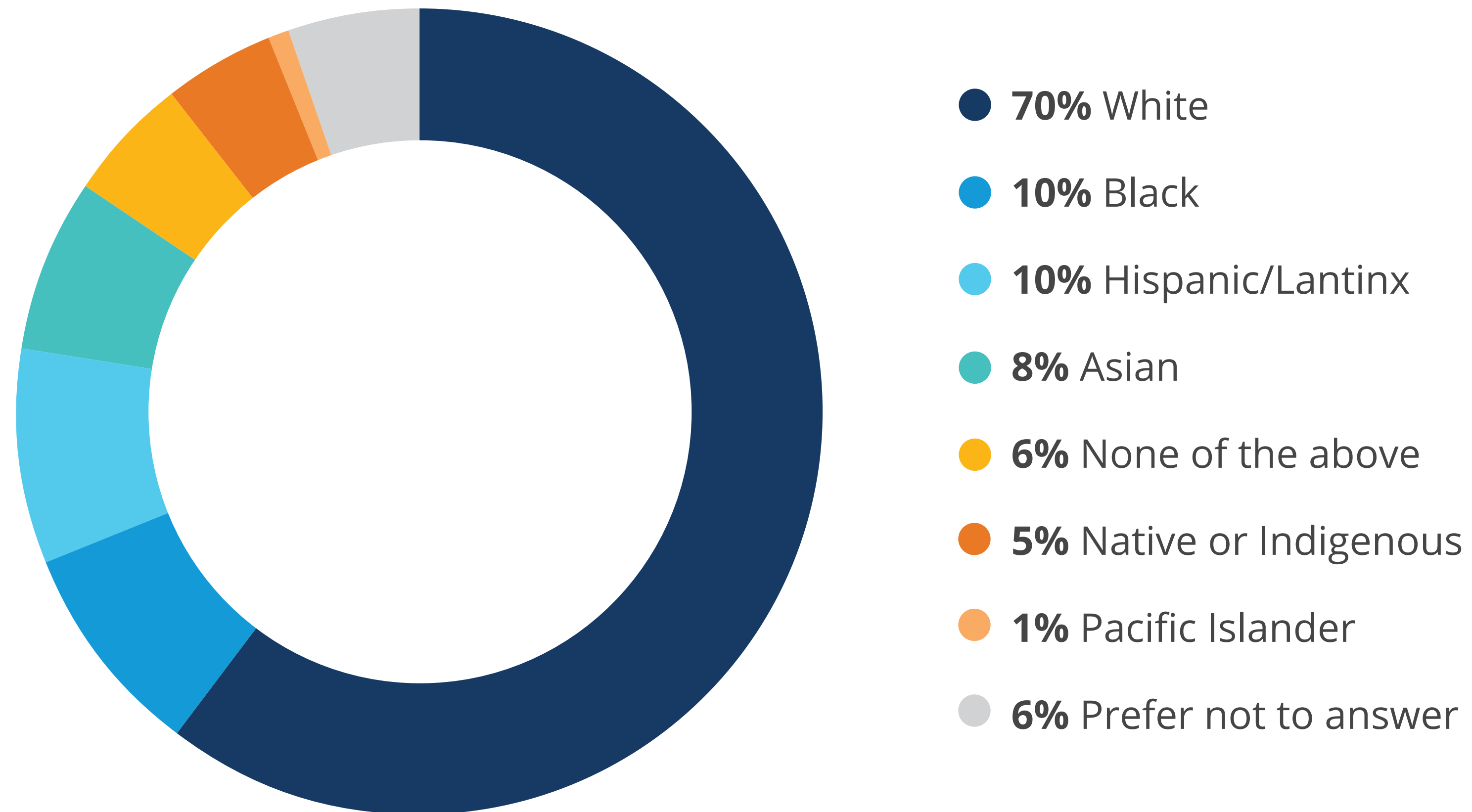
Margin of Error (MoE) is +/- 3.1% with 90% confidence and +/- 2.6% with 95% confidence (N=2,350)

Demographics

What best describes your location?

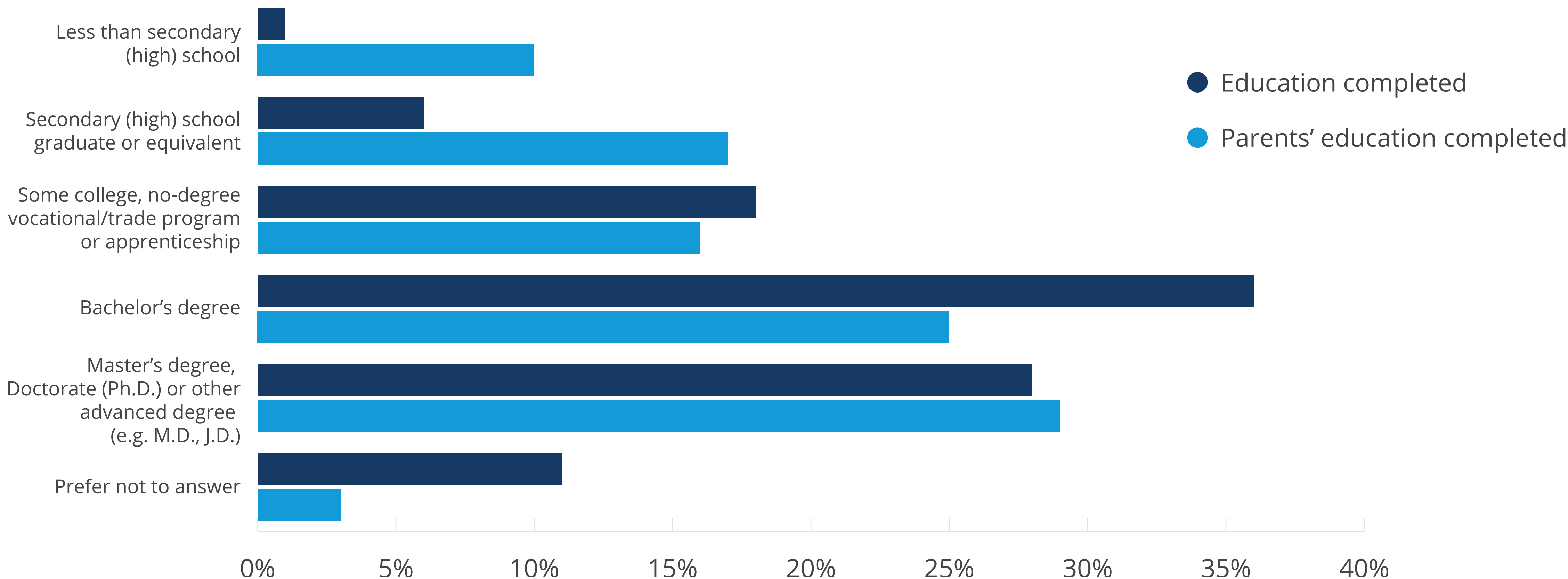


With which racial background(s) do you identify? If multiracial, check all that apply.



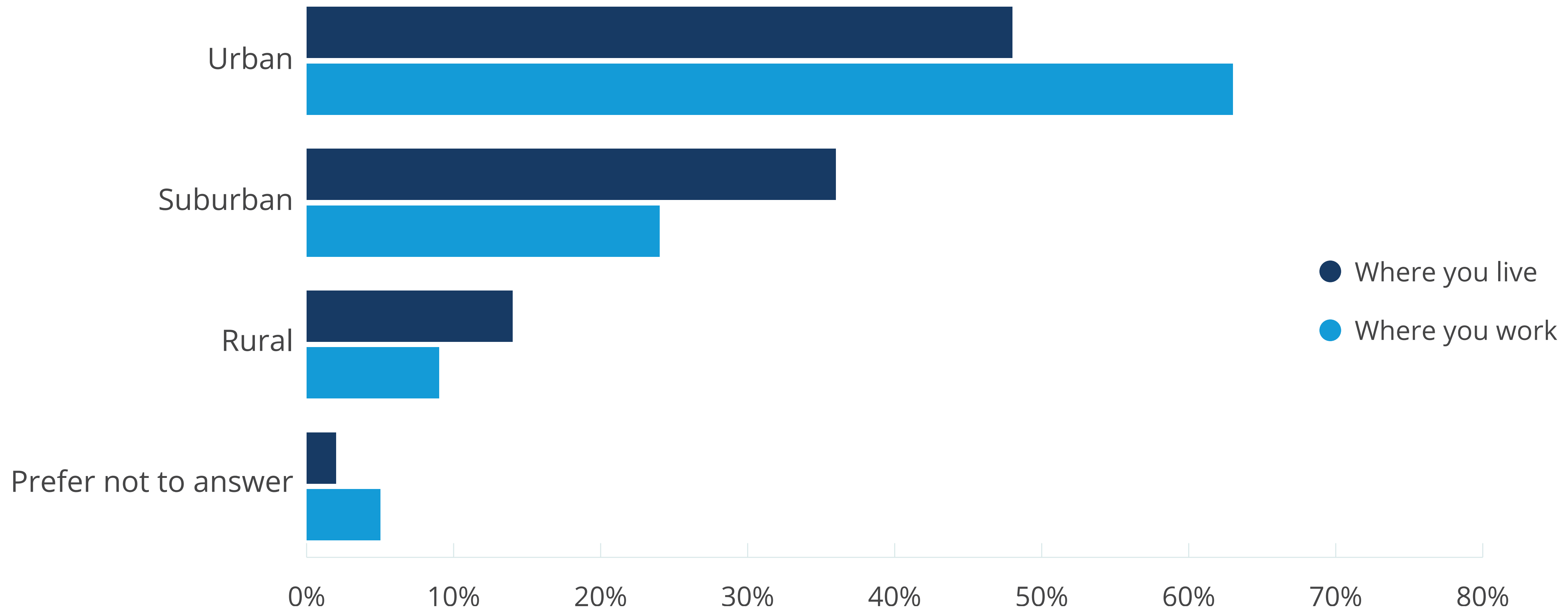
What is the highest level of formal education that you have completed?

What is the highest level of formal education that either of your parents completed?

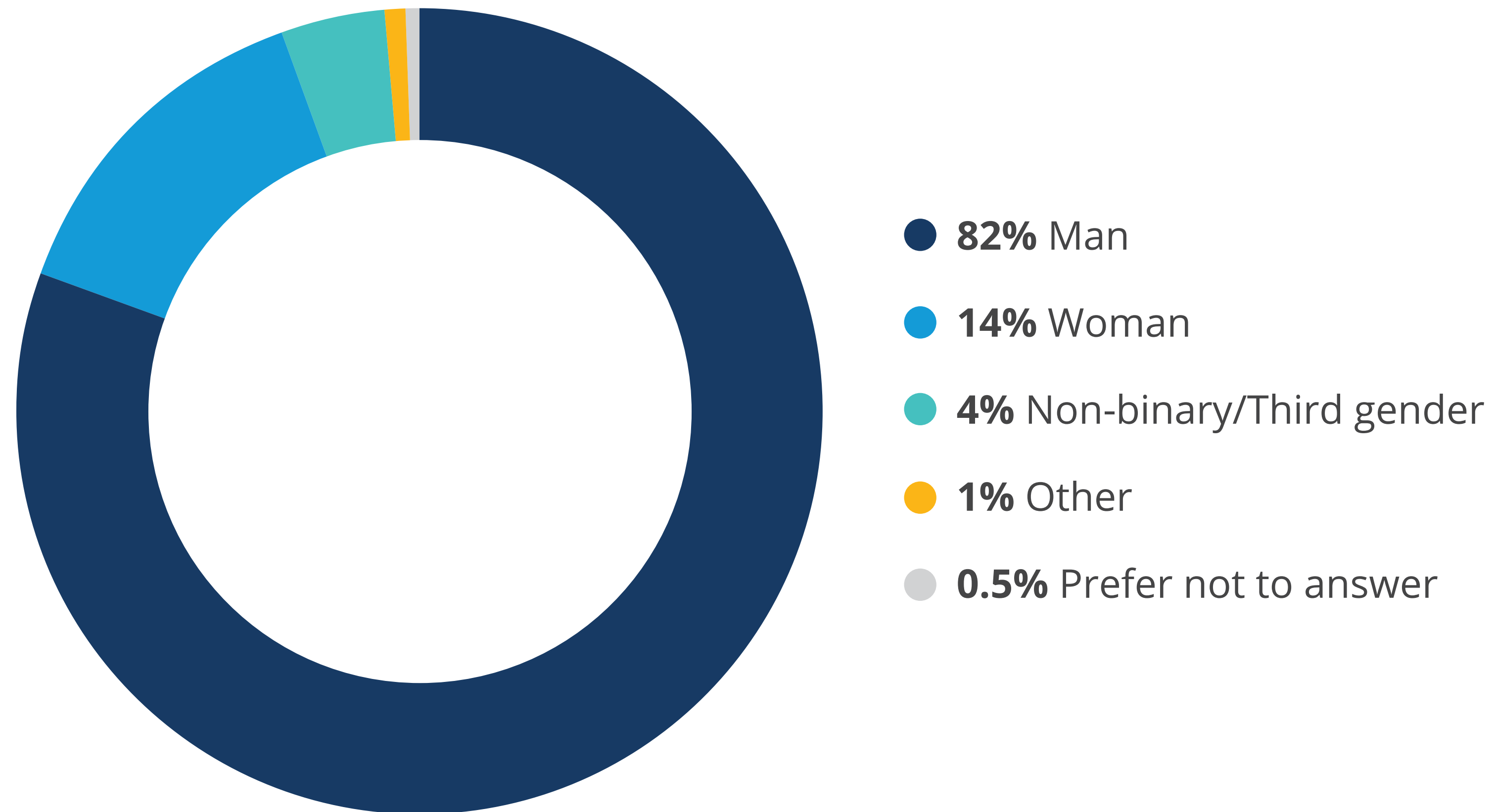


Which word best describes the area where you live?

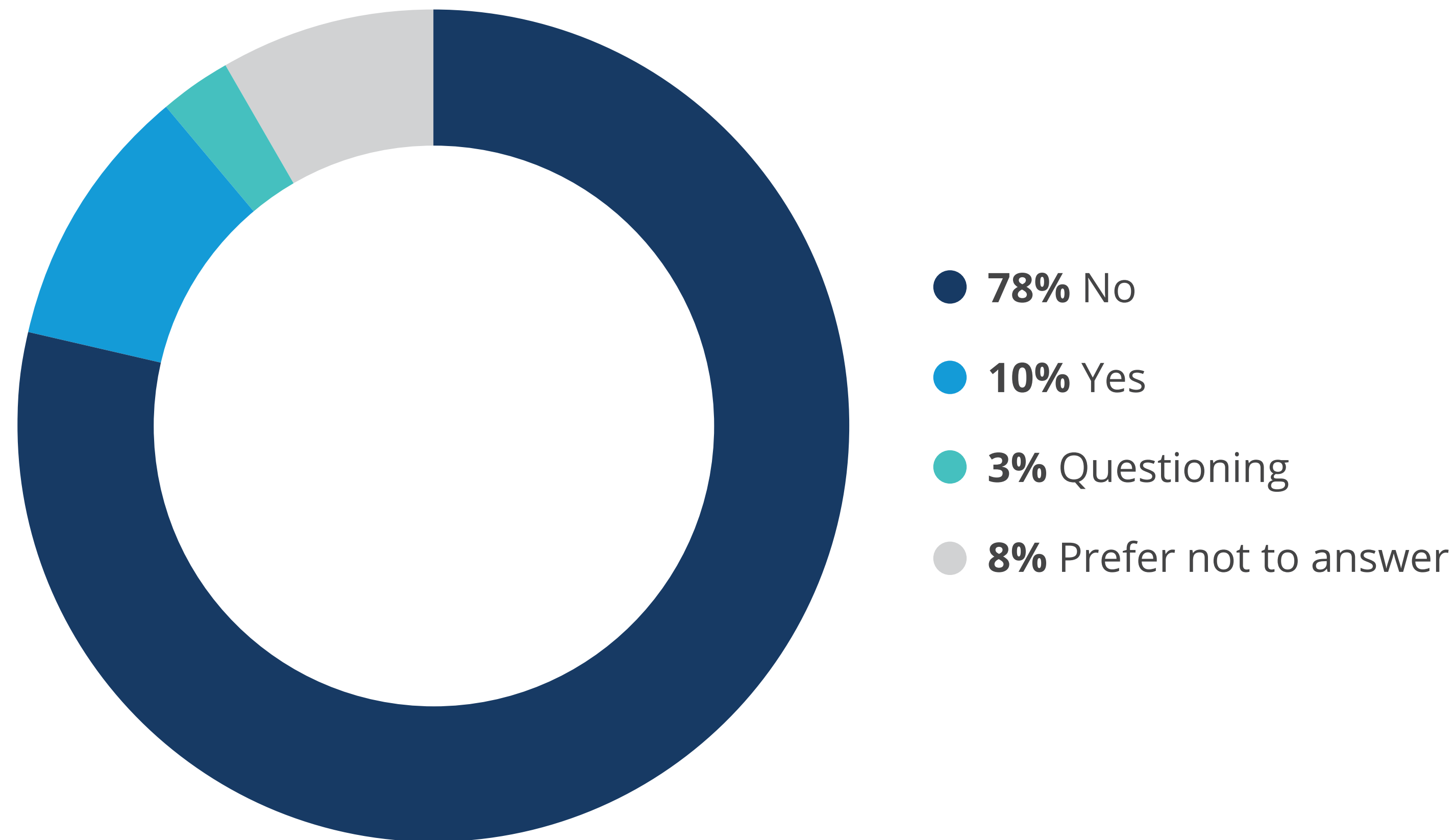
Which word best describes the area where you work?



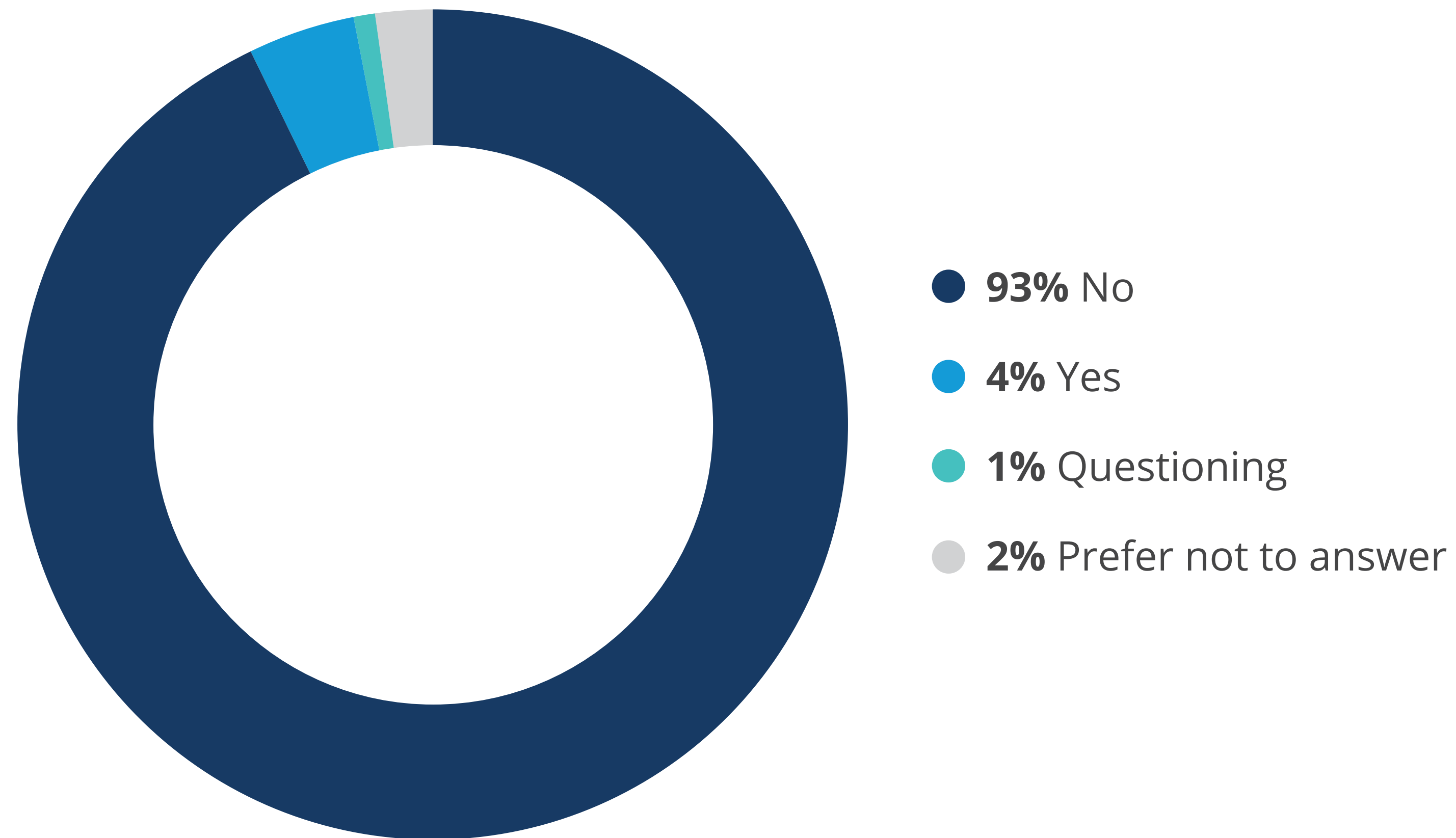
What is your gender?



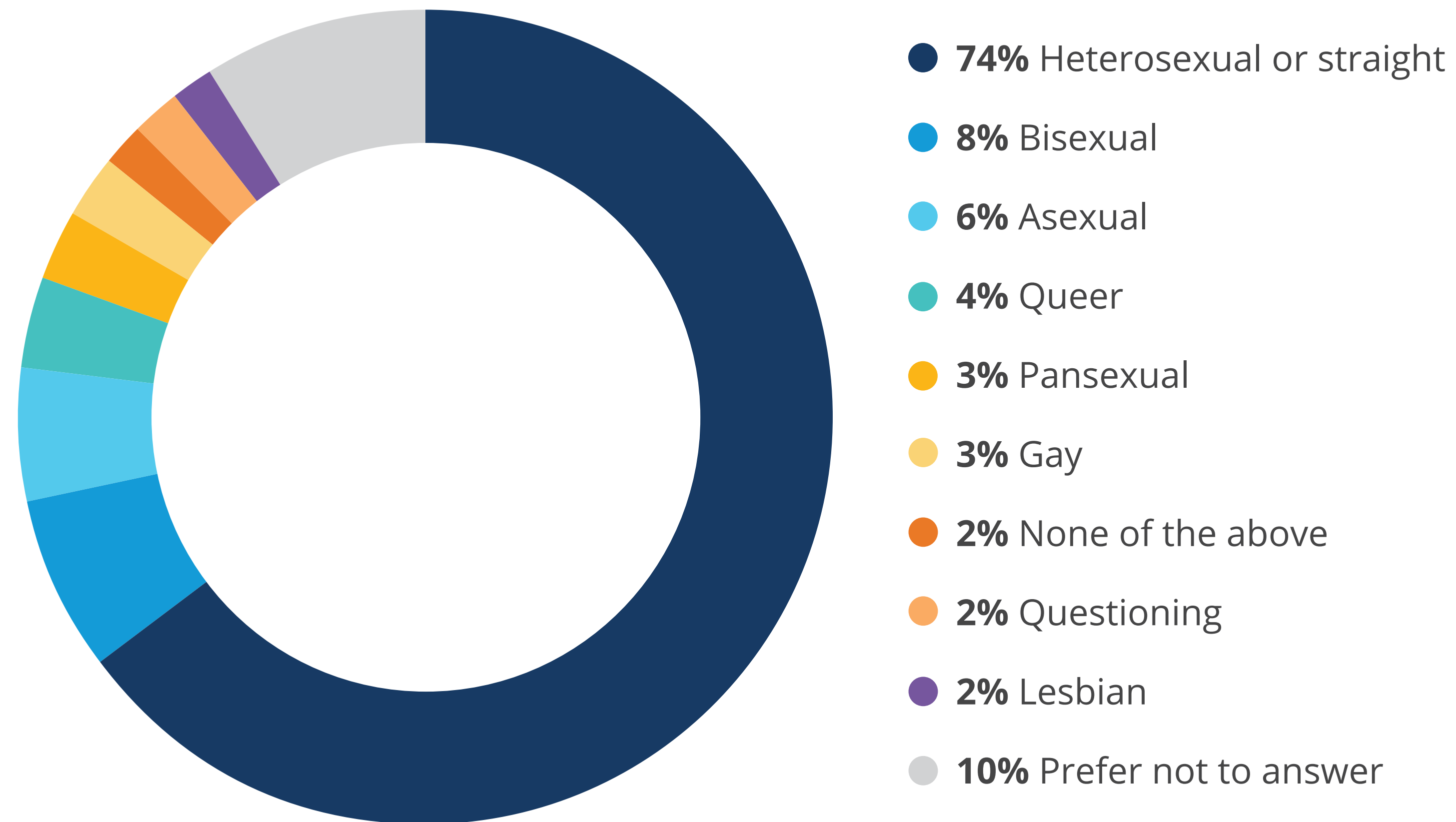
Do you consider yourself to be gender non-conforming, gender diverse, gender variant, or gender expansive?



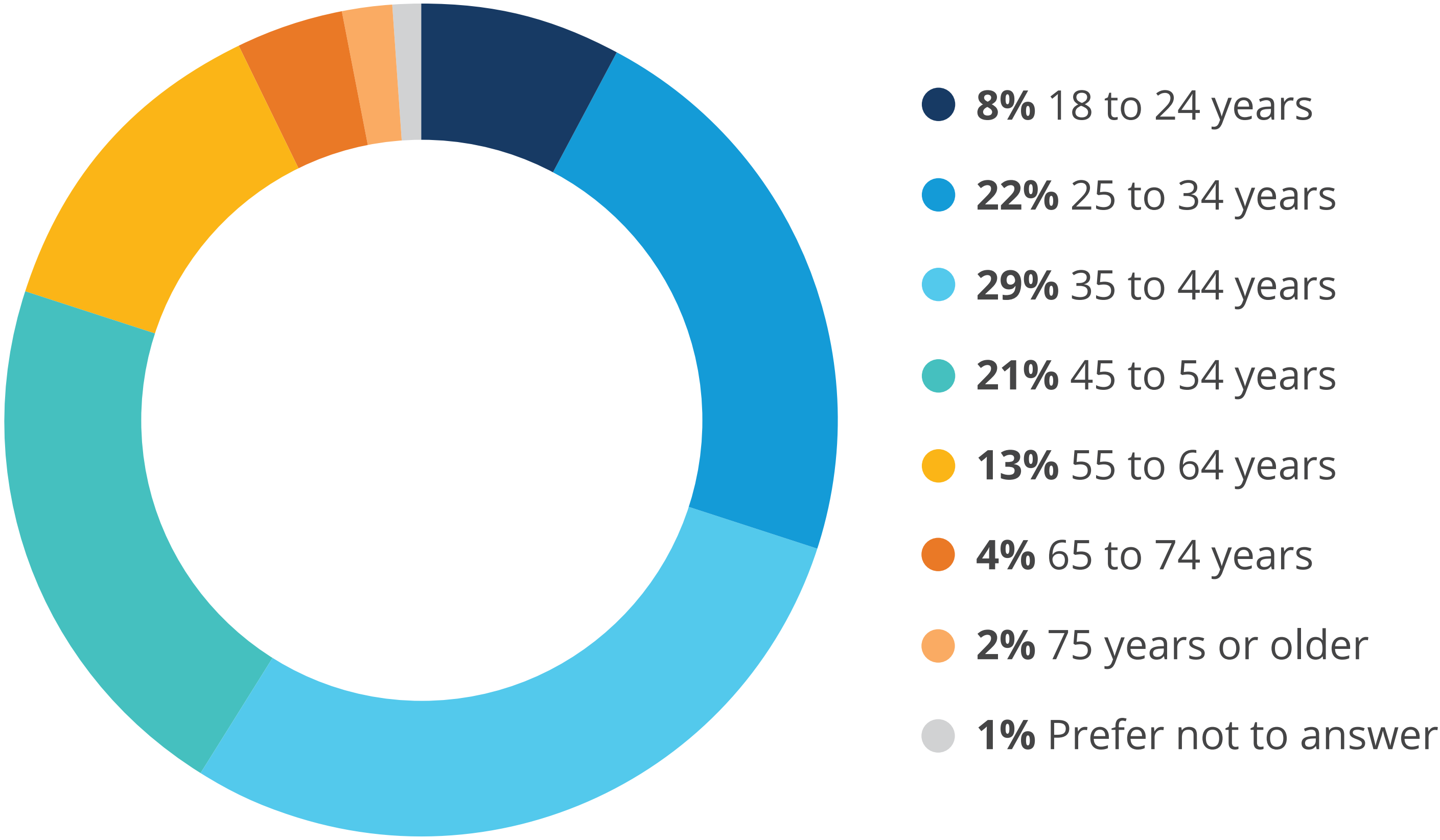
Do you consider yourself to be transgender?



What is your sexual orientation? (check all that apply)



What is your age?



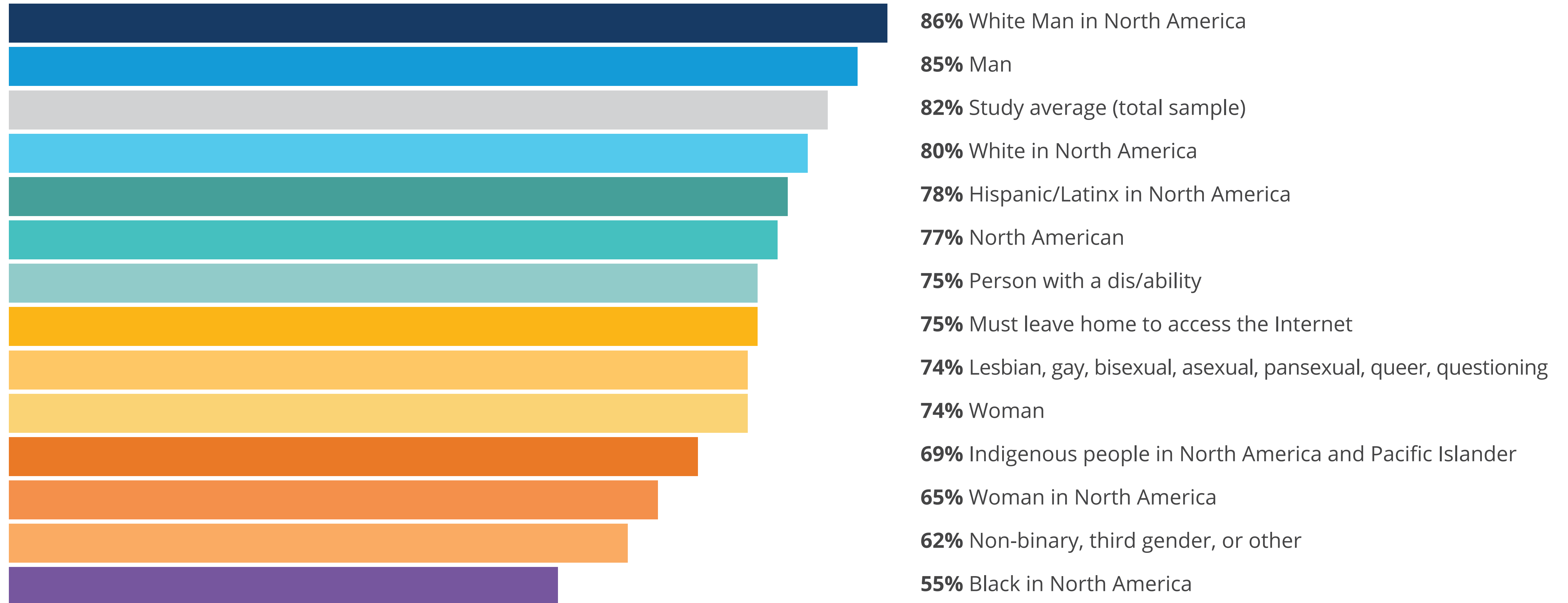
Do you have caregiving responsibilities? Select all that apply.



Key Findings

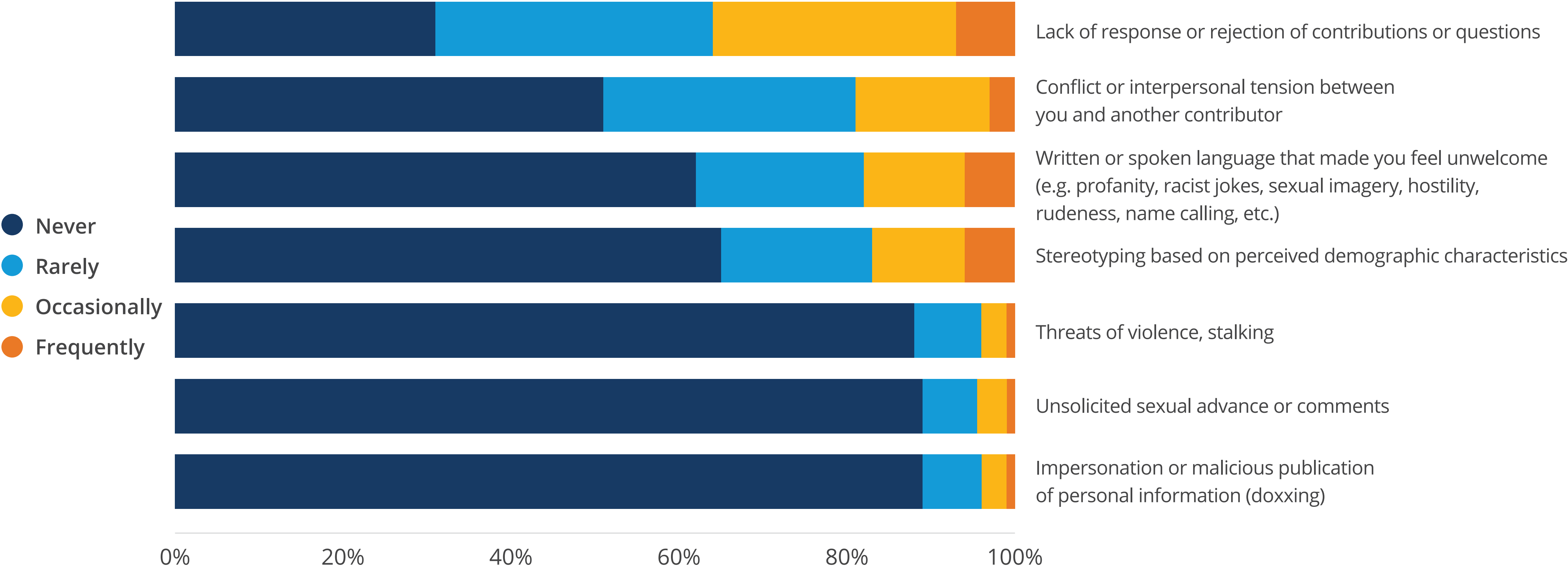
To what extent do you agree or disagree with the following statement?

"I feel welcome in open source."



Note that race categorizations were only asked of North American respondents | Sample Size = 2,346. White Man in North America (n=641), Man (n=1,625), White in North America (n=587), Hispanic/Latinx in North America (n=82), North America (n=651), Person with a dis/ability (n=387), Must leave home to access the Internet (n=68), Lesbian, gay, bisexual, asexual, pansexual, queer, questioning (n=390), Woman in North America (n=147), Indigenous people in North America and Pacific Islander (n=51), Non-binary, third gender or other (n=116), Black in North America (n=84)

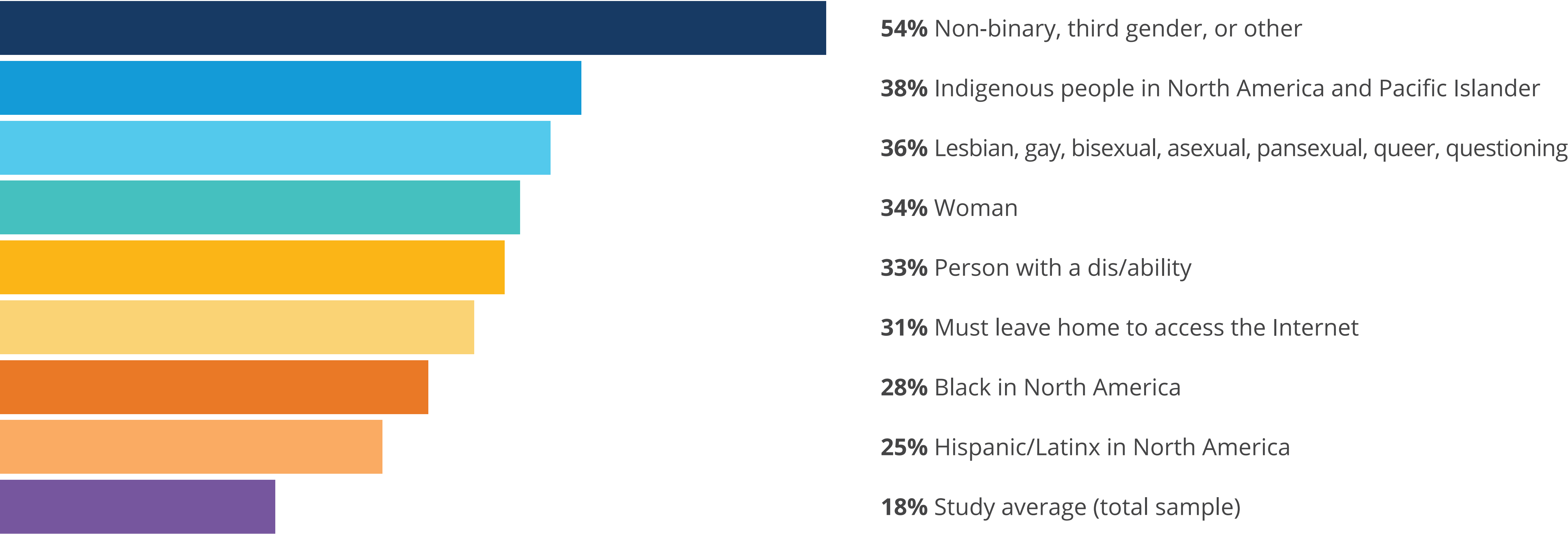
Have you ever experienced any of the following behaviors directed at you in the context of an open source project?



Sample Size = 2,291. Impersonation or malicious publication of personal information (doxxing) (n=2,281), Unsolicited sexual advances or comments (n=2,278), Threats violence, stalking (n=2,277), Stereotyping based on perceived demographic characteristics (n=2,276), Written or spoken language that made feel unwelcome (e.g. profanity, racist jokes, sexual imagery, hostility, rudeness, name calling etc.) (n=2,286), Conflict or interpersonal tension between you and another contributor (n=2,277), Lack of response to or rejection of contributions or questions (n=2,282).

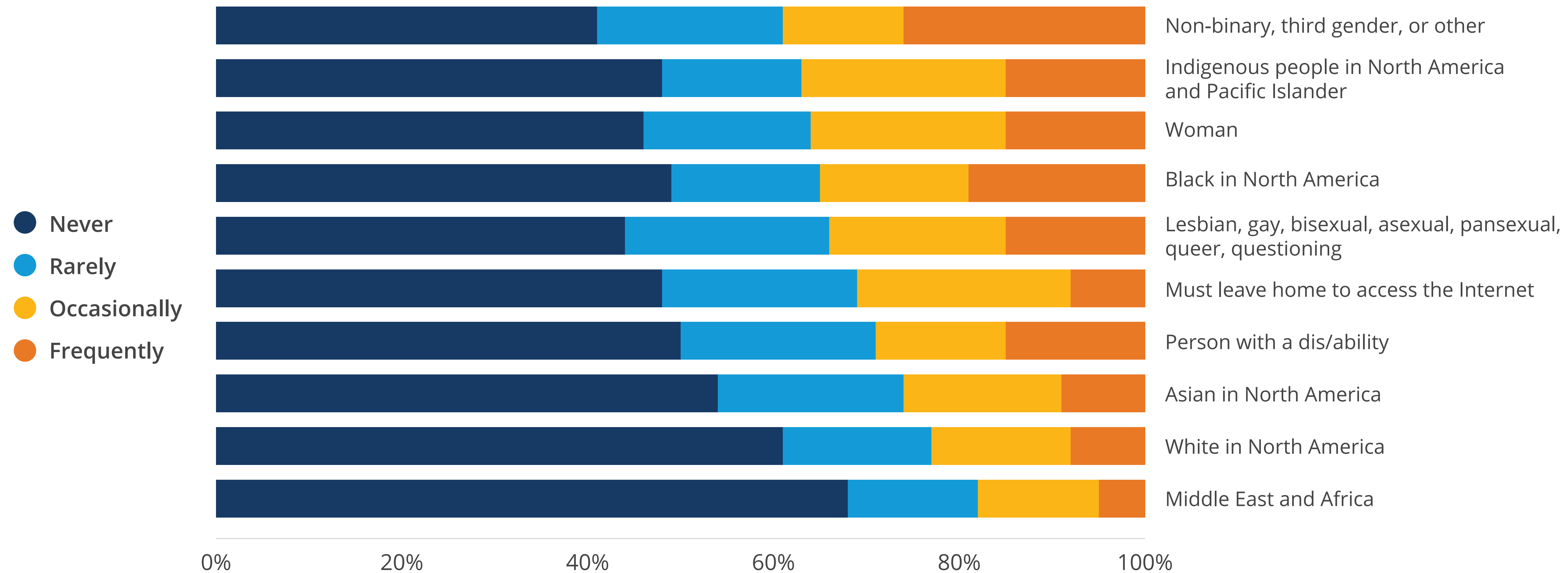
Have you ever experienced written or spoken language that made you feel unwelcome in the context of an open source project?

Written or spoken language that made you feel unwelcome (e.g., profanity, racist jokes, sexual imagery, hostility, rudeness, name calling, etc.)
Respondents, by demographic, answering “frequently” or “occasionally.”



Note that race categorizations were only asked of North American respondents | Sample Size = 2,286. Black in North America in North America (n=81), Indigenous people in North America and Pacific Islander (n=45), Hispanic/Latinx in North America, (n=81) Must leave home to access the Internet (n=67), Non-binary, third gender or other (n=114), Lesbian, gay, bisexual, asexual, pansexual, queer, questioning (n=377), Women (n=325), Person with a dis/ability (n=379).

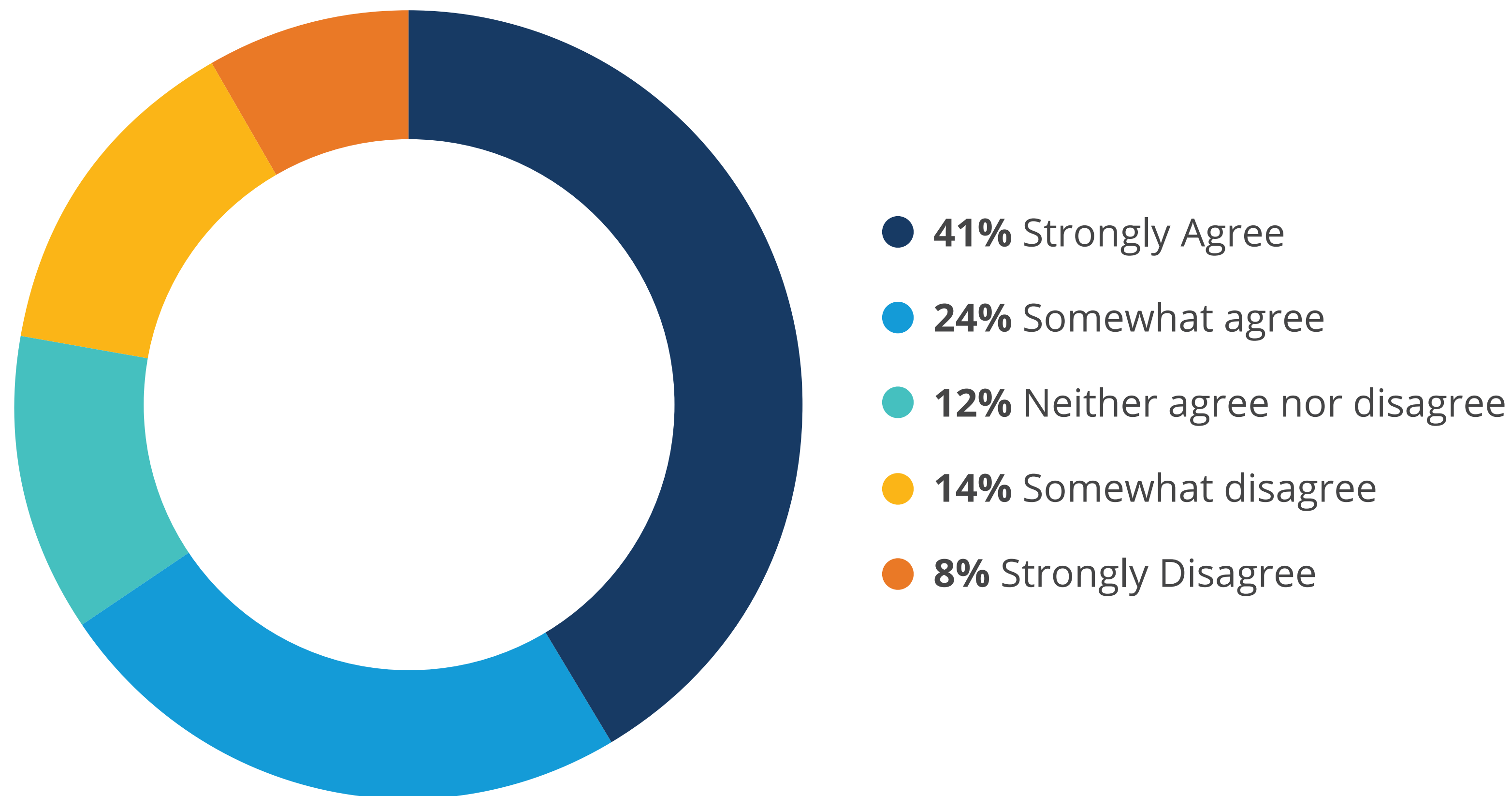
Have you ever experienced stereotyping based on perceived demographic characteristics directed at you in the context of an open source project?



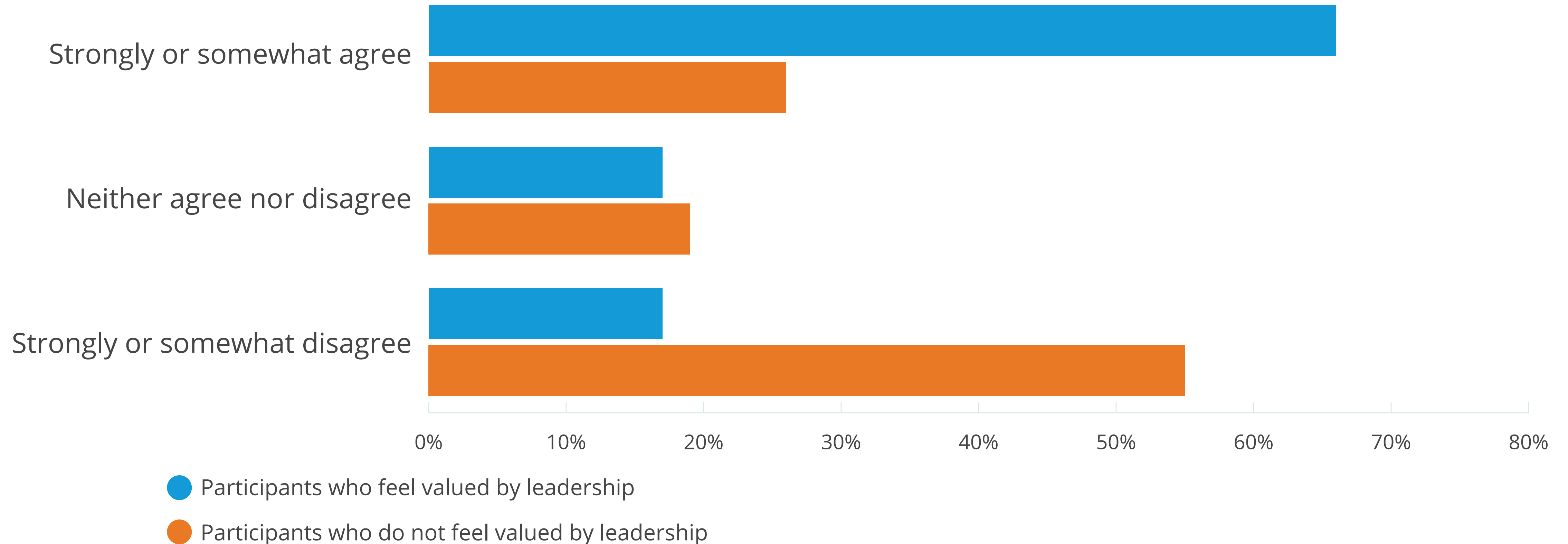
Note that race categorizations were only asked of North American respondents | Sample Size = 2,276. Asian in North America (n=66), Black in North America (n=80), Hispanic/Latinx in North America (n=82), Indigenous people in North America and Pacific Islander, Middle East and Africa (n=124), Must leave home to access the Internet (n=66), Non-binary, third gender or other (n=112), North America (n=814), Lesbian, gay, bisexual, asexual, pansexual, queer, questioning (n=377), White in North America (n=566), Woman (n=325), Person with a dis/ability (n=379).

To what extent do you agree or disagree with the following statement?

“People from different backgrounds have equal opportunities to participate in open source projects.”



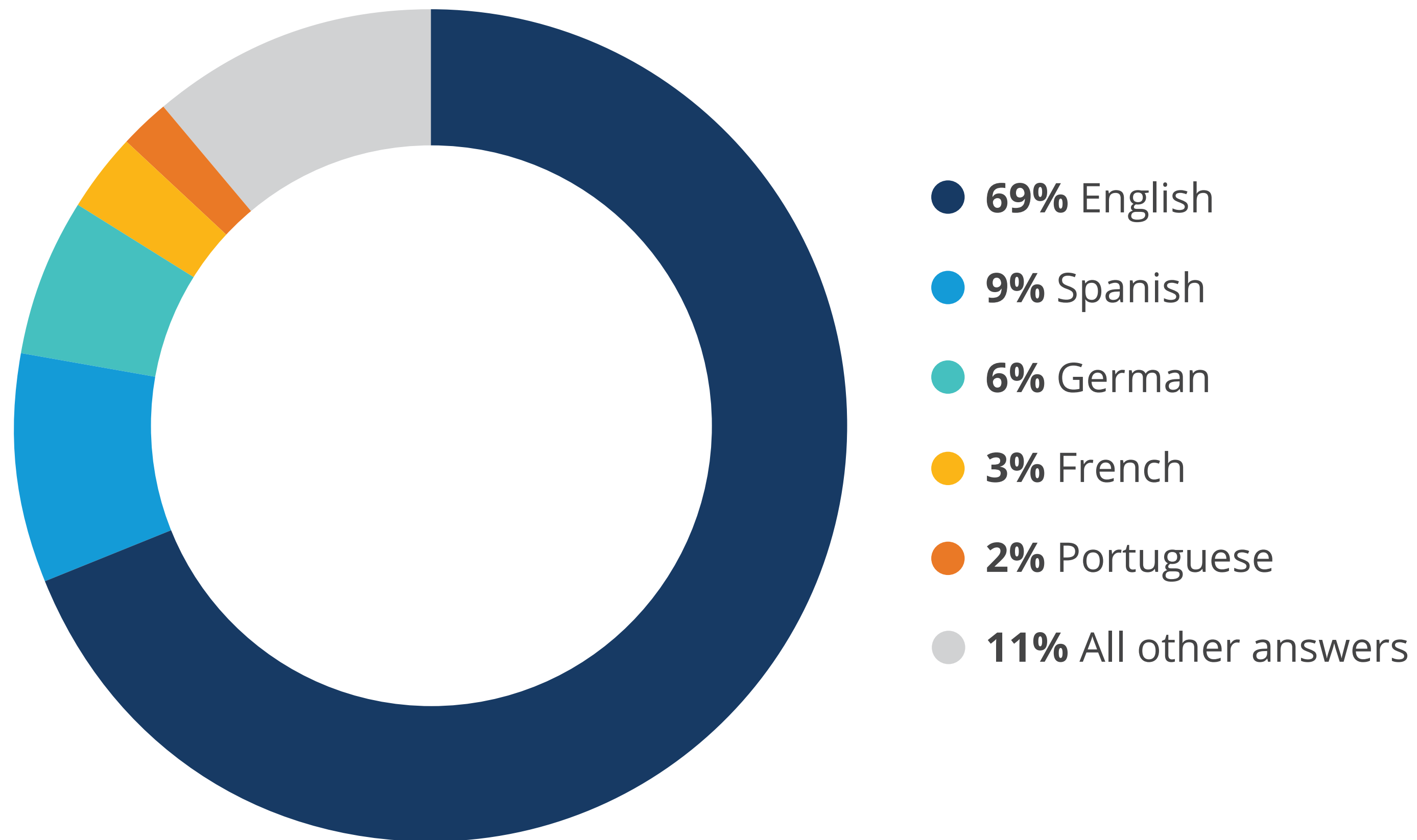
To what extent do you agree or disagree with the following statement?
“I feel that people from different backgrounds have an equal opportunity to be a part of the decision-making process within open source projects.”



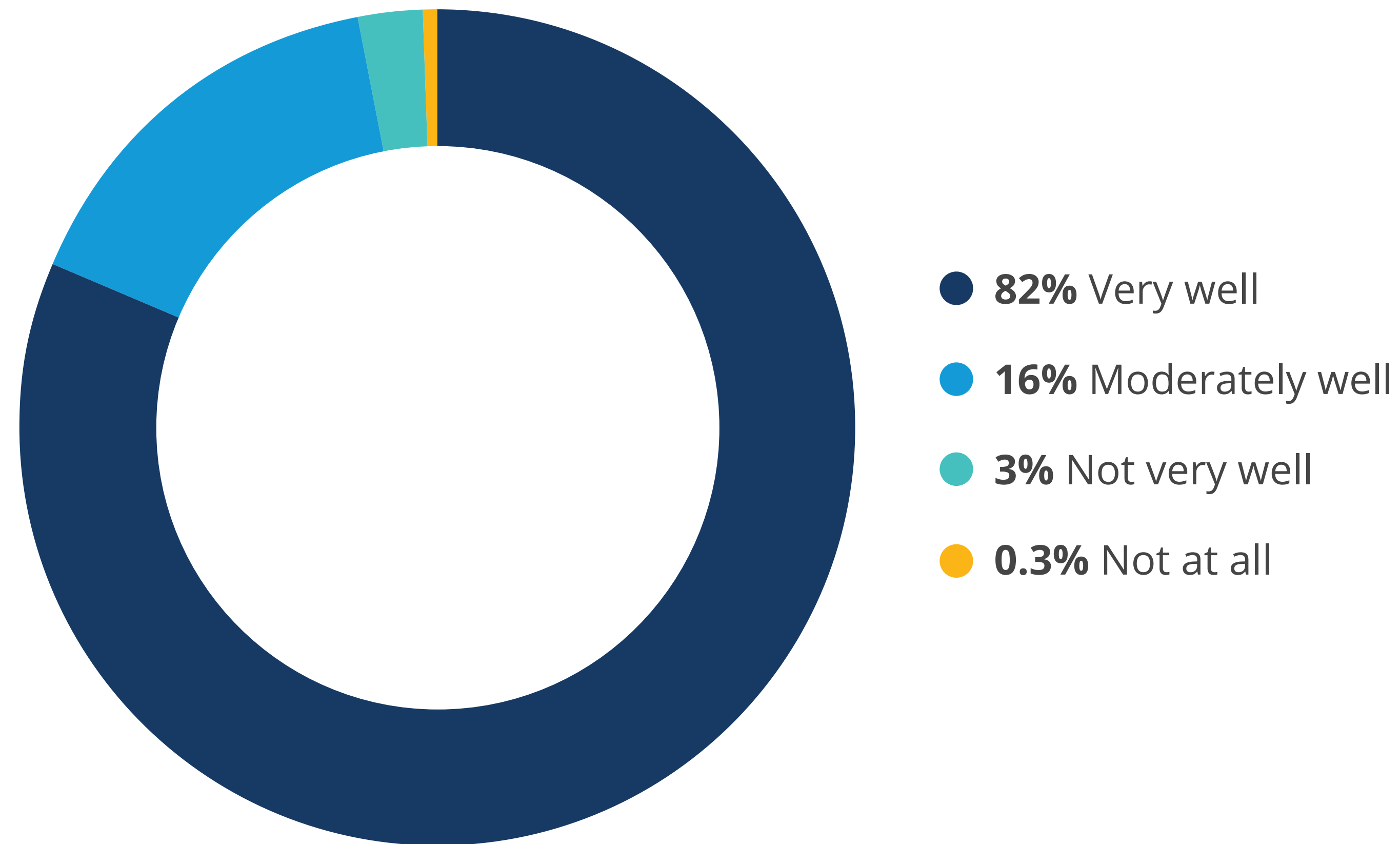
Sample Size = 1,490. Strongly or somewhat agree that “I feel included and my opinion is valued by leadership in open source projects where I participate” (n=1,269), Strongly or somewhat disagree that “I feel included and my opinion is valued by leadership in open source projects where I participate” (n=221)

Language

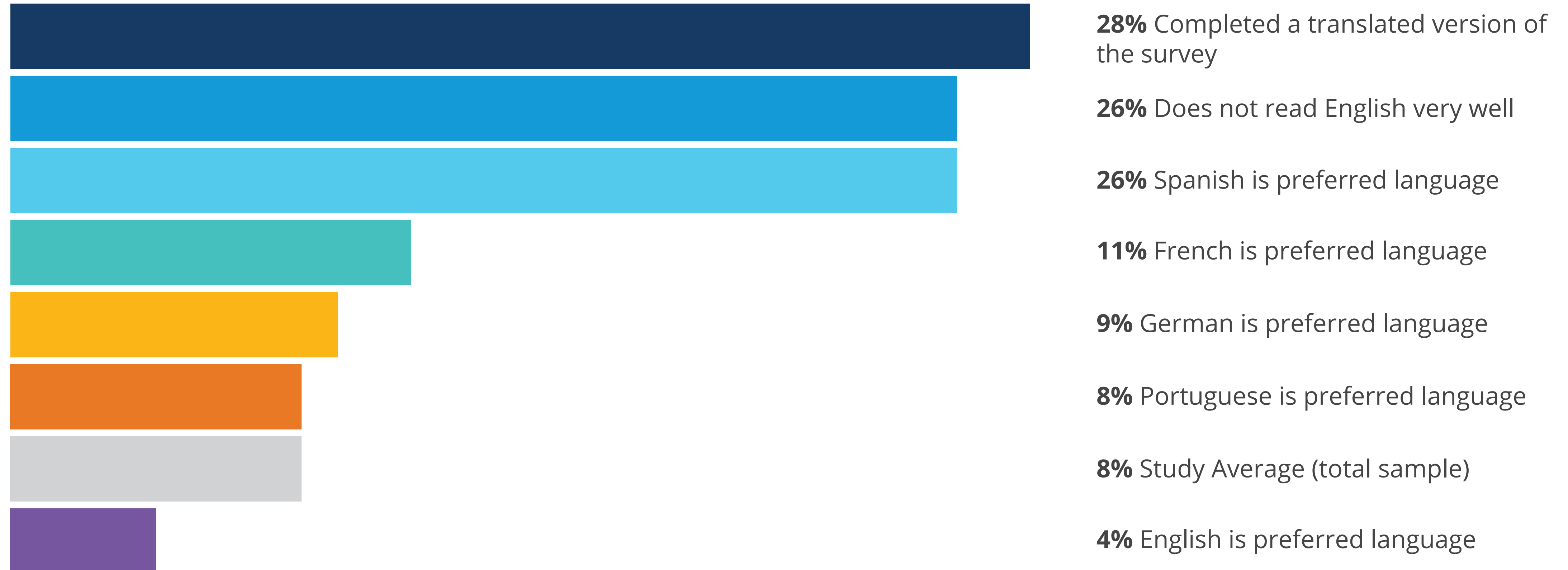
What is your preferred language?



How well can you read and write in English?



Respondents answering “yes” to the question: Has the general preference for use of English in open source negatively affected your ability to participate?

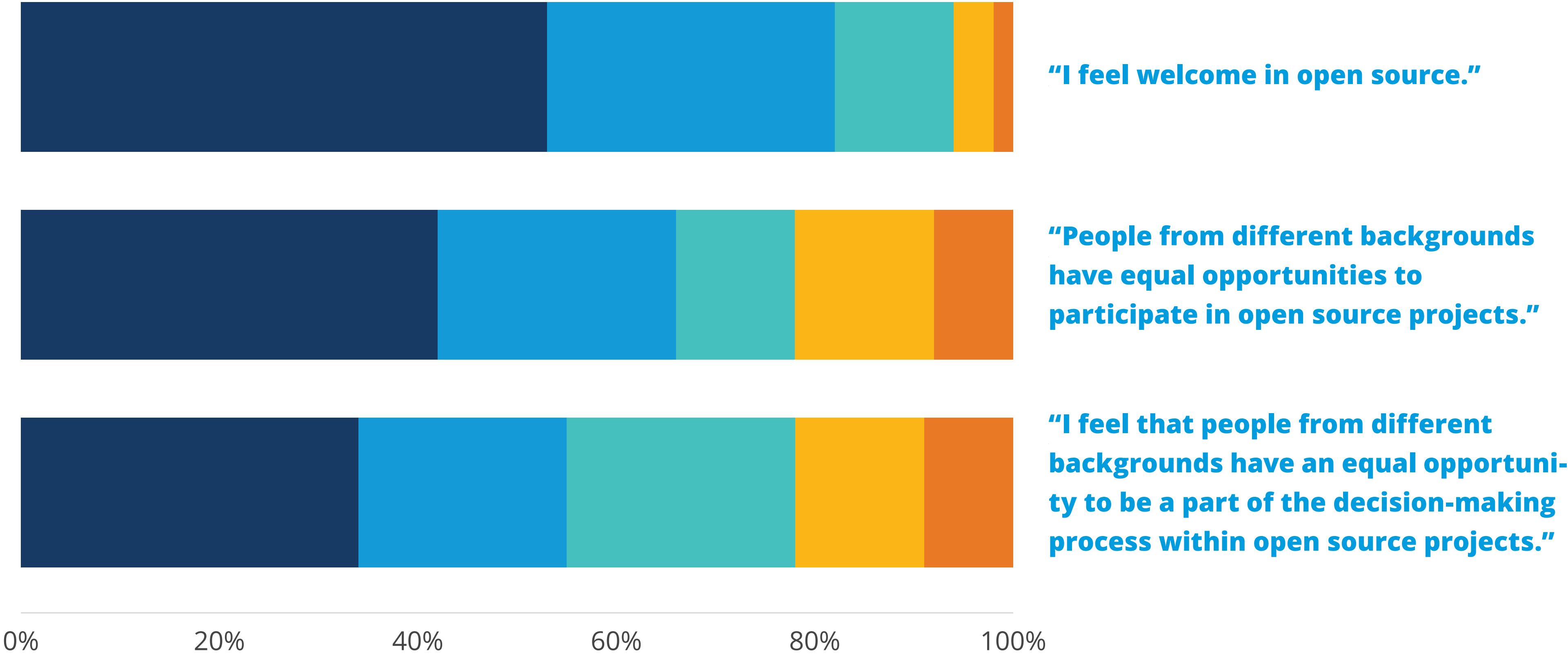


Sample Size = 2,346. Completed a translated version of the survey (n=258), Does not read English very well (n=112), Spanish is preferred language (n=191), French is preferred language (n=61), German is preferred language (n=137), Portuguese is preferred language (n=48), English is preferred language (n=1,540)

Obstacles and Challenges Faced

To what extent do you agree or disagree with the following statements?

- Strongly agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Strongly disagree

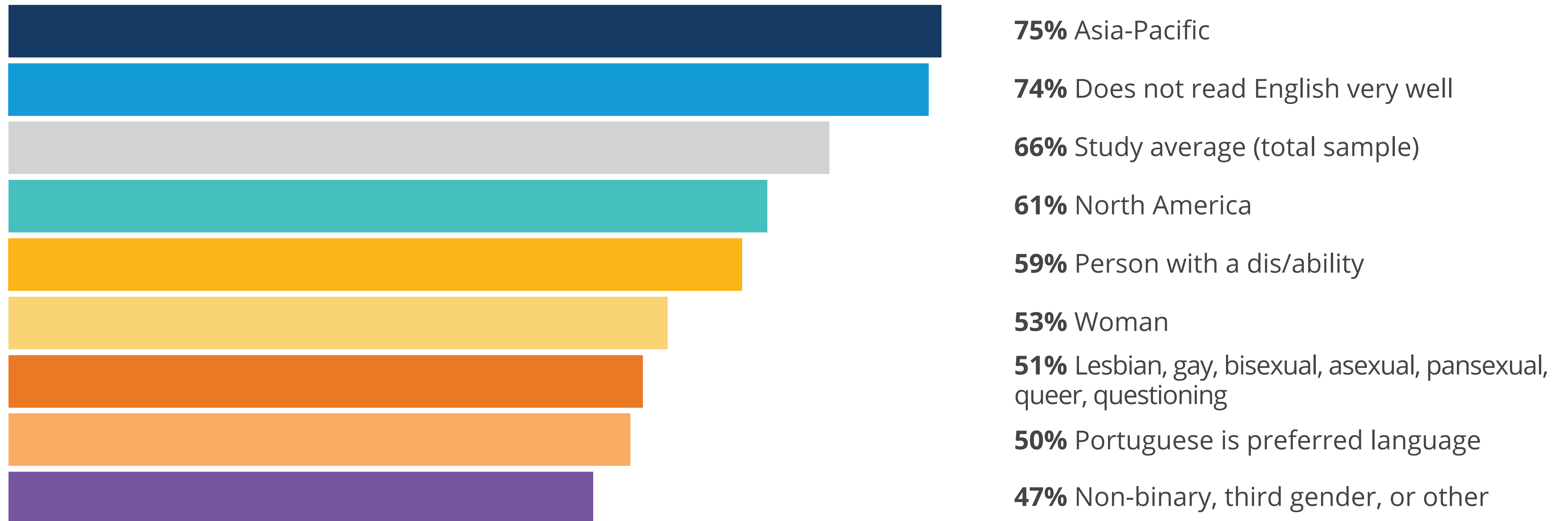


Sample Size: "I feel welcome in open source" (n=2,346), "People from different backgrounds have equal opportunities to participate in open source projects." (n=2,341), "I feel that people from different backgrounds have an equal opportunity to be a part of the decision-making process within open source projects." (n=2,328)

To what extent do you agree or disagree with the following statement?

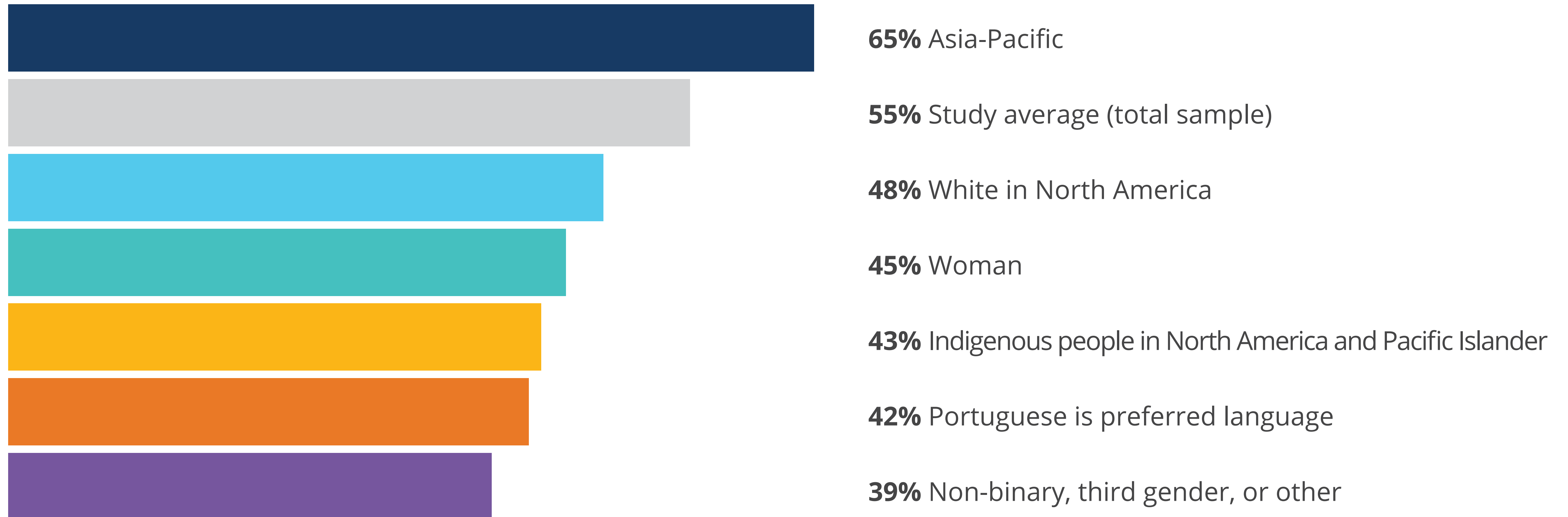
“I feel people from different backgrounds have equal opportunities to participate in open source projects.”

Respondents answering “strongly agree” or “somewhat agree”



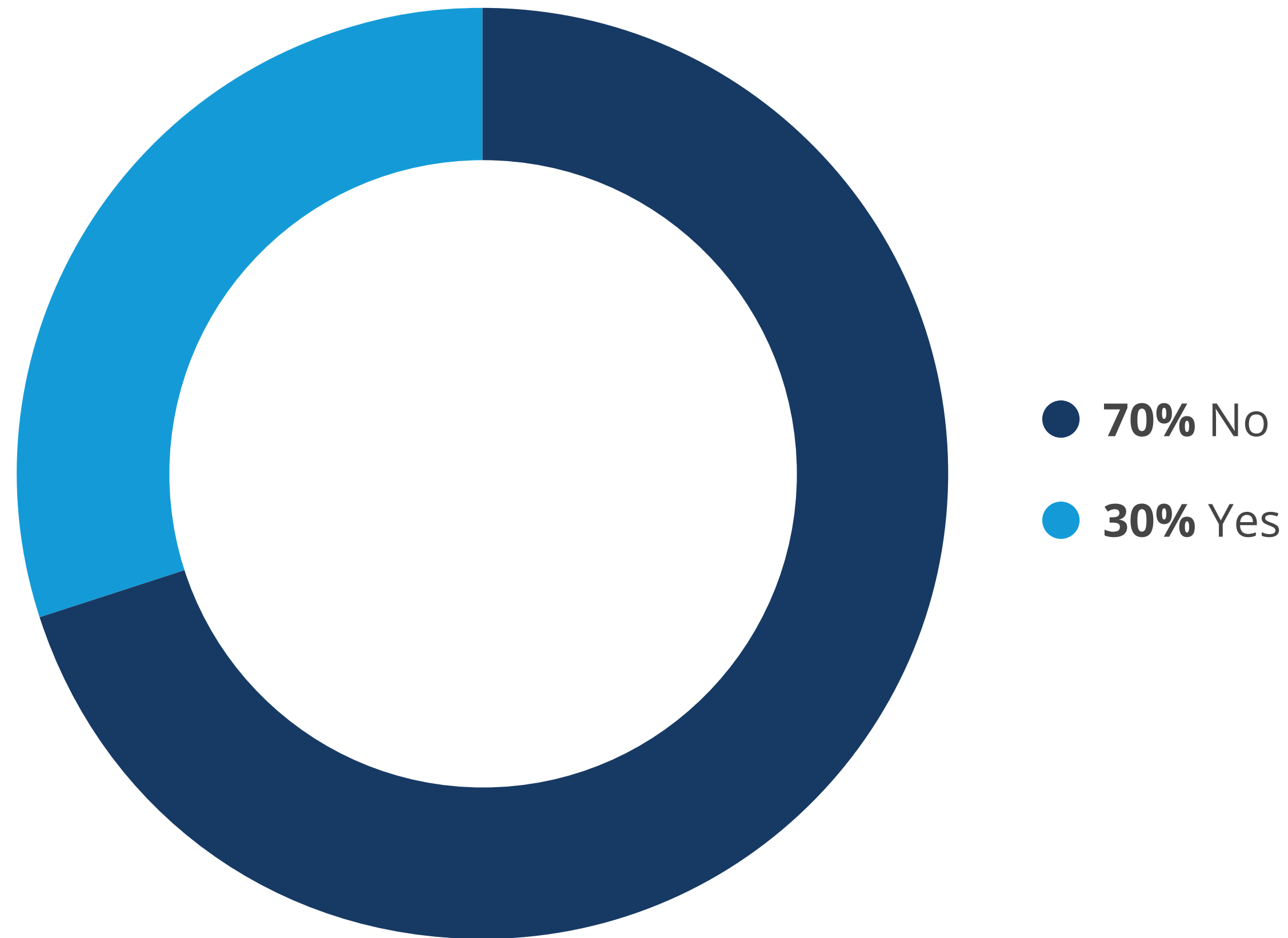
Respondents who “strongly agree” or “somewhat agree” with the following statement:

“I feel that people from different backgrounds have an equal opportunity to be a part of the decision-making process within open source projects.”



Sample Size = 2,328. Portuguese is preferred language (n=48), Woman (n=328), Non-binary, third gender or other (n=115), Asia-Pacific (n=338) Indigenous people in North America and Pacific Islander (n=51)

Have you felt like your identity has affected the ability to reach your goals when contributing to open source? For example, gaining the needed skills or networking with people?

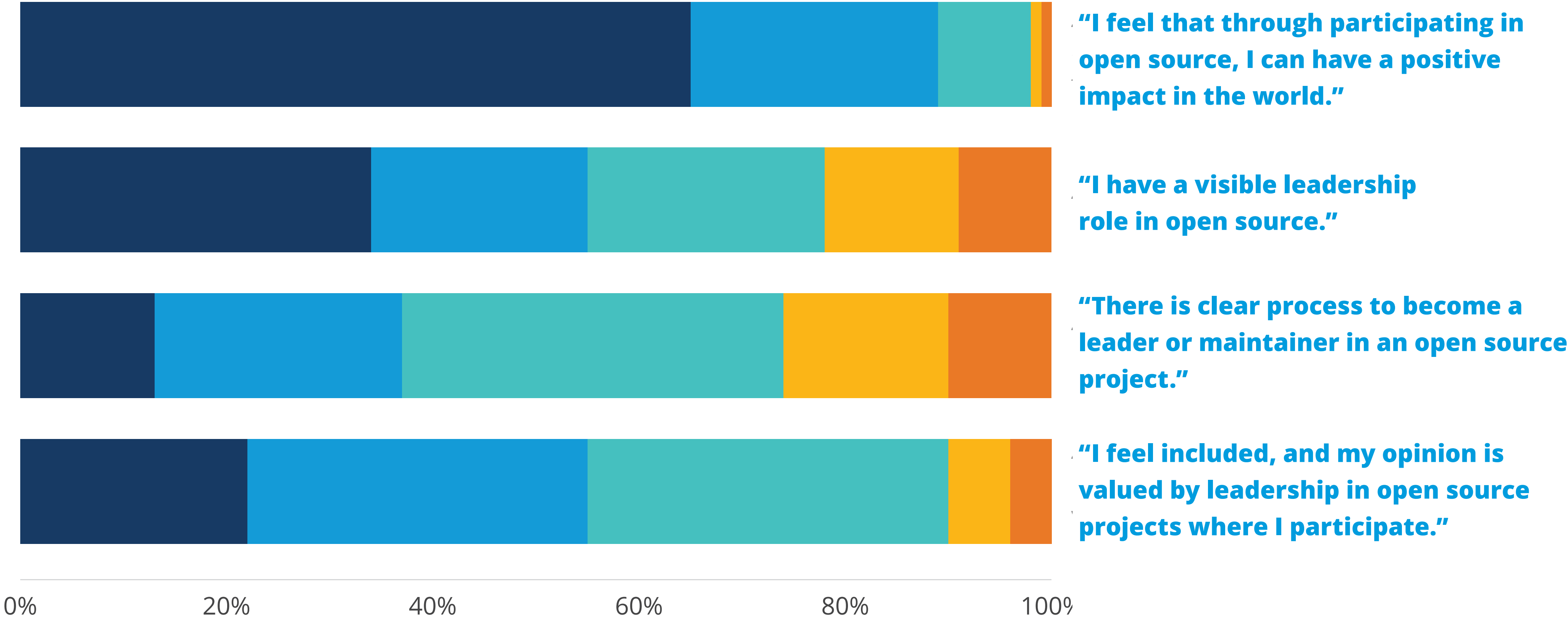


Lack of participation affects goal achievement. On average, 30% believe their identity has had an impact on their ability to reach their goals when contributing to open source.

Making a Difference

To what extent do you agree or disagree with the following statements?

- Strongly agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Strongly disagree



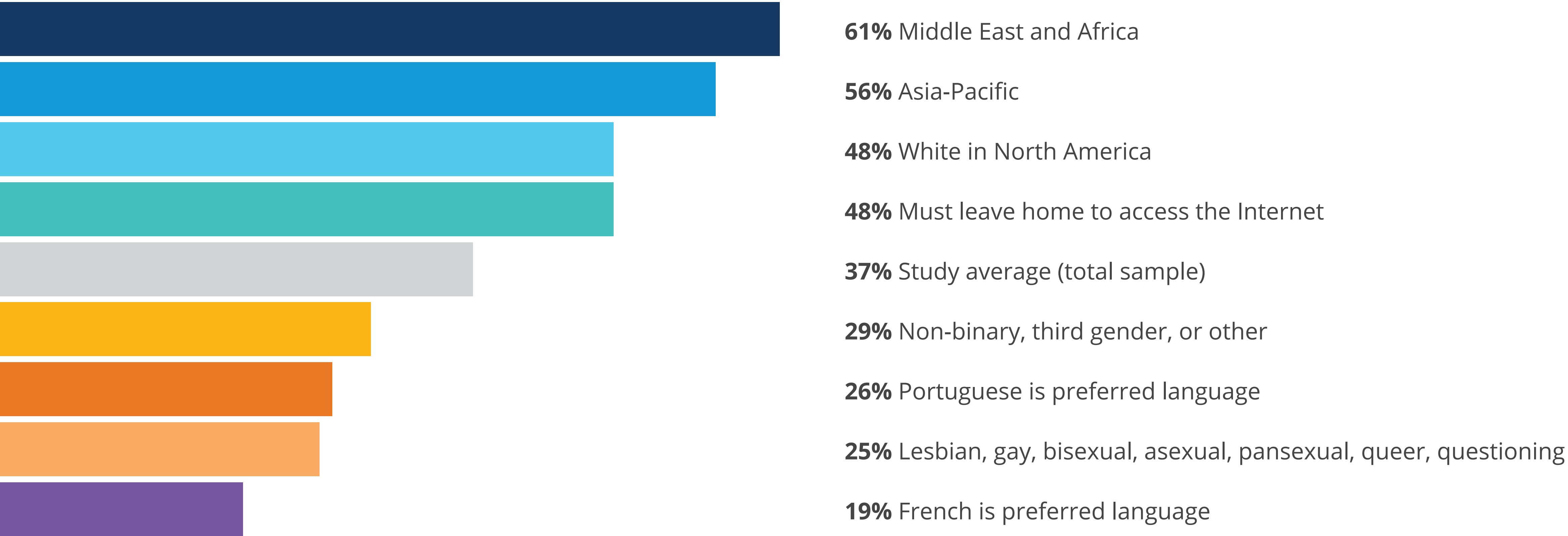
Sample size: "I feel that through participating in open source, I can have a positive impact in the world." (n=2,344), "I have a visible leadership role in open source." (n=2,328), "There is a clear process to become a leader or maintainer in an open source project." (n=2,292), "I feel included, and in my opinion is valued by leadership in open source projects where I participate." (n=2,285)

Respondents who “strongly agree” with the following statement with the following statement:

“I feel that through participating in open source, I can have a positive impact in the world.”

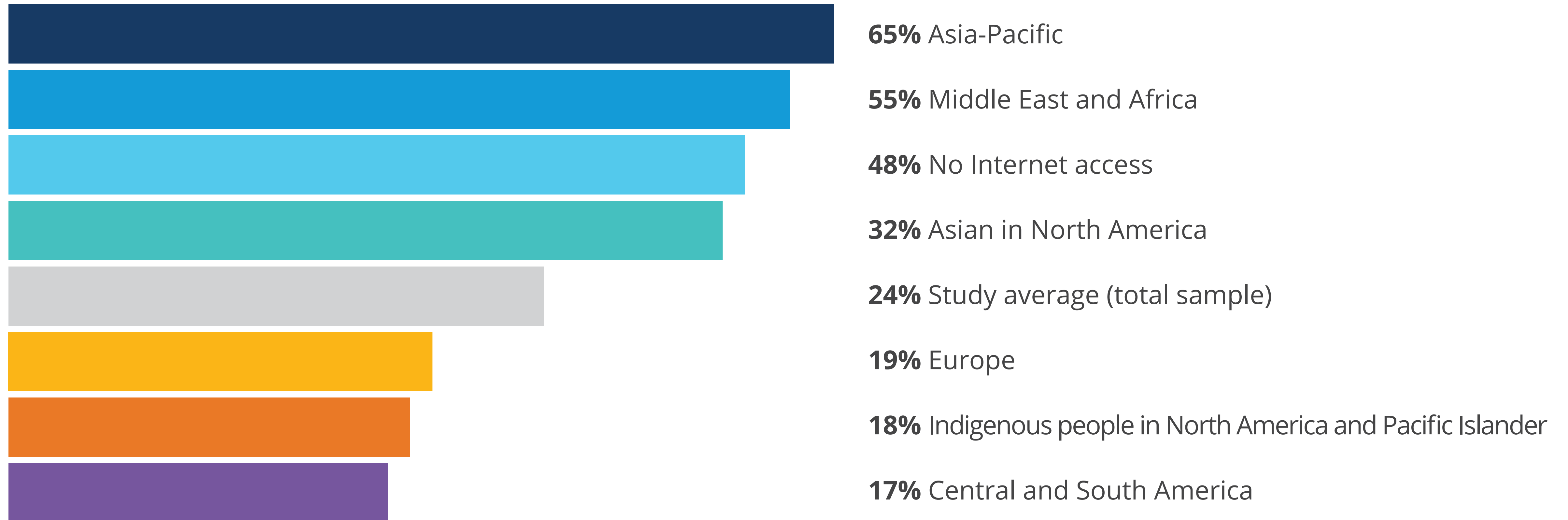


**Respondents who “strongly agree” or “somewhat agree”
with the following statement: “There is a clear process to become a leader or
maintainer in an open source project.”**



Sample Size = 2,292. Asia-Pacific (n=325), Middle East and Africa (n=125), White in North America (n=578), Must leave home to access the Internet (n=68), Lesbian, gay, bisexual, asexual, pansexual, queer, questioning (n=384), Non-binary, third gender or other (n=112), French is preferred language (n=59), Portuguese is preferred language (n=47)

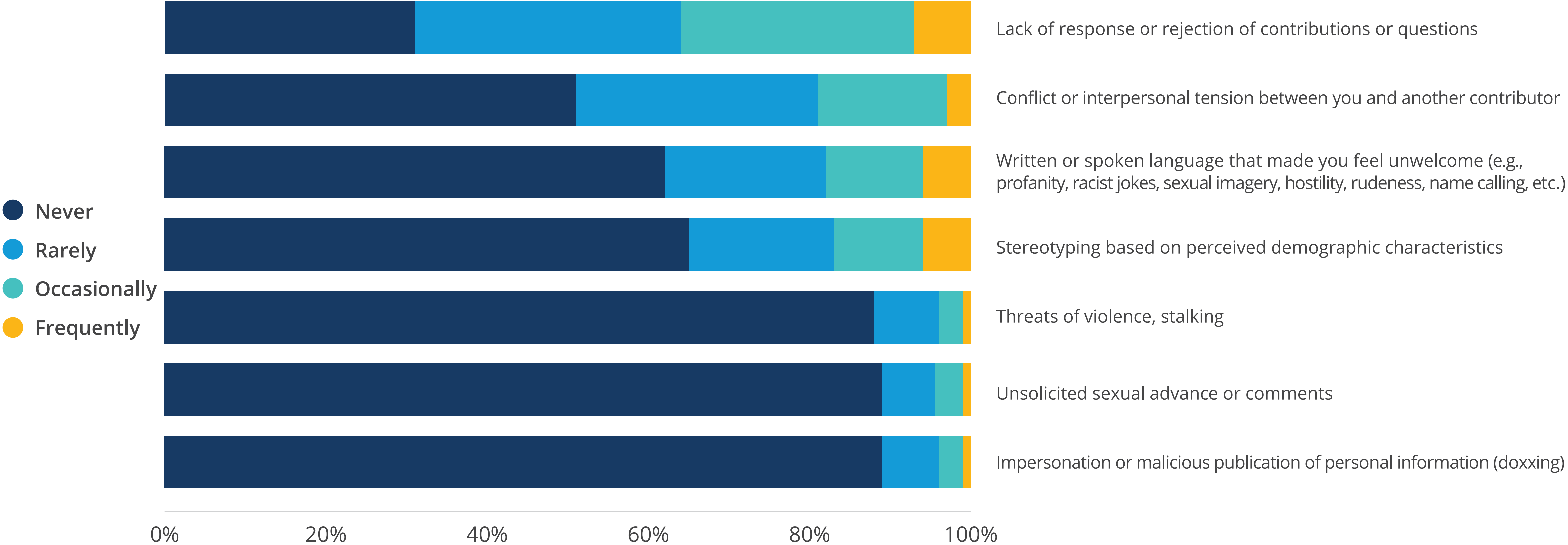
**Respondents who “strongly agree” or “somewhat agree”
with the following statement:
“I have a visible leadership role in open source.”**



Sample Size = 2,308. Central and South America (n=180), Asia-Pacific (n=326), Europe (n=845), Asian in North America (n=66), Indigenous people in North America and Pacific Islander (n=51), No Internet access (n=46)

Conduct & Responses

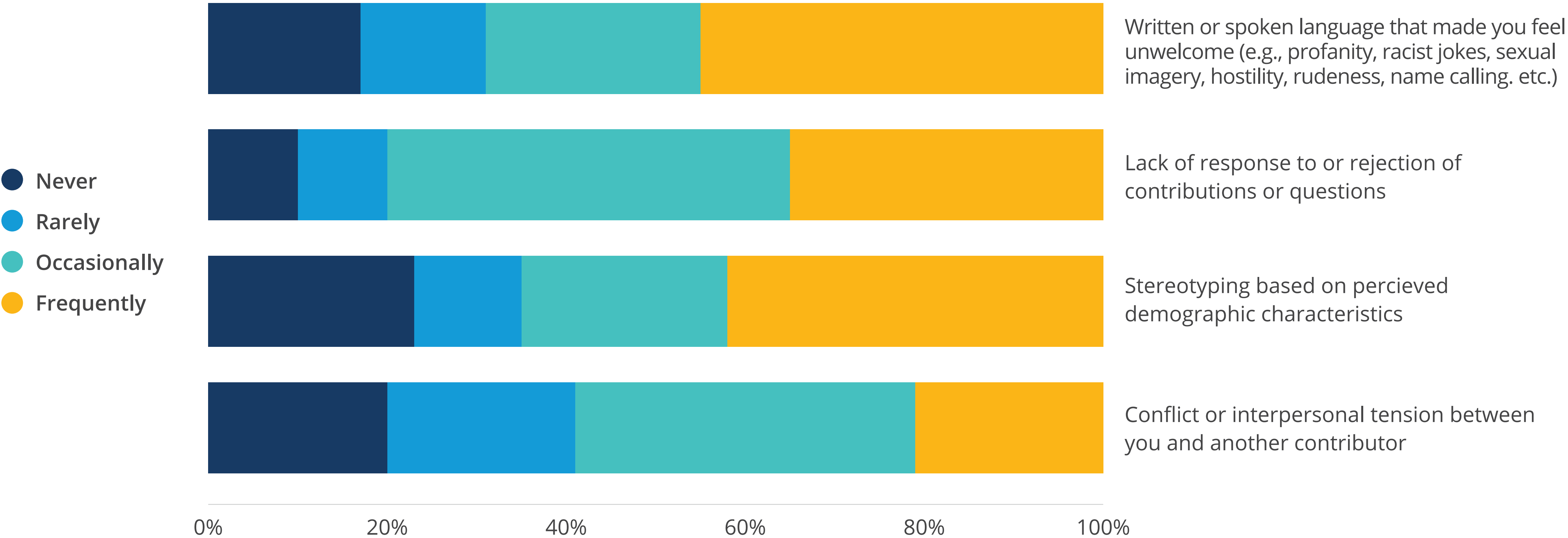
Have you ever experienced any of the following behaviors directed at you in the context of an open source project?



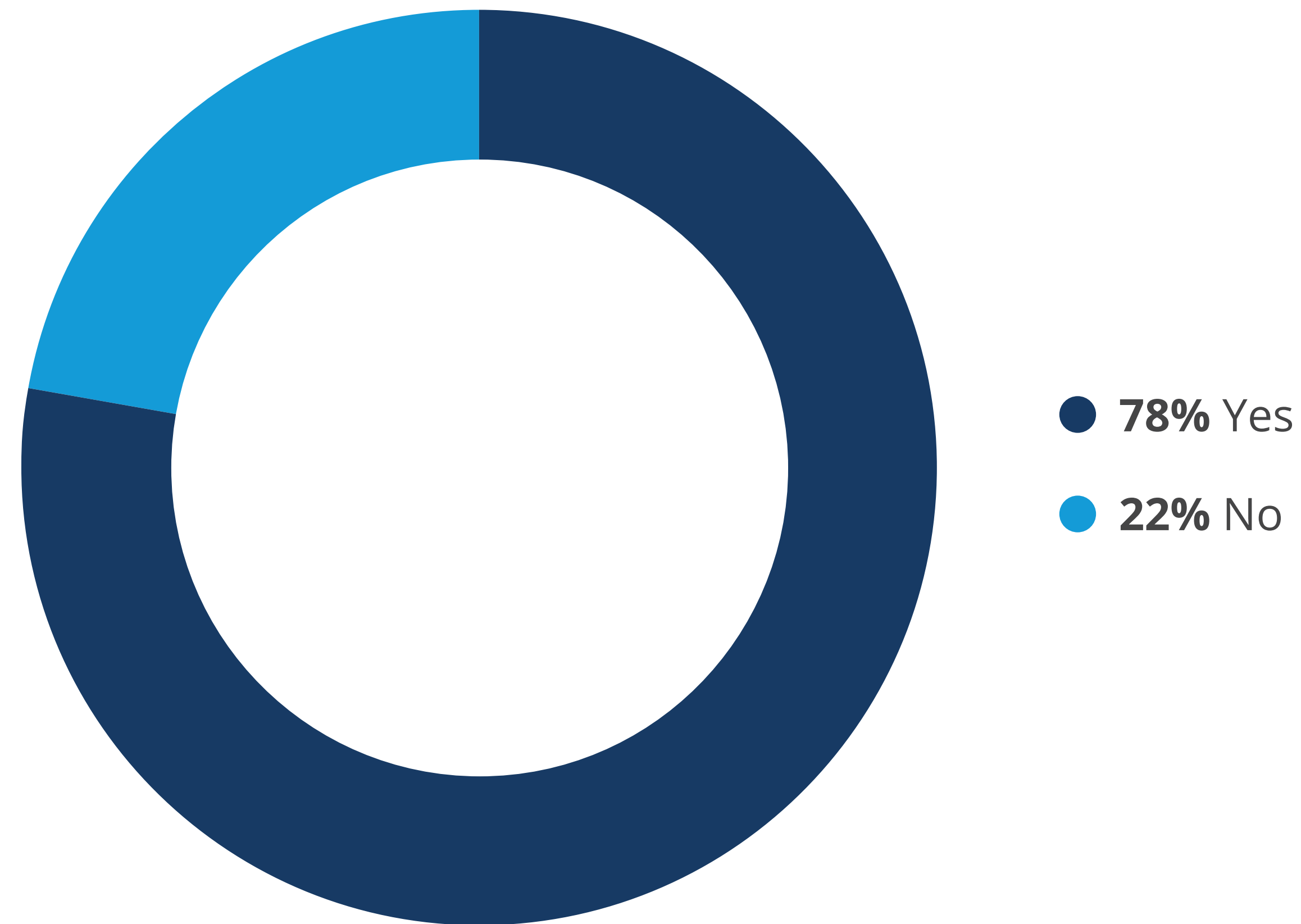
Sample Size = 2,291. Impersonation or malicious publication of personal information (doxxing) (n=2,281), Unsolicited sexual advances or comments (n=2,278), Threats violence, stalking (n=2,277), Stereotyping based on perceived demographic characteristics (n=2,276), Written or spoken language that made feel unwelcome (e.g., profanity, racist jokes, sexual imagery, hostility, rudeness, name-calling etc.) (n=2,286), Conflict or interpersonal tension between you and another contributor (n=2,277), Lack of response to or rejection of contributions or questions (n=2,282)

Have you ever experienced any of the following behaviors directed at you in the context of an open source project?

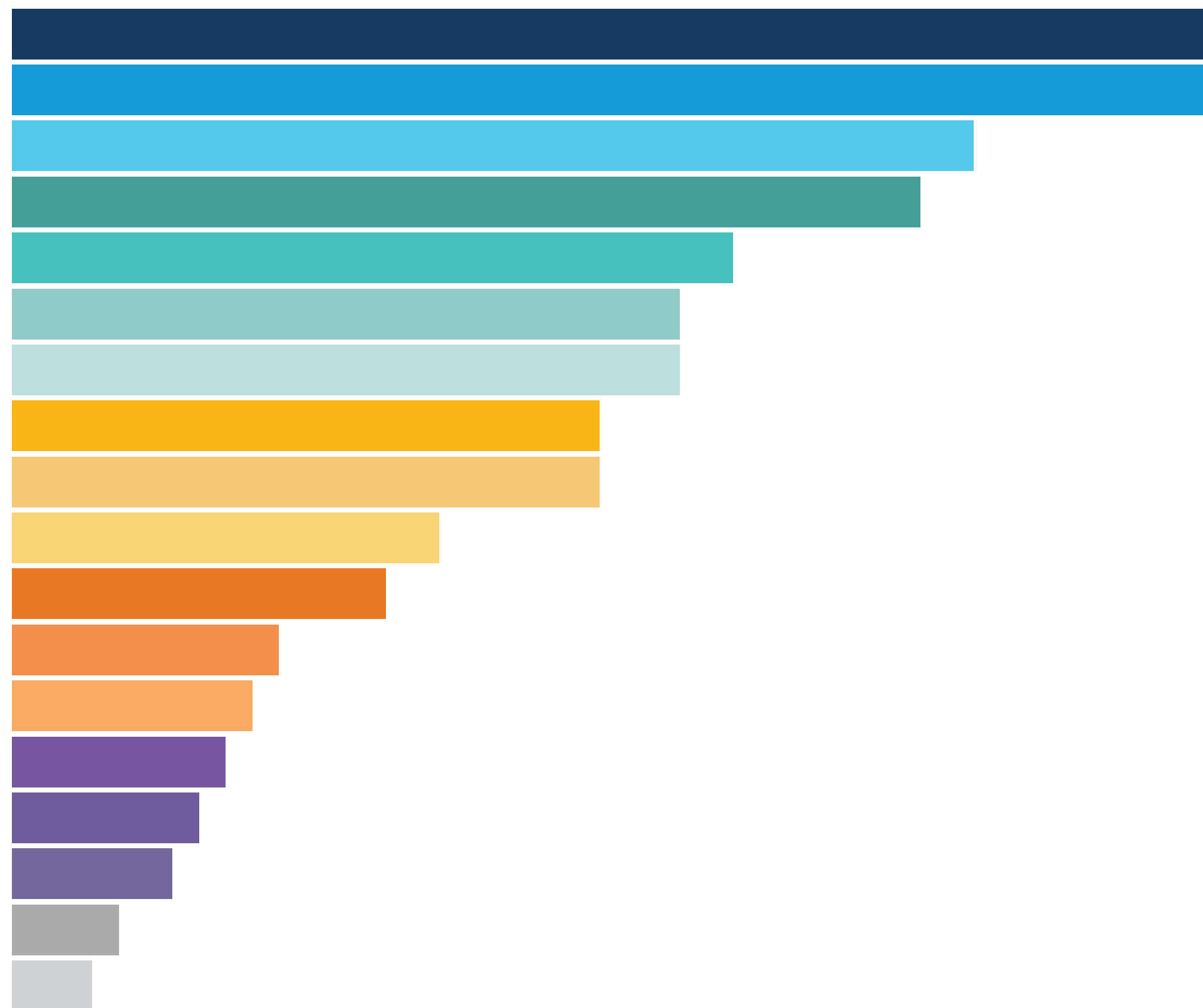
Frequency of Behaviors Experienced in the Context of an Open Source Project by Those That Do Not Feel Welcome in Open Source



If you have experienced harassment, do you think the situation was connected to your background?

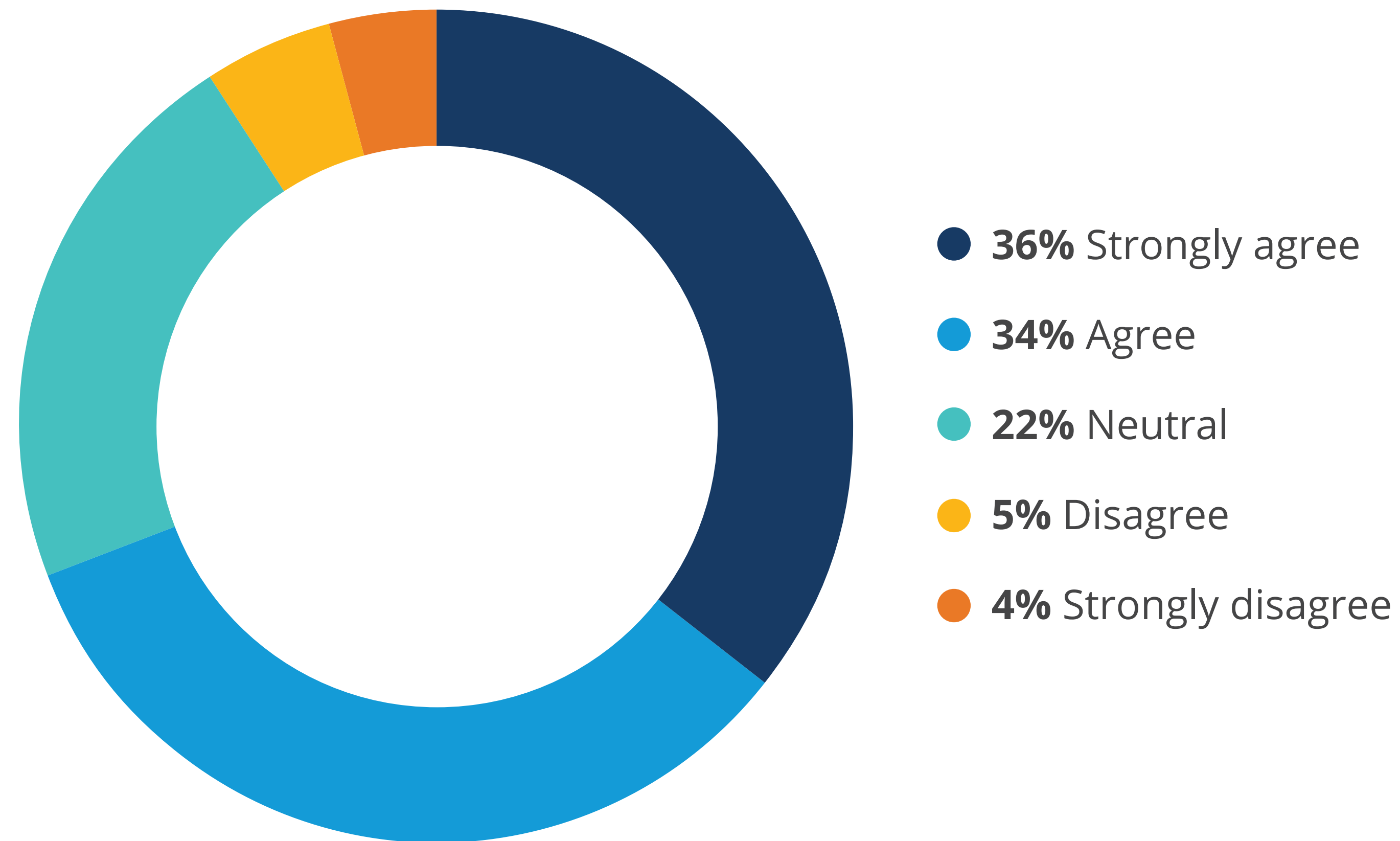


If you've witnessed or experienced hostility or harassment within an open source community, how do you typically respond? Choose all that apply.



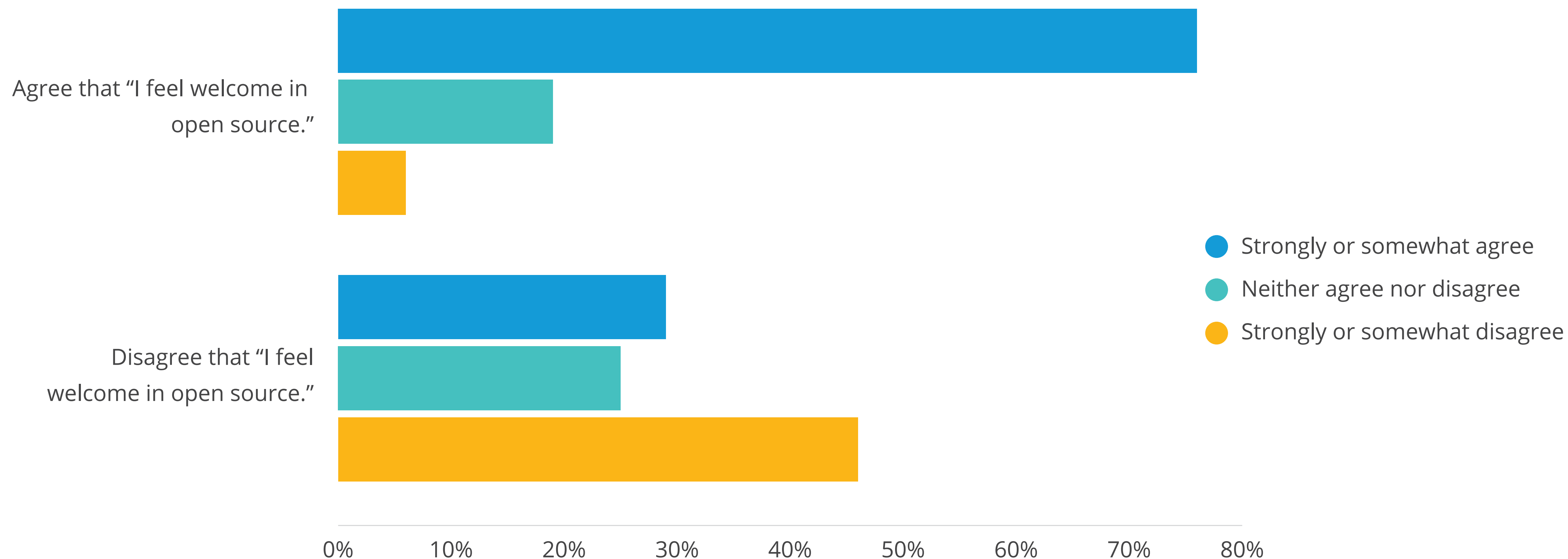
- 45%** I did not react/ignored the incident
- 45%** Asked the user(s) to stop the harassing behavior
- 36%** Reported the incident to project maintainers
- 34%** Blocked the user(s) harassing me
- 27%** Solicited support from other community members
- 25%** Left the project/open source community temporarily or permanently
- 25%** Stopped contributing to a project
- 22%** Reported the incident to event organizers
- 22%** Engaged in private discussion with community members about the issue
- 16%** Engaged in public discussion with community members about the issue
- 14%** Worked, asked questions, or collaborated in private channels more often
- 10%** Made changes in my life online (e.g., stopped attending meetups or conferences, etc.)
- 9%** Removed or changed content on my public online presence
- 8%** Reported the incident to the hosting service or ISP
- 7%** Changed or deleted a username
- 6%** Started contributing under a pseudonym
- 4%** Consulted legal counsel / an attorney
- 3%** Contacted law enforcement

To what extent do you agree or disagree with the following statement?
“When I participate in open source, I trust that the code of conduct is enforced.”



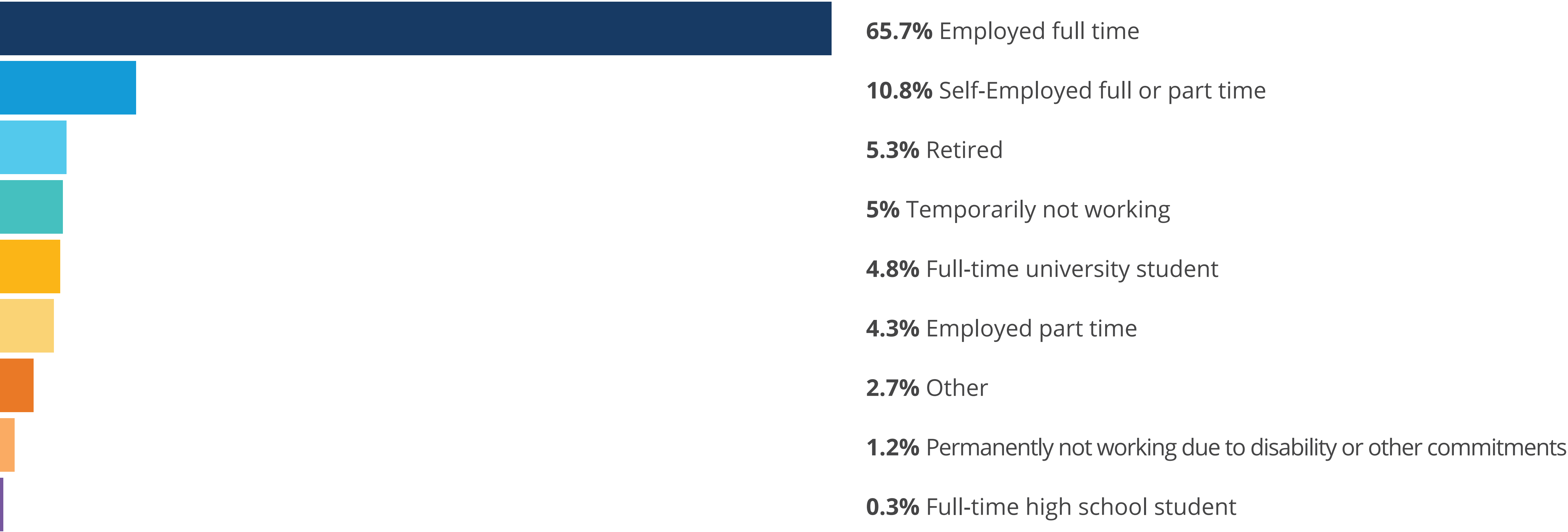
If you don't feel welcome, you also don't trust that the Code of Conduct is being enforced.

To what extent do you agree or disagree with the following statement?
When I participate in open source, I trust that the code of conduct is enforced."

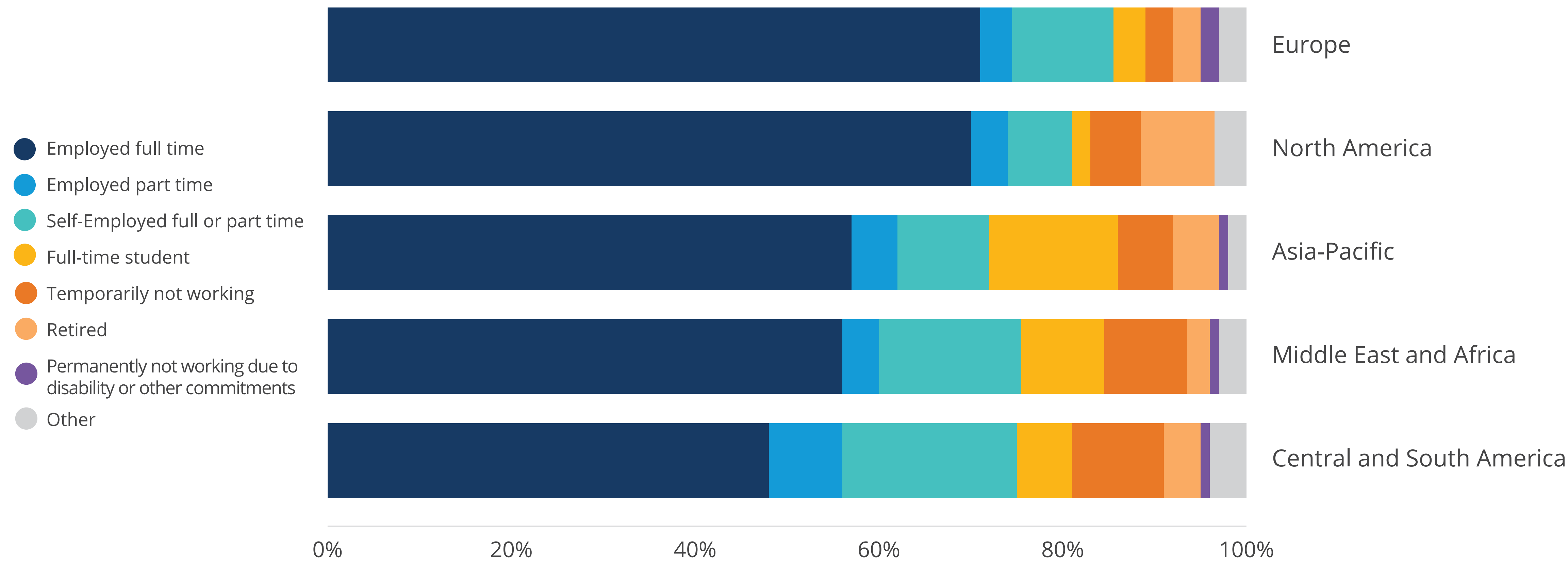


Employment & Education Opportunities

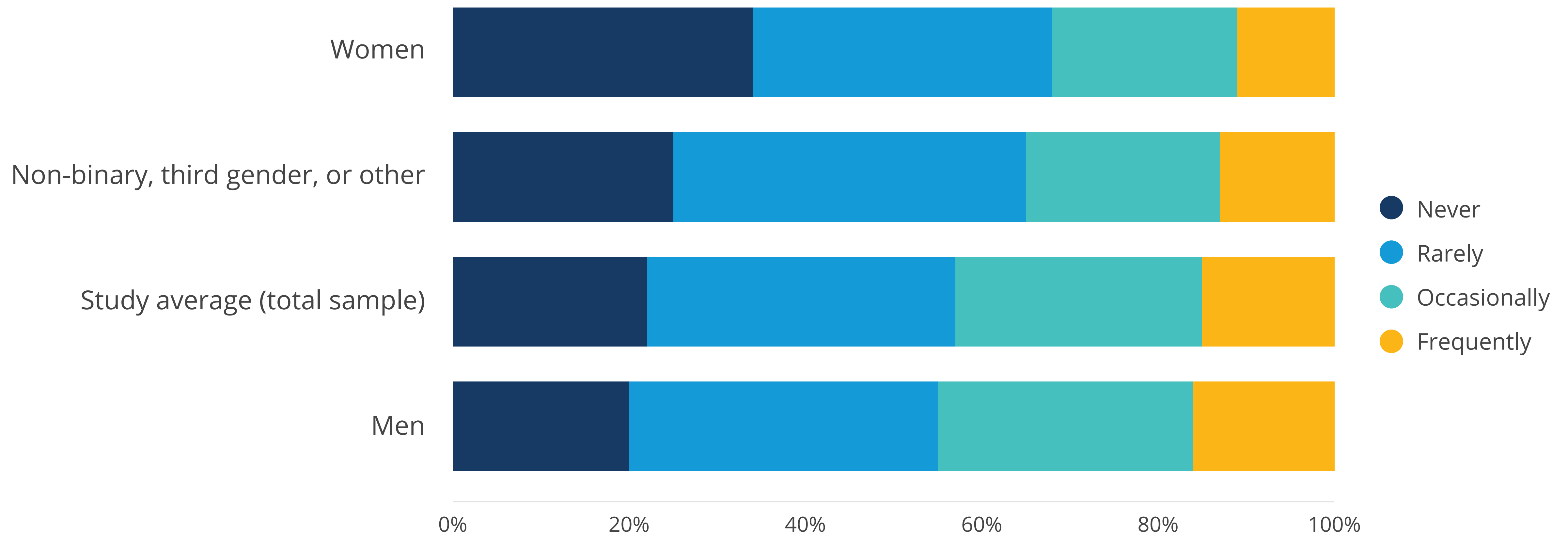
Which best describes your employment (paid work) status?



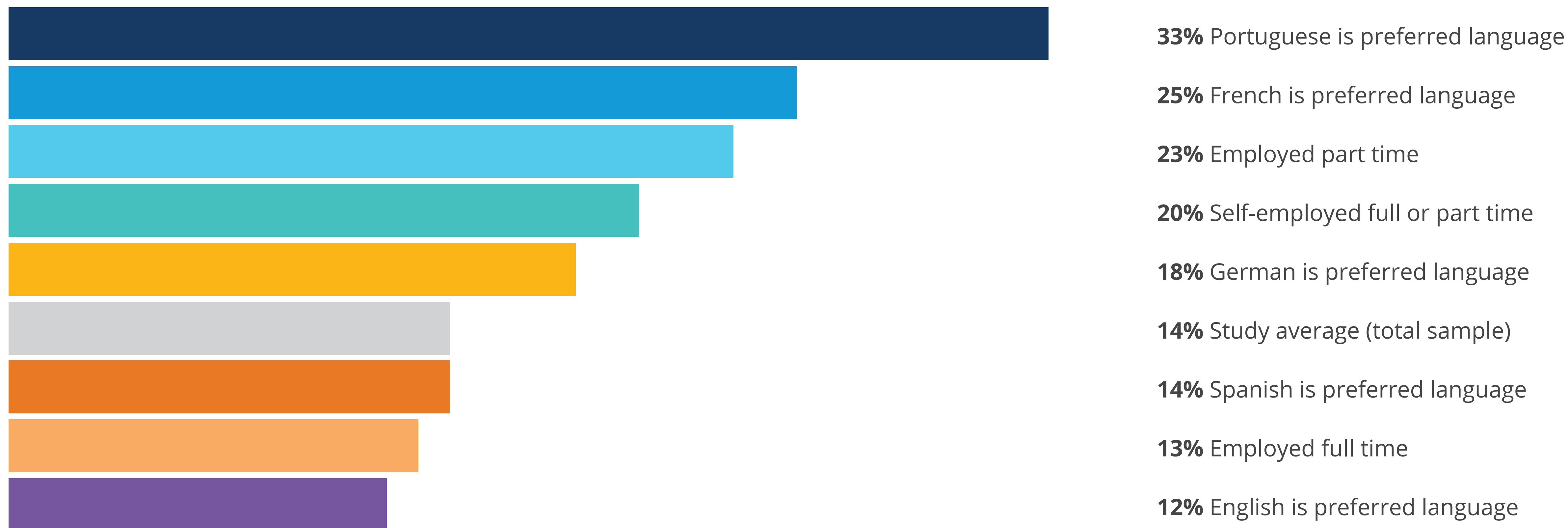
Which best describes your employment (paid work) status?



In your main job, how often do you contribute to open source communities?

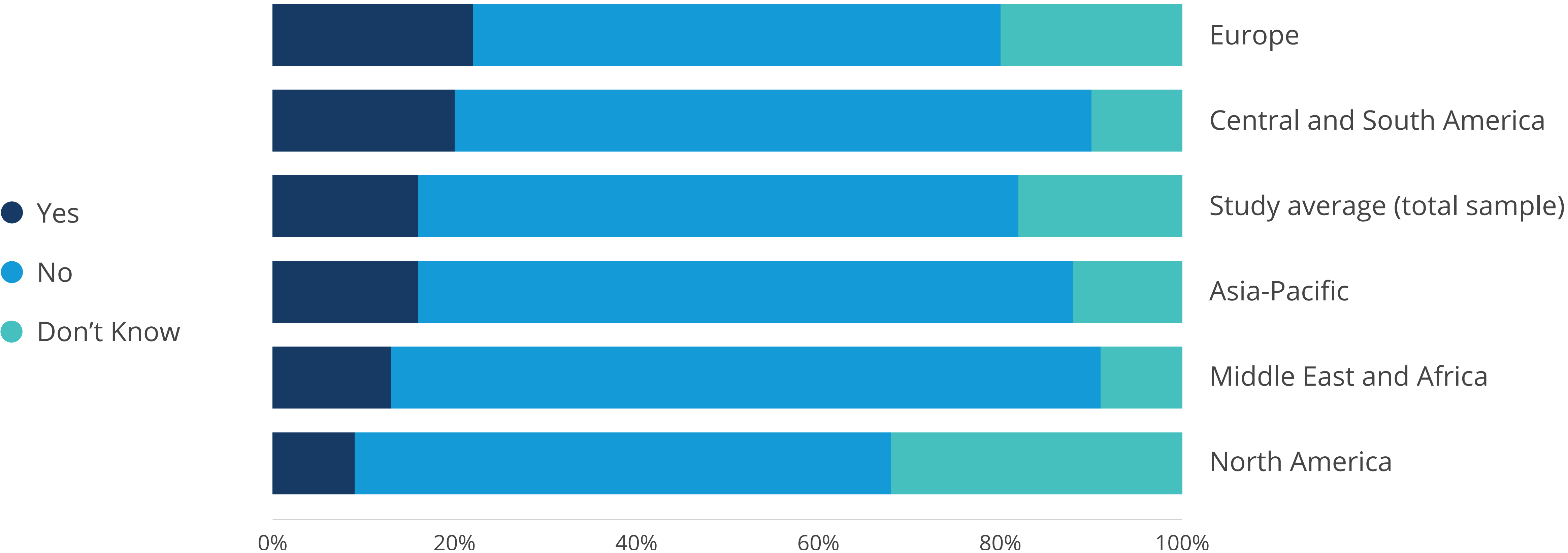


Respondents answering “yes” to the question: Do you receive/accept payments for your contributions to open source?



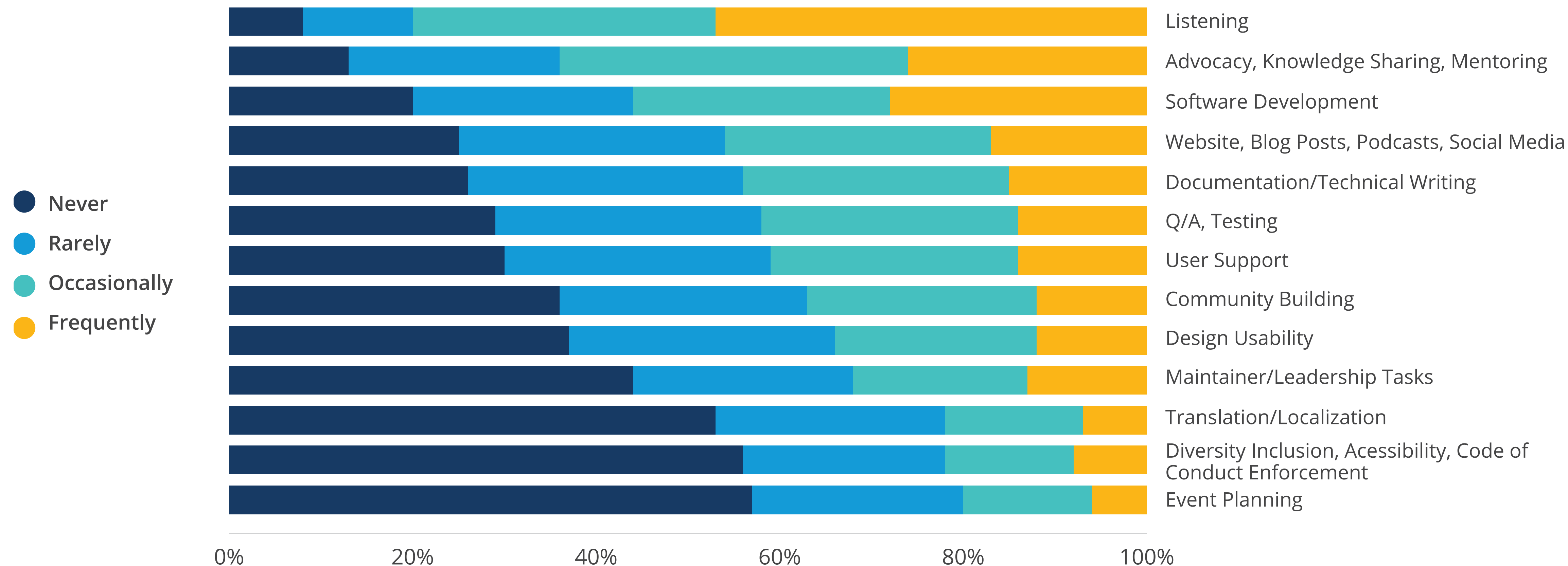
Sample Size = 2,316. Employed full time (n=1,516), Employed part time (n=95), Self-Employed full or part time (n=247), English is preferred language (n=1,521), French is preferred language (n=61), German is preferred language is preferred language (n=136), Portuguese is preferred language (n=48), Spanish is preferred language (n=189)

Is open source taught as part of your school's curriculum?



Activities

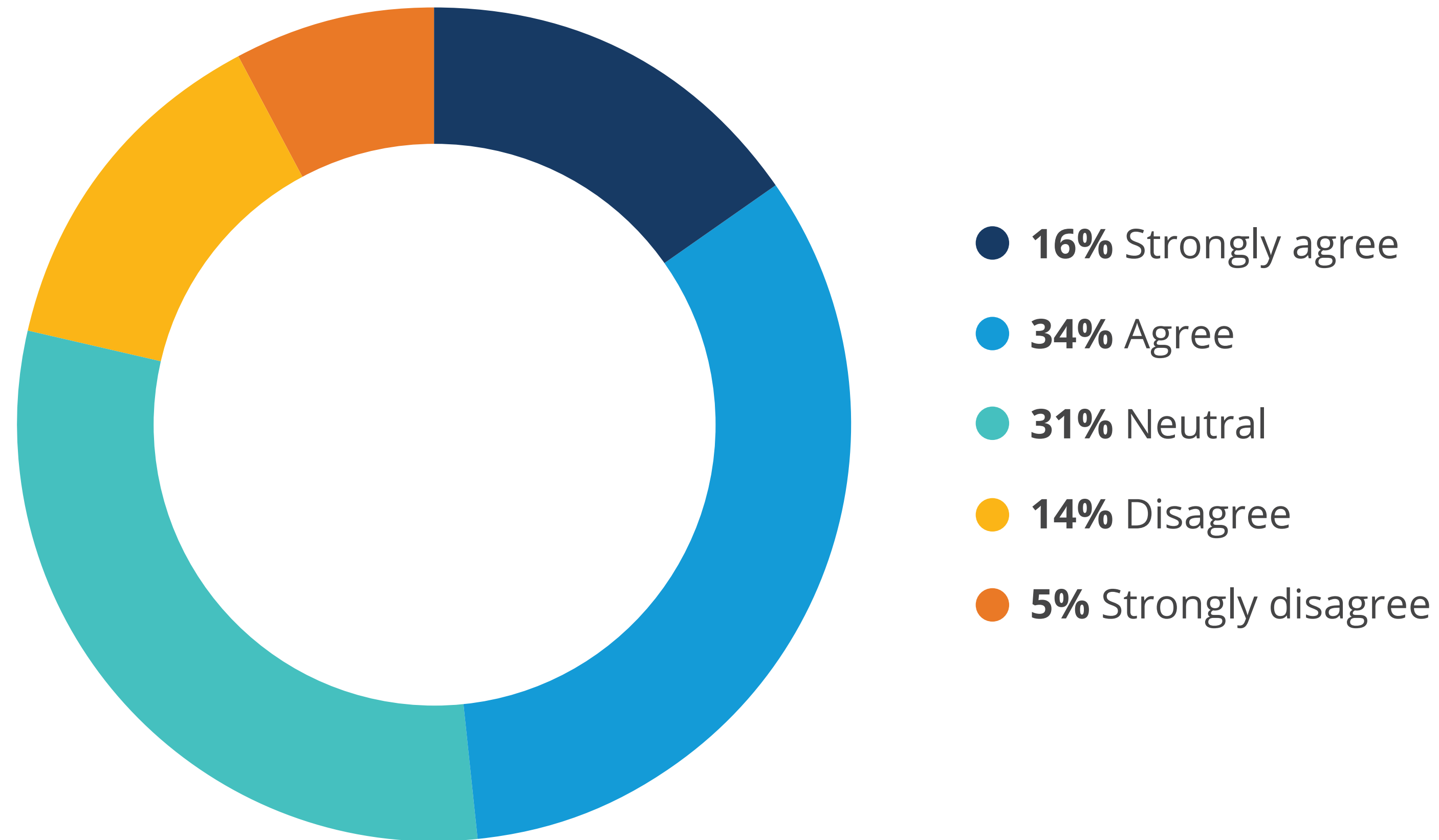
Where are your efforts focused in open source participation and how often do you engage in those activities?



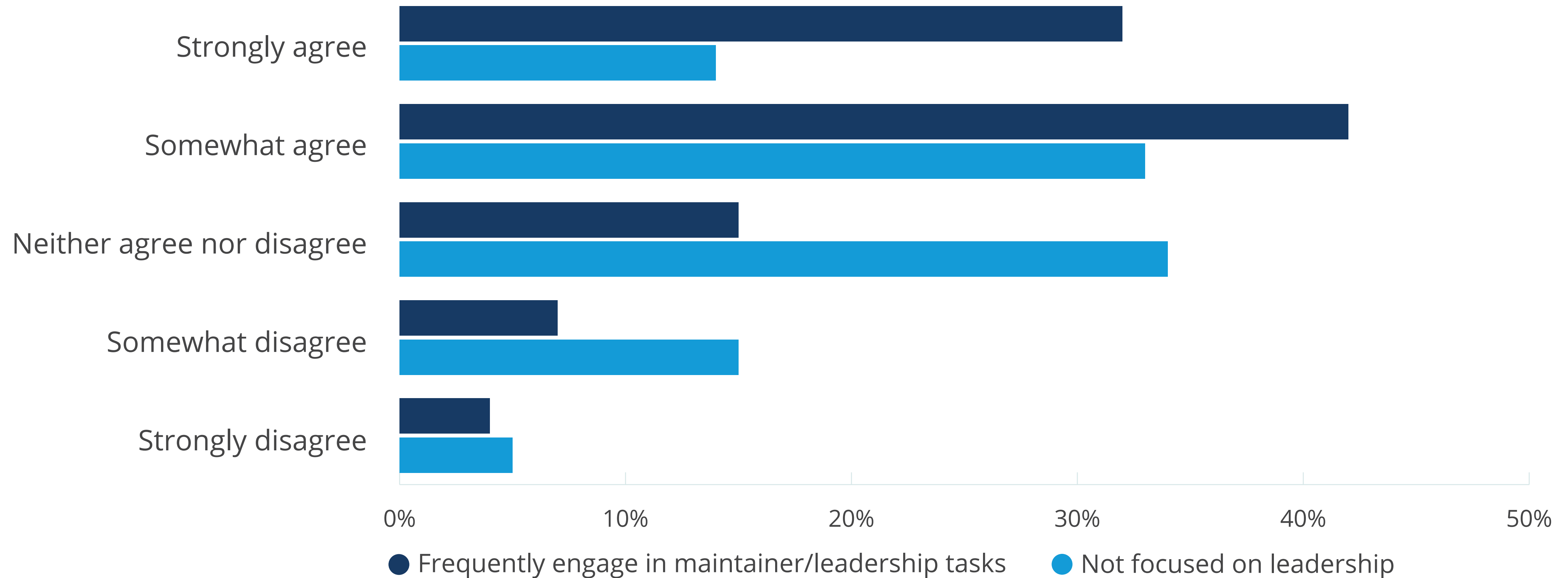
Documentation

To what extent do you agree with this statement?

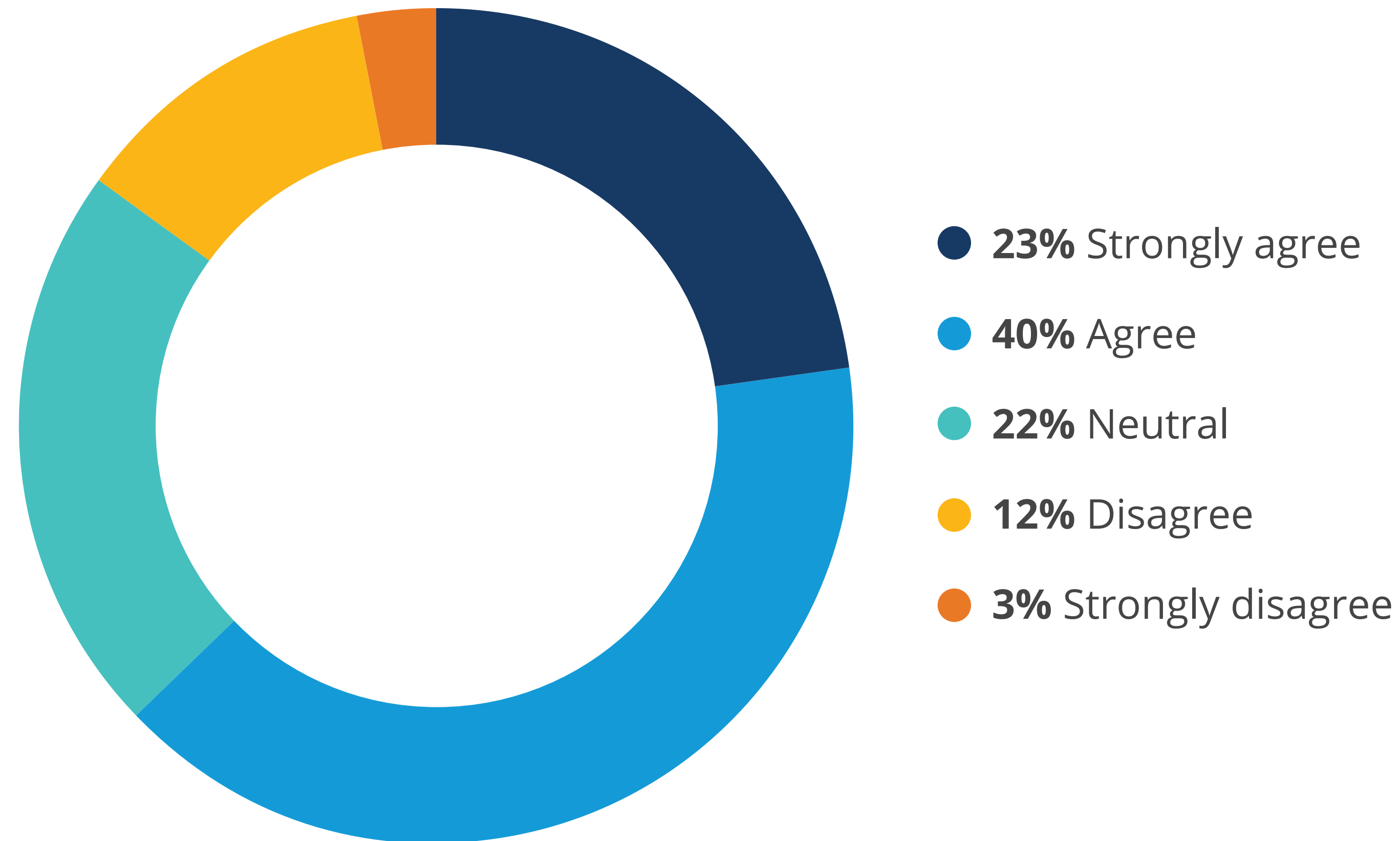
“Open source projects I work on have documentation that captures process documentation in addition to technical documentation?”



To what extent do you agree with this statement?
“Open source projects I work on have documentation that captures process documentation in addition to technical documentation?”



To what extent do you agree with this statement?
“Open source projects I work on have documentation that is easily findable, searchable, and accessible?”

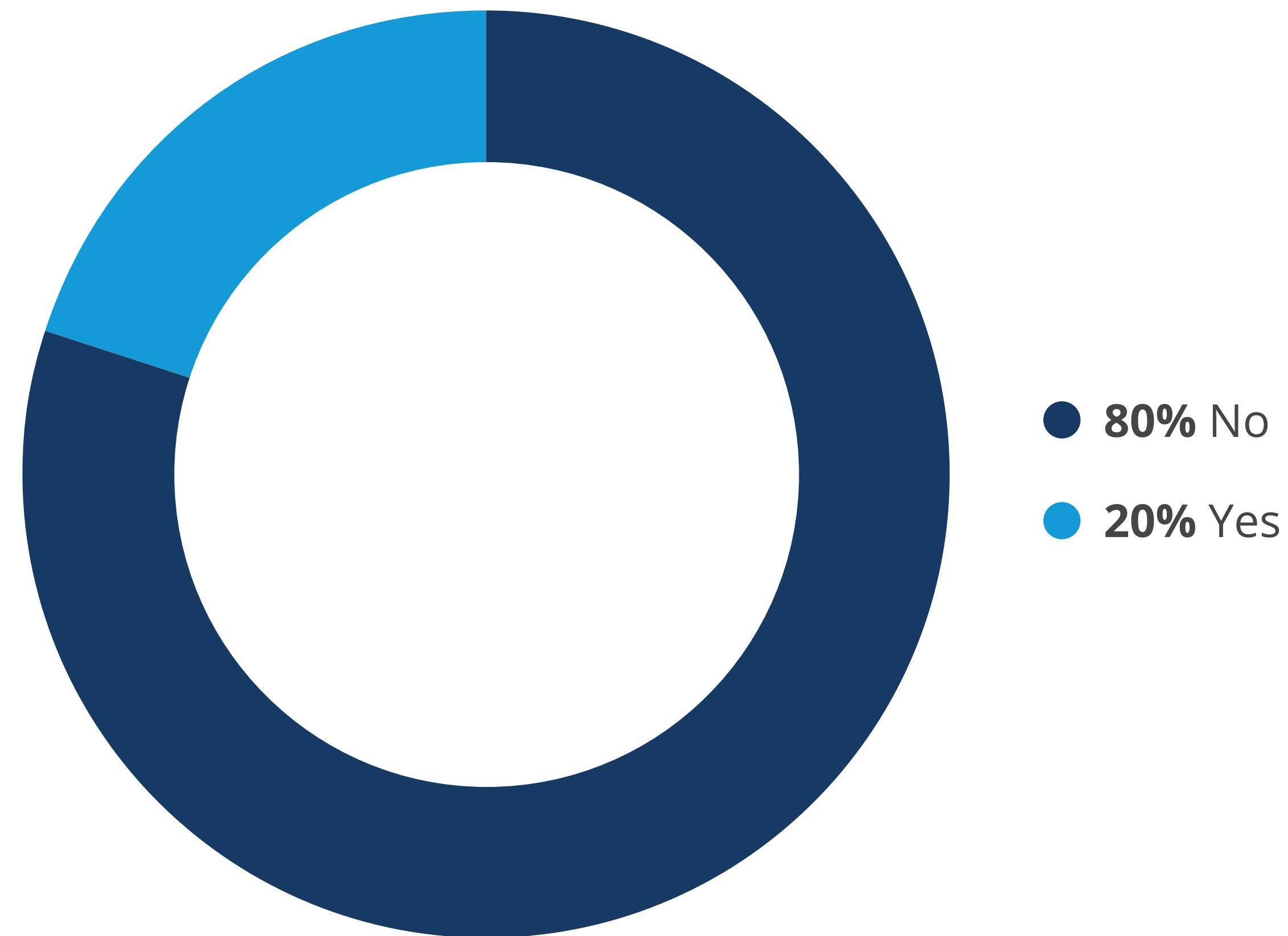


Tooling

What source code hosting platforms do you most regularly use when participating in open source?

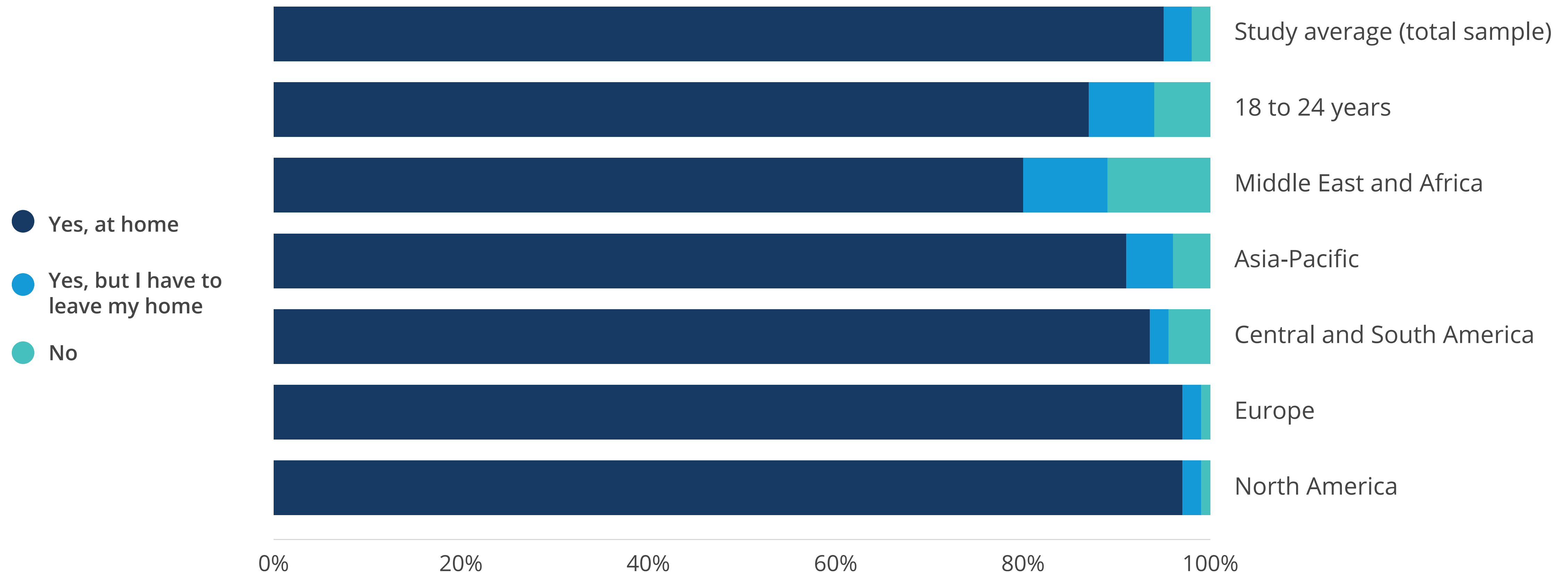


Have you had difficulty participating in an open source community because of tools used in an open source project?



Internet Access & Connectivity

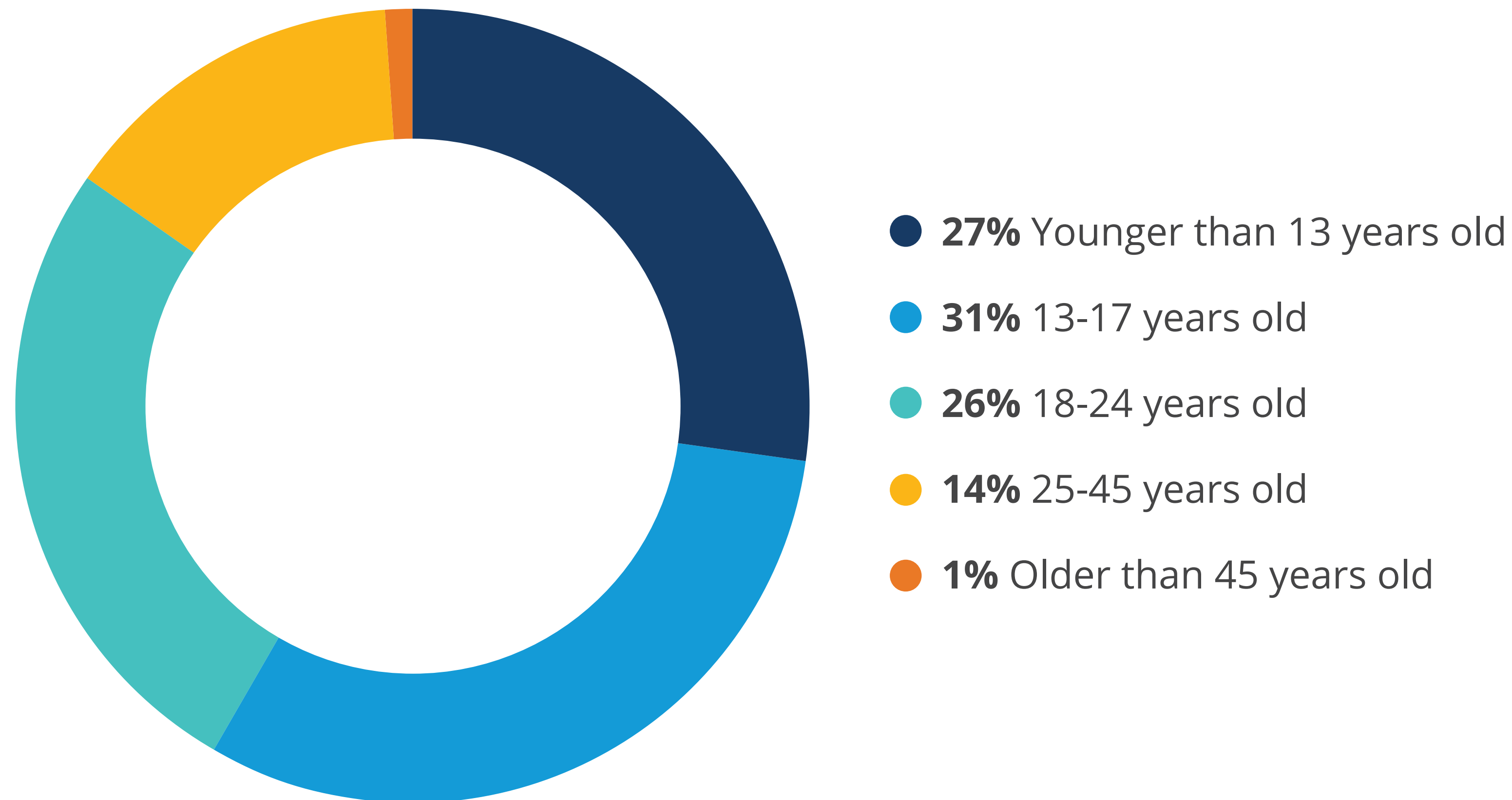
Do you have access to a reliable Internet connection?



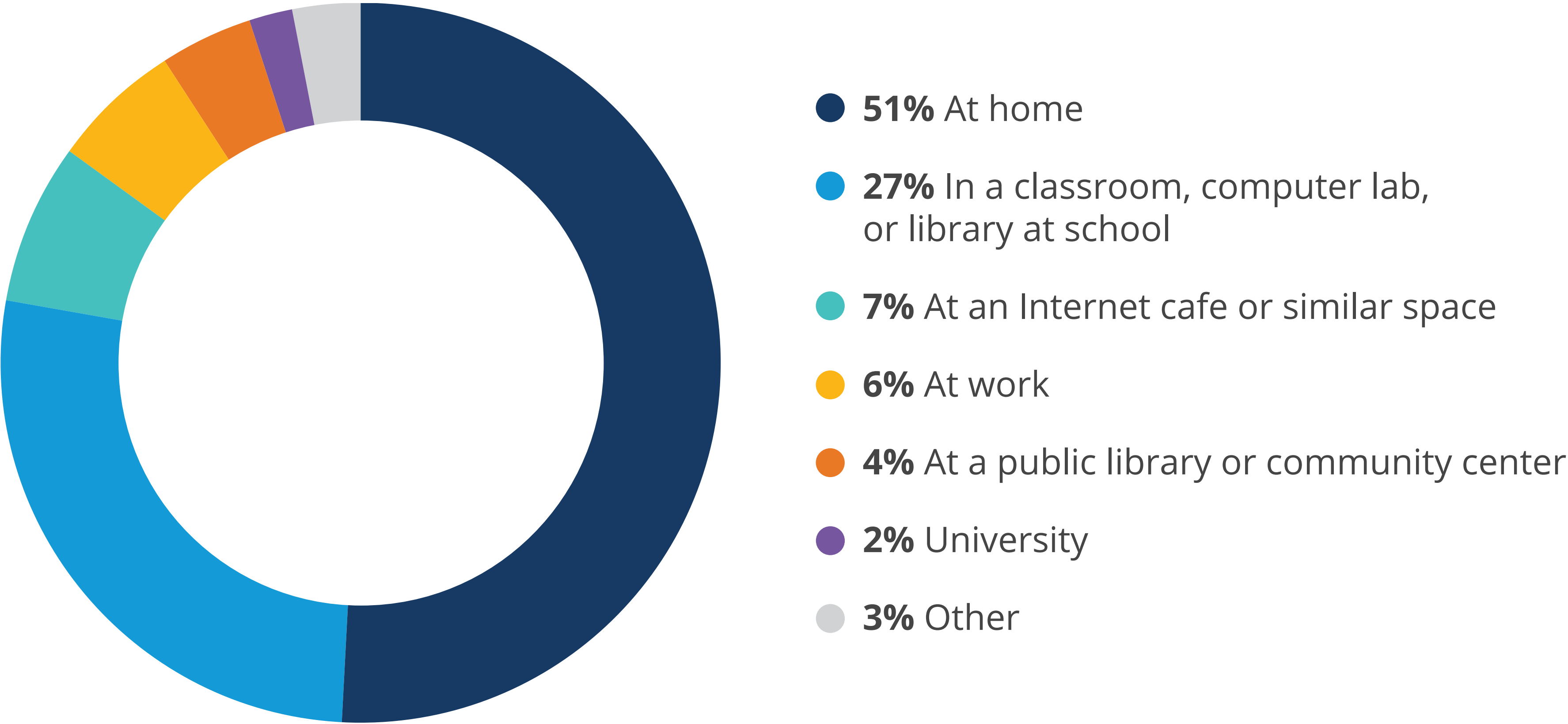
**Please select all of the devices that you have access to
(leave blank if you do not have any of the listed devices).**



How old were you when you first had access to a computer connected to the Internet or other public network such as BBSes?



Where did you first have regular access to a computer with an Internet connection?



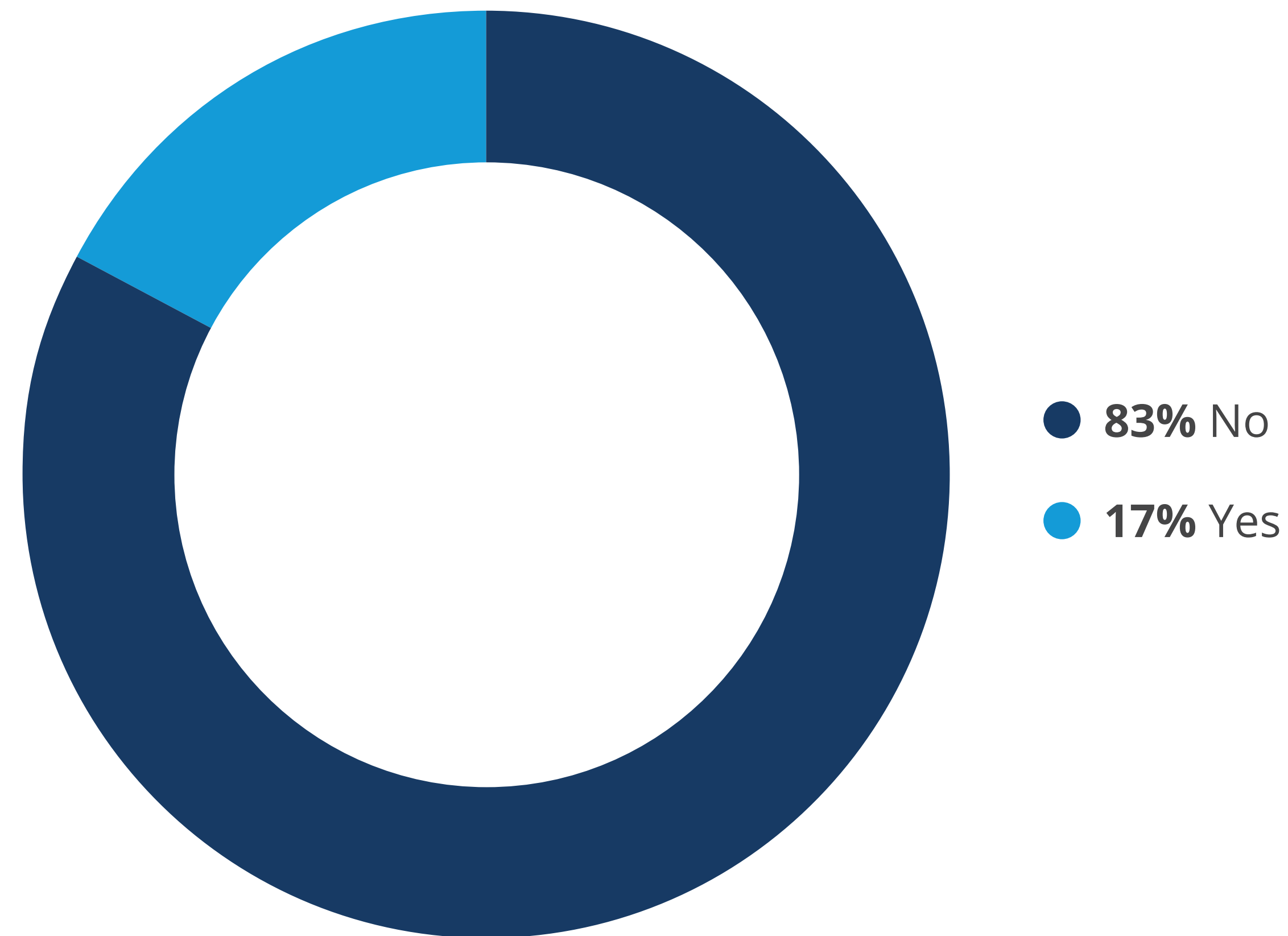
86% of “at school” and 84% of the at “public library or community center” respondents do not have reliable Internet access at home.

The “At work” and “University” categories were added as a result of coding open-ended “other” responses.

Dis/ability

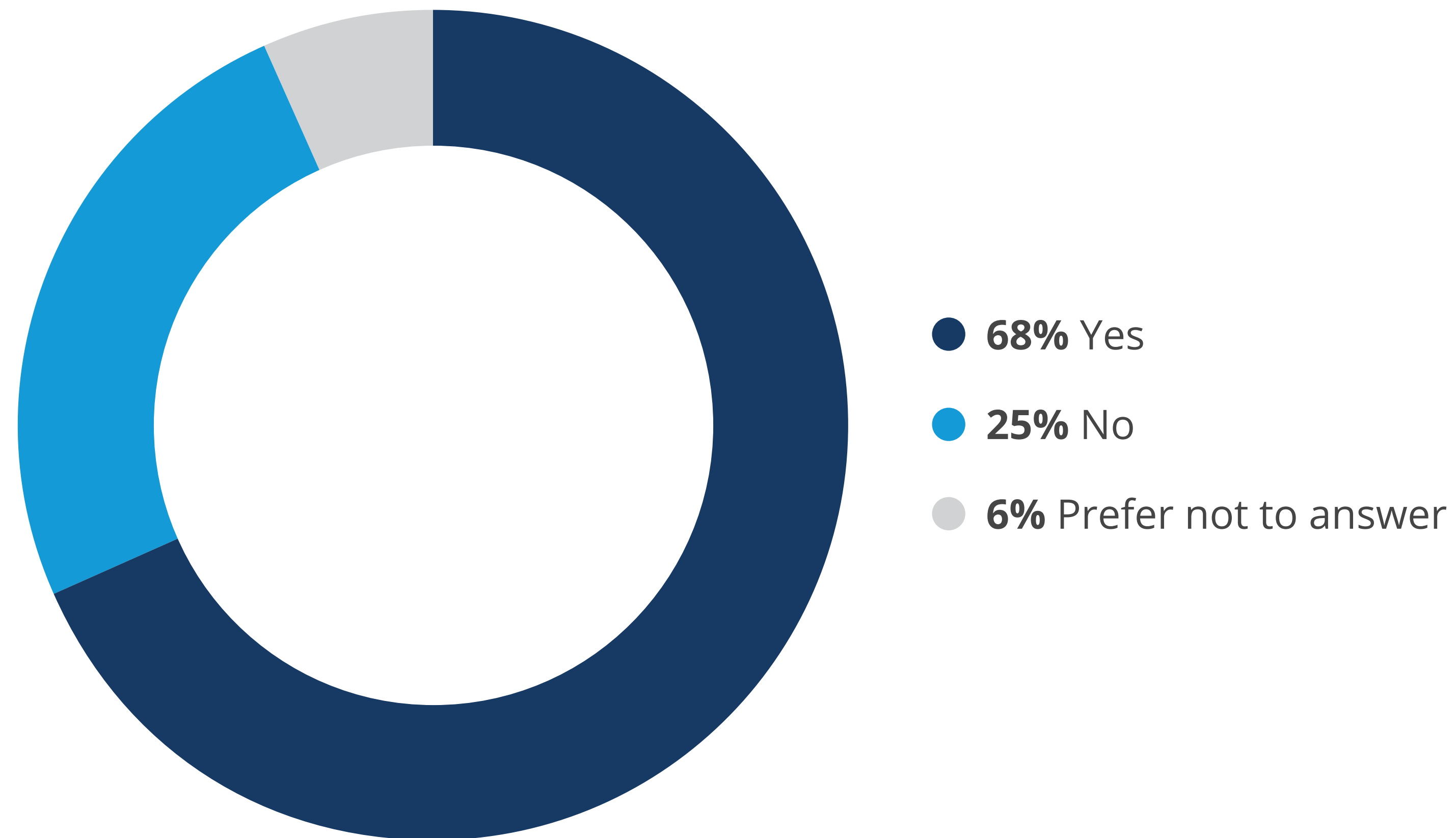
Do you identify as a person with a dis/ability?

For the purpose of this survey we define dis/ability as a long-term physical, mental, intellectual, or sensory impairment which, in interaction with various attitudinal and environmental barriers, hinders your full and effective participation in society on an equal basis with others.

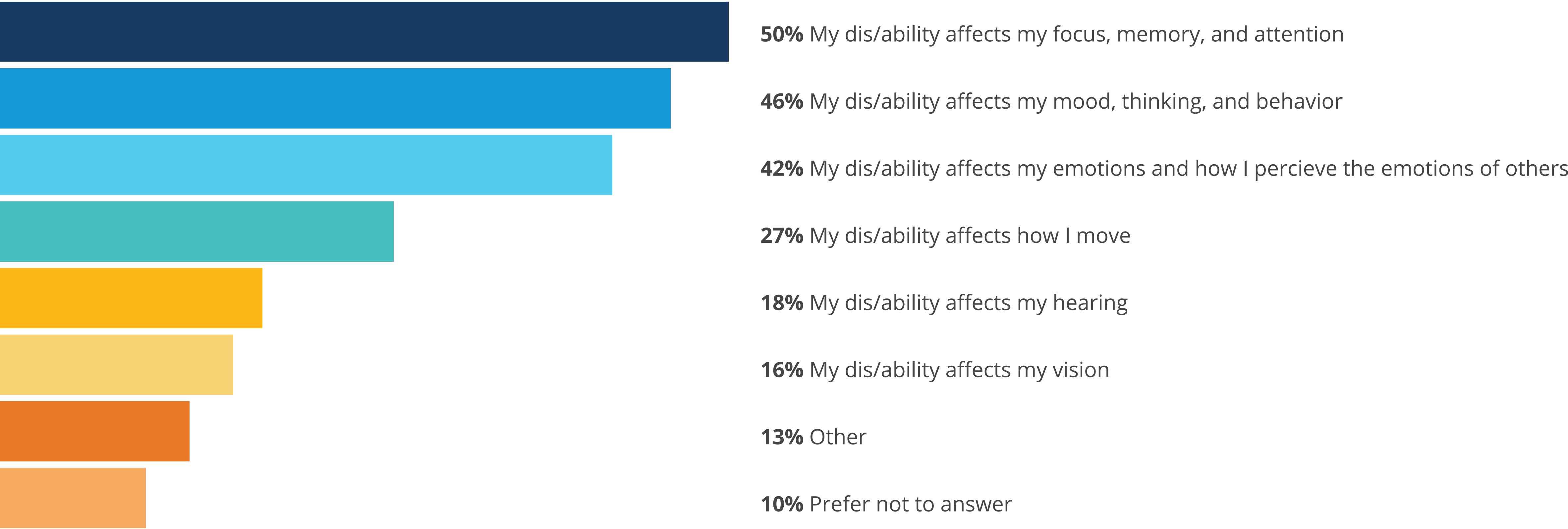


Does your dis/ability affect how you work?

For the purpose of this survey we define dis/ability as a long-term physical, mental, intellectual, or sensory impairment which, in interaction with various attitudinal and environmental barriers, hinders your full and effective participation in society on an equal basis with others.



What parts of your life does your dis/ability affect? Select all that apply:



Miscellaneous

What are your pronouns?

Analysis of over a thousand open-ended responses indicates that usage of gender-neutral pronouns is not widespread in the open source community.

We looked at the results according to how respondents answered, “Do you consider yourself to be gender non-conforming, gender diverse, gender variant, or gender expansive?”

- The gender conforming respondents’ pronouns typically conformed also. Seventy-one percent use a pronoun like “he / him / his” or “she / her / hers.”
- Slightly fewer (61%) of those questioning their gender still named either a “he / him / his” or “she / her / hers” type formulation.
- Forty-five percent of gender non-conforming respondents describe their pronouns in the traditional manner. At the same time, 35% did provide an answer that purposefully mentioned “they” or “he and/or she” or some other combination seemingly as a means to be inclusive.

- “There are no pronouns in my native language.”



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December 2021

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