



Royal Academy
of Engineering

Culture⁺



The
Honeycomb
Works

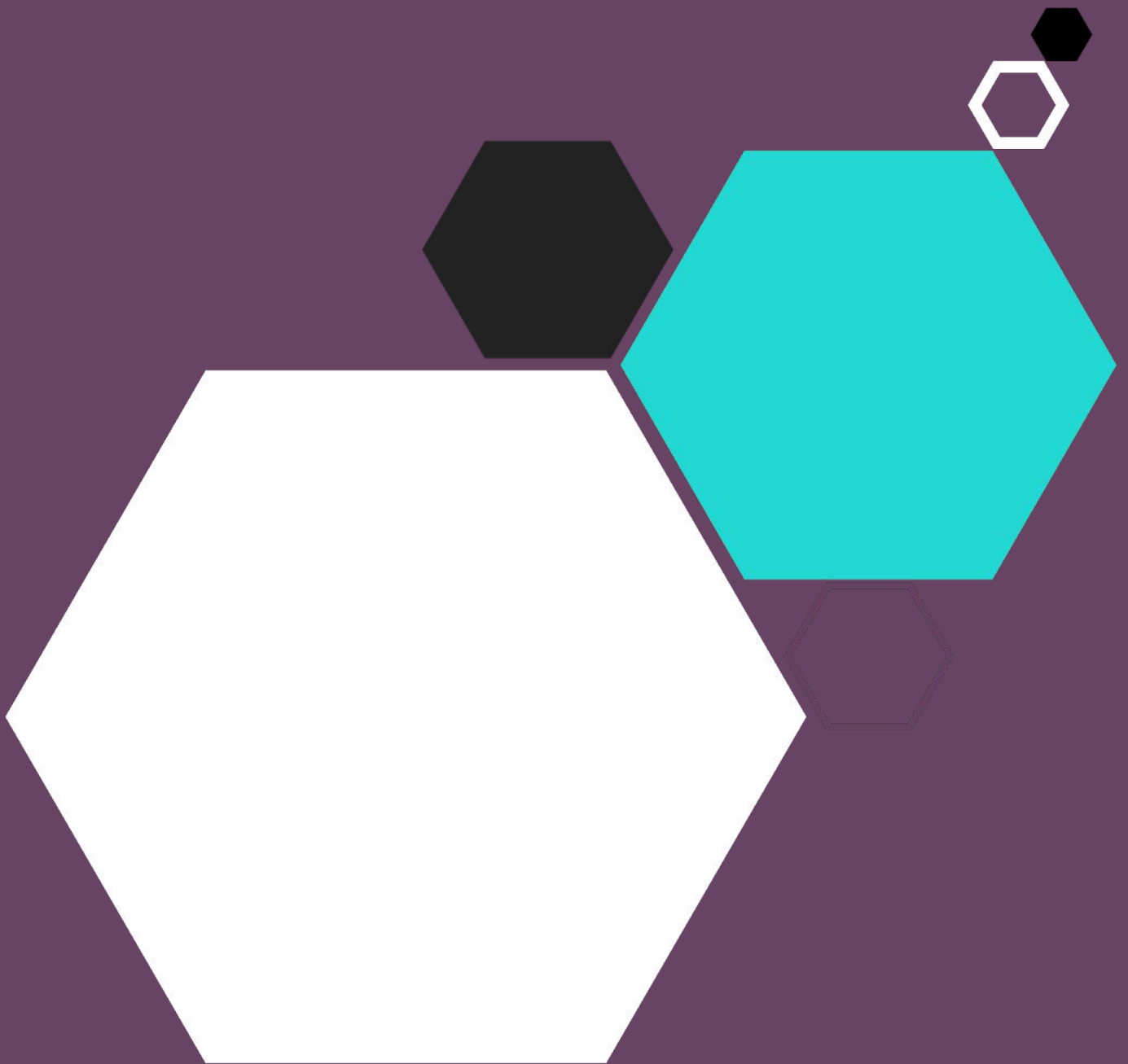
Culture and inclusion data report

What's happening in engineering
startups and scale-ups?

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Introduction and methodology



Introduction

At The Honeycomb Works, our mission is for everyone at work to feel like they belong and are free to invent.

A large part of that is creating inclusive, psychologically safe cultures where everyone feels able to contribute, challenge and innovate.

What is the current state of affairs? This report shares what we've learned so far via Culture⁺.

This data is gathered from early adopters of Culture⁺, organisations who recognise the importance of inclusive cultures. We've identified some clear strengths in these organisations. However, even within this population there are some areas that need urgent action. This suggests there is some difficult work to do in harder to reach organisations who are not yet on the journey with us.

Sharing the findings of this report is part of our ongoing mission to improve inclusivity and innovation in the engineering industry as a whole. Please do get in touch with any questions or to let us know how we can help.

Engineering startups and scale-ups are tackling some of the most complex and important challenges we face as a society. It is critical they are doing everything possible to get this right.

Foreword

At the Royal Academy of Engineering, one of our goals is to build an engineering community fit for the future: one that is skilled, diverse, and supported by inclusive cultures. We launched Culture+ to help startups, scale-ups and SMEs embed equity, diversity and inclusion (EDI) into their foundations, because inclusive cultures are not just good practice; they are essential for innovation, resilience and long-term success.

We recognised that smaller companies face unique challenges as they grow, from affinity bias in close-knit teams to managing culture at scale. And even though startups and SMEs make up 99% of private sector business in the UK, tailored, evidence-based support was lacking. Culture+ was created to fill that gap by turning culture into something measurable and actionable. Organisations can address the challenges they're already facing by engaging with their Honeycombs that cover distinct areas of inclusive practice. They can track their progress over time and see the real impact on their culture.

We also saw Culture+ as a way to better understand the specific barriers startups encounter. It has allowed us to look more closely at which behaviours are having the greatest influence on team dynamics and outcomes.

What is remarkable is how much we have already learned from just 50 organisations. The insights in this report reveal clear, tangible barriers to inclusive practice, from psychological safety to inclusive decision-making. These are not abstract ideas; they are measurable factors that shape how teams perform and grow.

And this is only the beginning. As more organisations join the platform, the evidence base will grow stronger. With data from 100 or more companies, we will uncover even deeper insights into inclusive cultures within startups and SMEs and what works to make them better.

We are proud to support this work and share these findings. We hope this report inspires action and reinforces that culture is not a side project, but a core part of engineering excellence.



Erik Tomlin

EDI Platform Manager
Royal Academy of Engineering

The Honeycomb Works

Data. We know you love it.

As engineers, you know that if you want to properly assess a system or diagnose a problem or even just ensure ongoing safety, you need data and continuous monitoring. Culture is just like any other system and understanding how teams work within the companies trying to solve the world's problems is mission critical. Whether someone is safe to speak up when they see something wrong, admit when they made a mistake or share the breakthrough idea that they may not be super confident about, can literally have life and death consequences.

At the foundation of our mission for everyone at work to feel safe to belong and invent is turning behaviour into data. However the challenge for startups and scale-ups is that with small teams, it can be challenging to draw insights out of a small sample size.

We are solving that problem by looking across multiple organisations; we can draw evidenced conclusions that will specifically help your team grow well. That is why this report is so important.

Here you will find the first insights we've gathered. As people use Culture+ to develop themselves, we've been aggregating and analysing the data. We've found some things that validated what we thought and other surprising things. Most importantly, this isn't just an academic exercise. Every key insight comes with actions to take that can be implemented by anyone in a leadership position. For some, you don't even have to be in leadership to use the knowledge to improve your organisation, your team, or yourself.

There is much more to come. Since this analysis, we've added about 10 more organisations to the platform and we are learning more every day. Stay in touch to be sure you get the next set of evidence-based recommendations you can put into practice to improve your culture.



Melissa Sabella
CEO, The Honeycomb Works

What did we do?

The Honeycomb Works and the Royal Academy of Engineering created a platform that contained all the essential support startups needed to build and sustain inclusive cultures.

This process involved extensive consultation with various stakeholders, from engineering startups to experts in inclusion within the engineering industry.

The result was Culture⁺, a behaviour change platform that supports individual development as the path to creating positive, lasting change in engineering.

The platform allows us to gather data around how people are feeling and how they are behaving. We are sharing this data now to provide an evidenced picture of how things are going for UK-based engineering startups.

“Culture⁺ has given me the tools to build an inclusive team and has provided us with a platform for reflecting on our habits in a way that allows us to grow.”

ACT Medical

Why a Honeycomb?

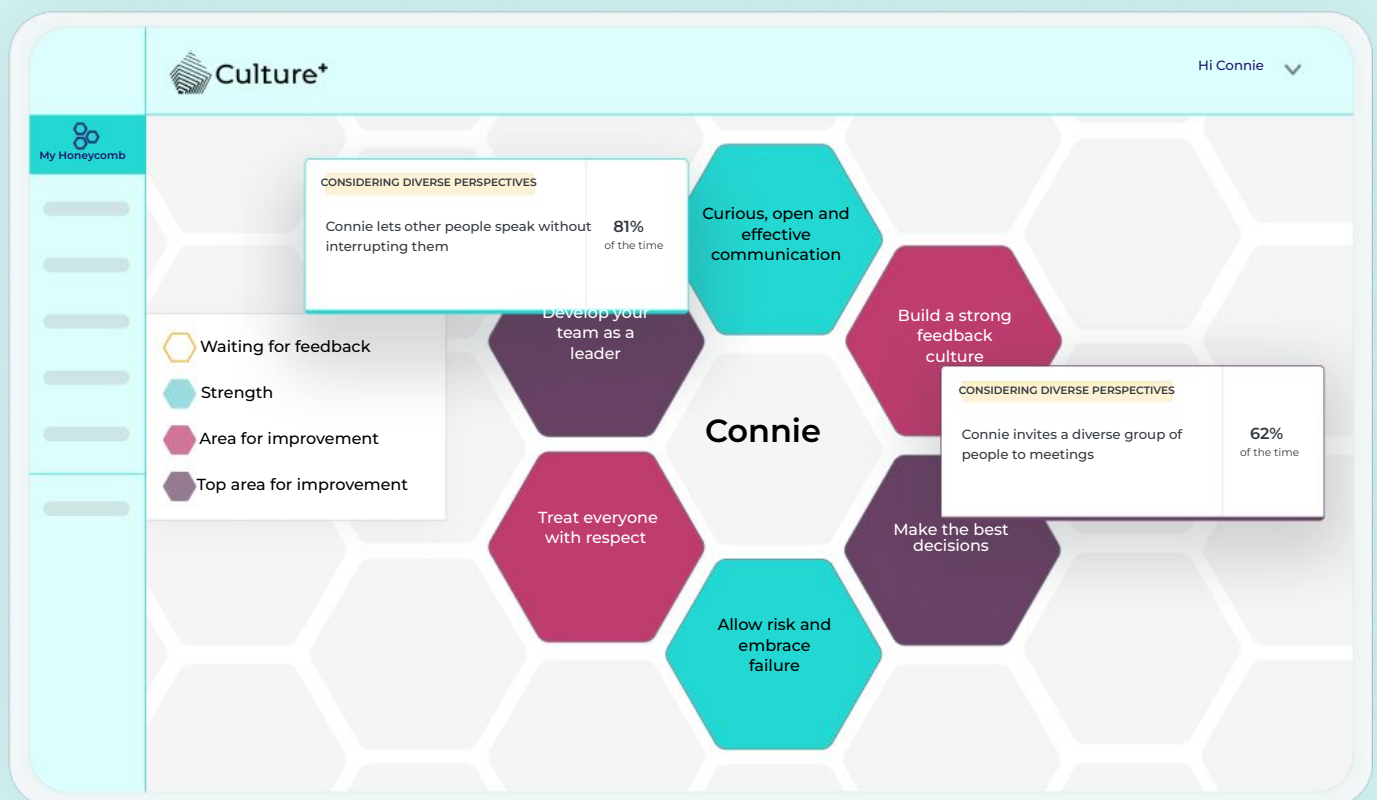
Here's a little bit about how the platform works to help you fully understand the data

The core areas needed for inclusion and innovation were identified through our extensive research.

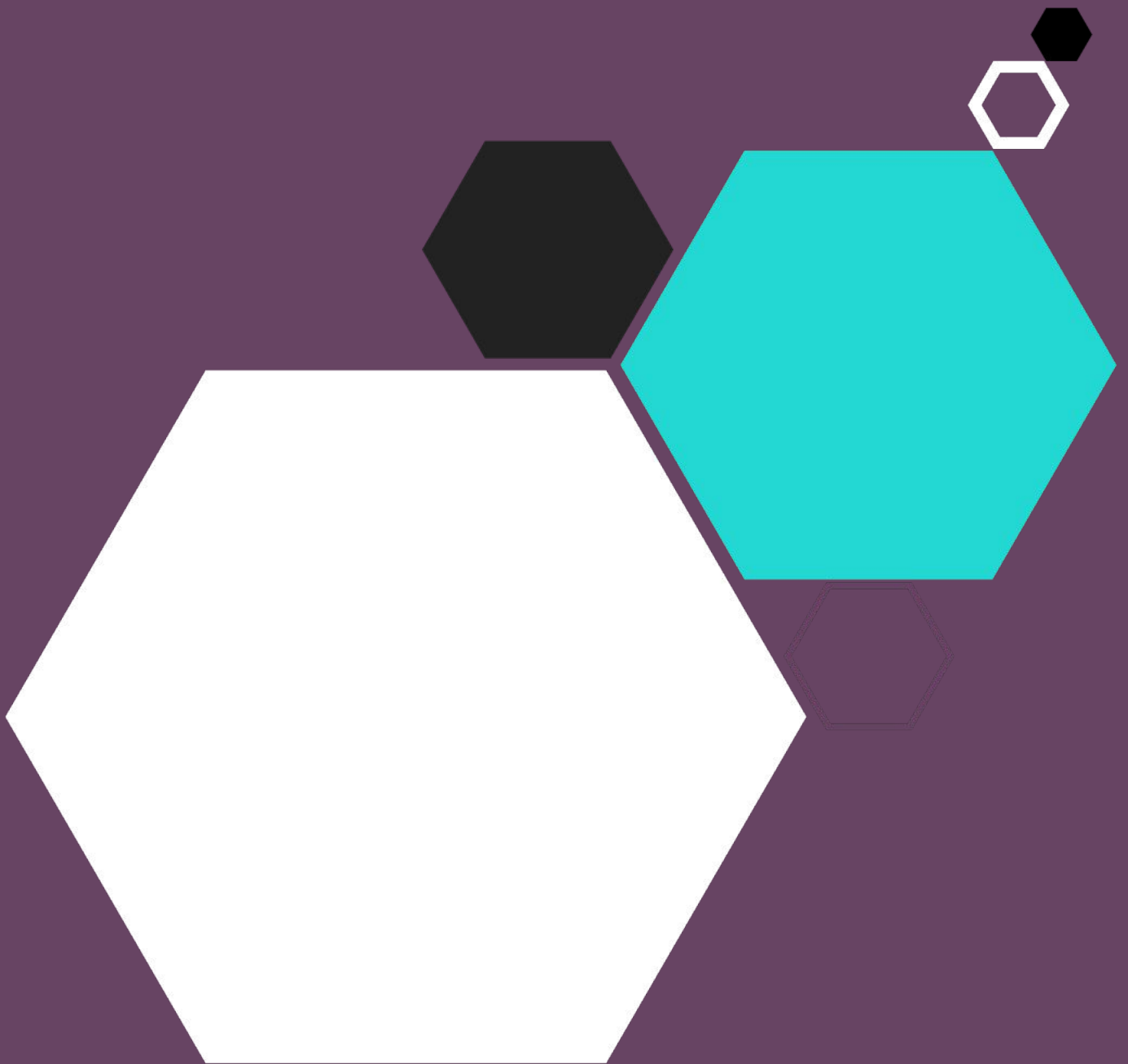
Each of these core areas is attached to a cell. Each cell has the four behaviours that are needed to get to that outcome.

This report discusses the average scores given for individual behaviours and the average scores for cells (average across the four behaviours contained in the cell).

A cell or behaviour is considered a strength if it has an average score >78%.



Findings



Key findings: What should you know?



Better for the in-group?

The evidence suggests that women and those outside of the 35 to 54 age group are having a harder time.



Are managers wearing rose-tinted glasses?

The data suggests that they might not be seeing the worst of the behaviour around them.



The biggest risk?

Psychological safety needs to improve, otherwise innovation will suffer.



What to make of high scores?

It's important to dig deeper.

01

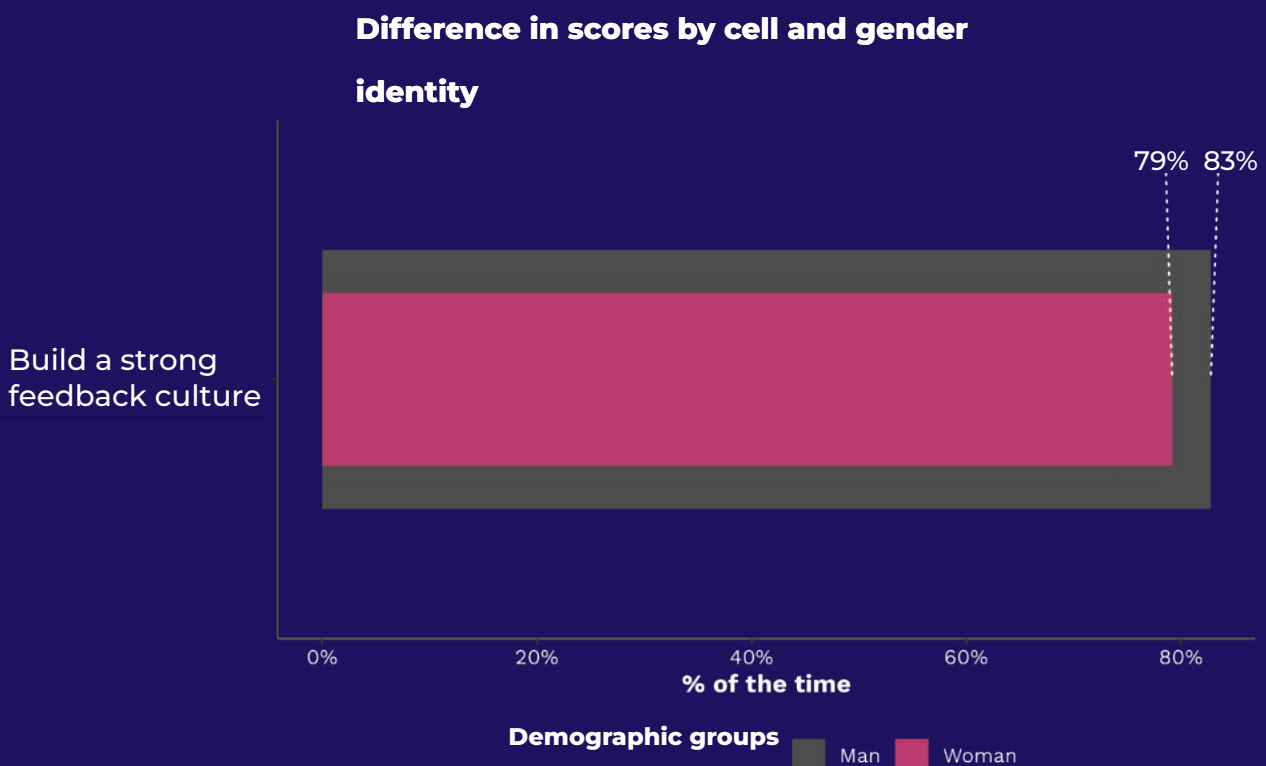
**Things are
great — for the
in-group**



1.1. It's tougher for women

Women gave their colleagues lower scores than men on four cells and the same score on one cell. This is an emerging pattern and we're keen to gather more data to strengthen our findings.

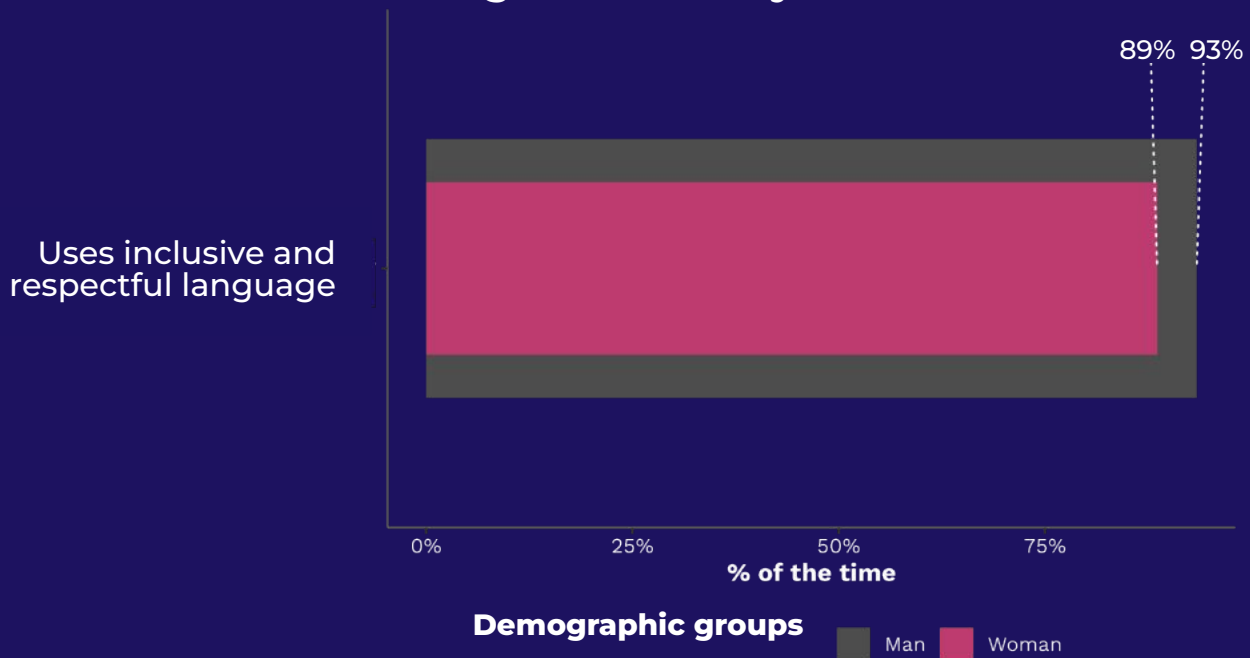
Below are two statistically significant differences we're reporting to illustrate the finding.



Women give their colleagues lower scores than men give for behaviours connected to feedback.

This finding suggests that people are asking for and receiving feedback less often around their female colleagues. Feedback is the life line of innovation. It's also a clear sign of collaboration and trust. Small differences in how feedback is given and received is likely to have a significant impact on women's experiences over time.

Difference in scores by behaviour and gender identity*



Women give their colleagues lower scores than men for the specific behaviour “uses inclusive and respectful language”.

This finding suggests that women observe and experience less inclusive language than their colleagues who are men.

It's also possible that the higher scores from men indicate a lack of awareness or sensitivity to some of the potentially exclusionary language used. We know that people tend to pick up on this language at a much higher rate if they feel like they are the target.

To further support this finding, those who said they had a mental illness gave scores that were 7.5 pp lower than those who said they didn't. We will report more fully on this group's experience when we gather more relevant data.

Note: we don't have sufficient data to report experiences of gender beyond man/woman

Any individual woman might not notice these differences. Even if they did, they may not be able to ascribe it to bias. However, we can see in the aggregate data that this is happening across organisations consistently. It is likely to influence who develops and is listened to and therefore gets promoted, contributing to the gender gap at senior levels.

We know that there is a slight increase in women aged 16 to 34 entering engineering and technology. Yet the proportion of women in engineering is dropping, largely due to women between the ages of 35 and 44 leaving. *

Culture⁺ helps identify the specific behaviours that should be part of the focus in efforts to reverse these trends.

*Spike in women aged
35 to 44 leaving engineering*

* 2024, EngineeringUK, Press release: Spike in women aged 35 to 44 leaving engineering

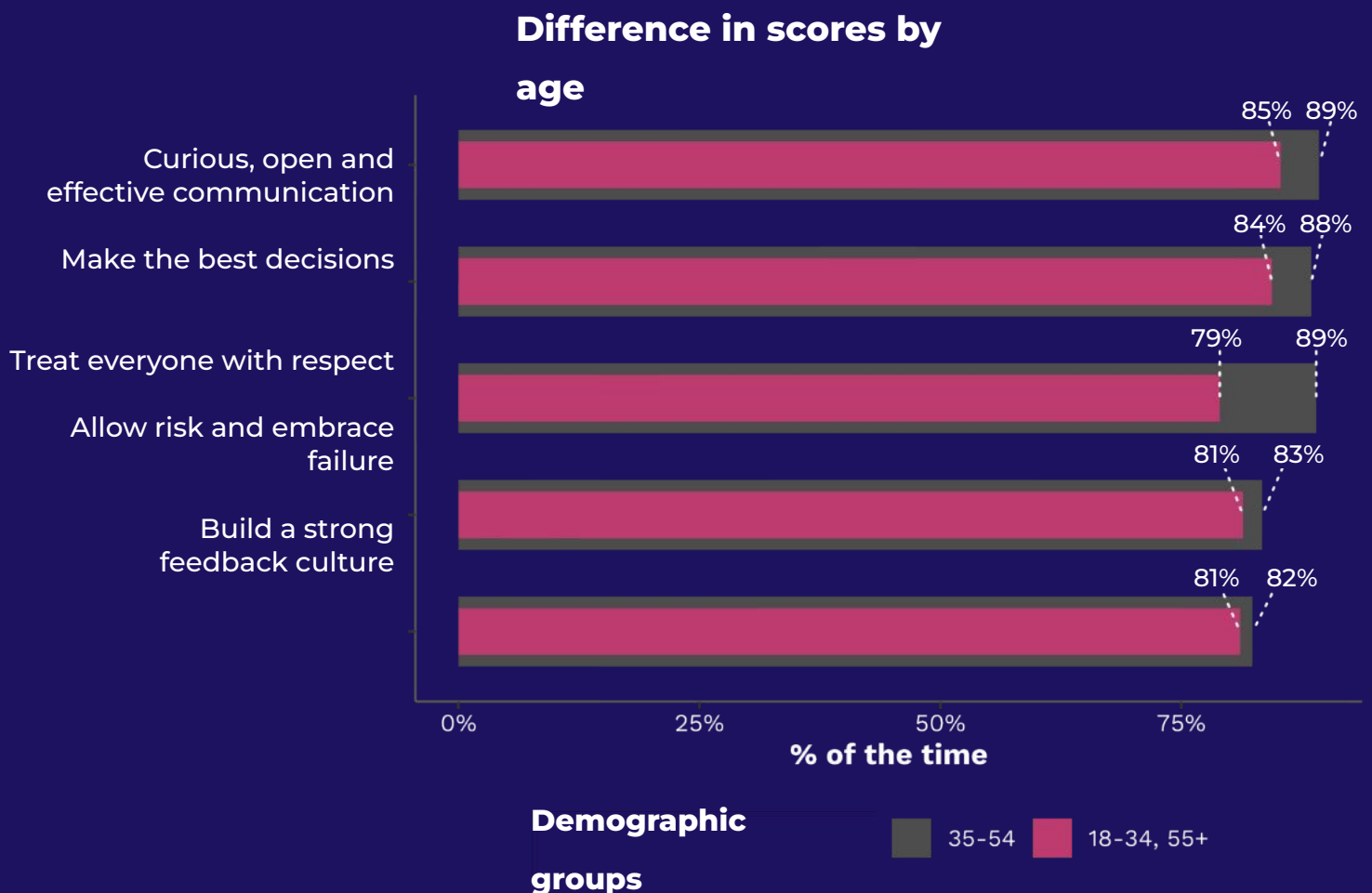
1.2.

An age gap in experiences?

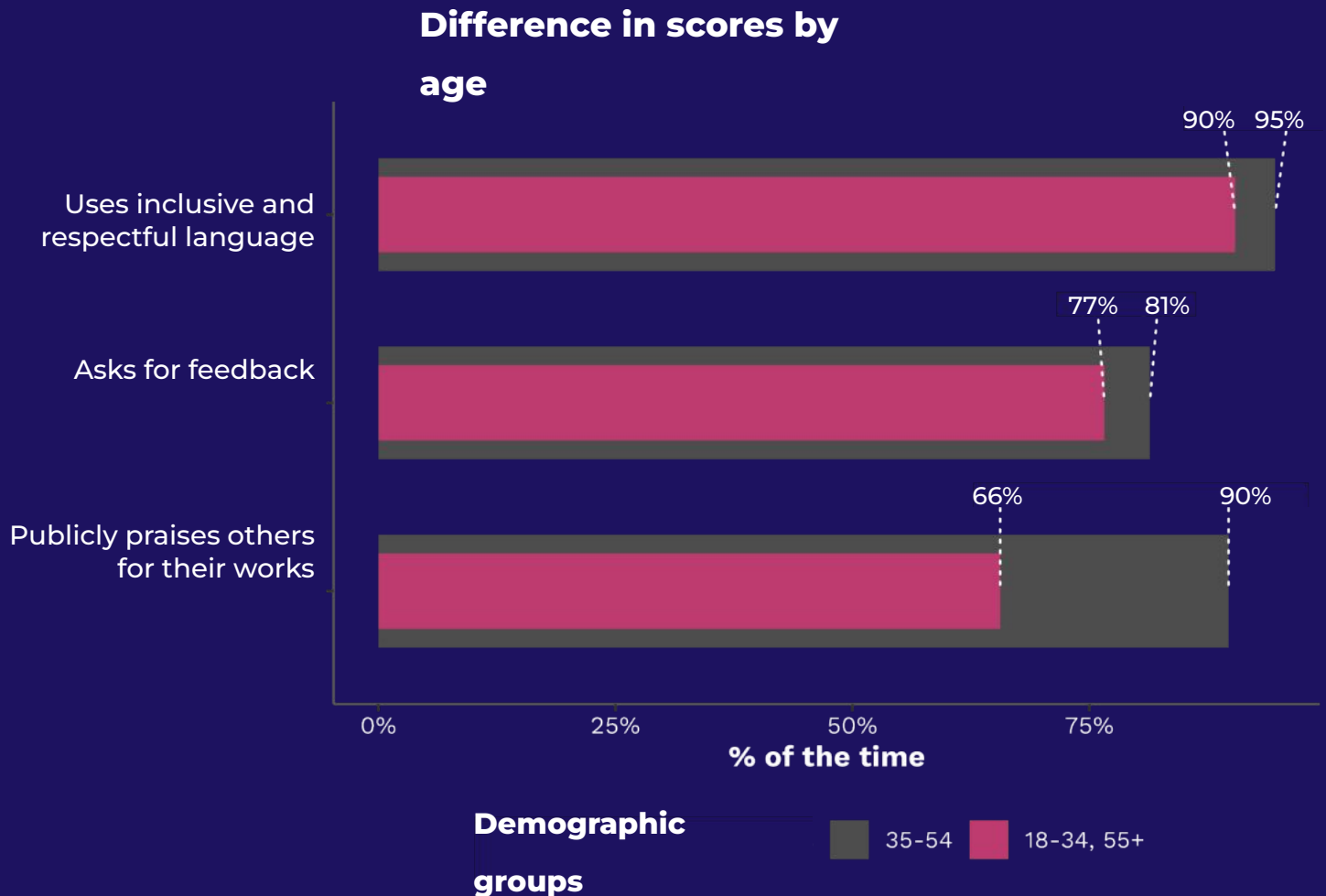
Our evidence suggests **age is a factor** in how you are treated. People aged 35 to 54 are having the best experience, followed by those between 18 and 34. People over 55 are having the worst experience.

It appears the group who are 35 to 54 are having a more positive experience of their colleagues' behaviour. They scored all behaviours higher than other age groups. Perhaps people in this group are more senior and as such people change (improve) their behaviour around them. This is supported by our next finding.

Here are the differences for scores in cells
(all statistically significant):



There are three behaviours with significant differences:



There's a large discrepancy in how often these groups are observing their colleagues publicly praising others for their work.

The absence of this behaviour could lead to the 18 to 34 and 55+ age groups feel undervalued and demotivated.

Note: responding to demographic questions is entirely optional, the numbers responding for each question vary and can be seen in the appendix.

02

**Managers might
be out of touch
with reality**

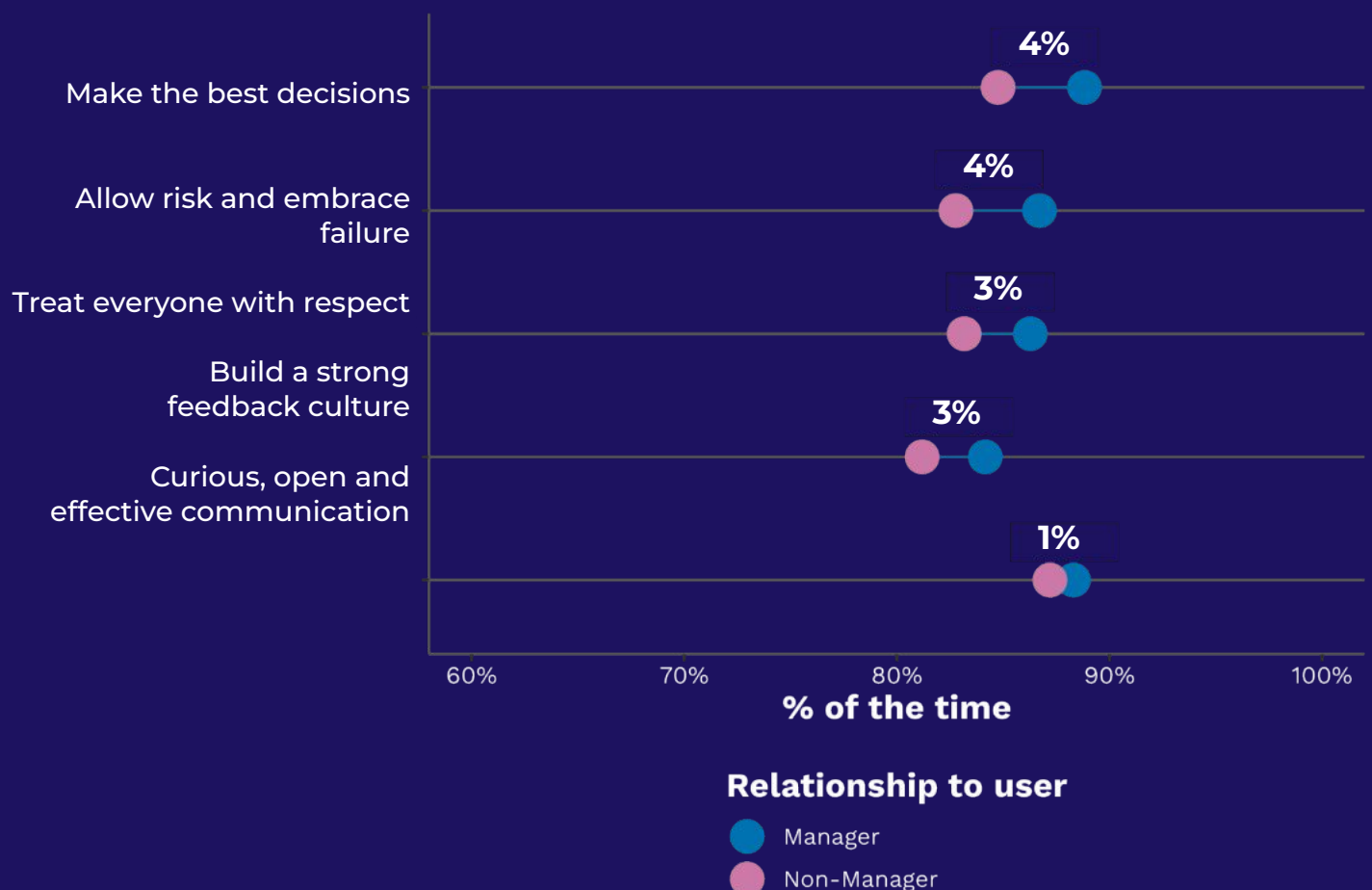


2.1.

Managers might be missing what's really going on

As part of our analysis we separate out scores given by managers from those given by non-managers. The average scores given by managers was higher than the average score given by non-managers for every cell.

The difference between the scores given by managers and non-managers for each cell. Manager scores are always higher.

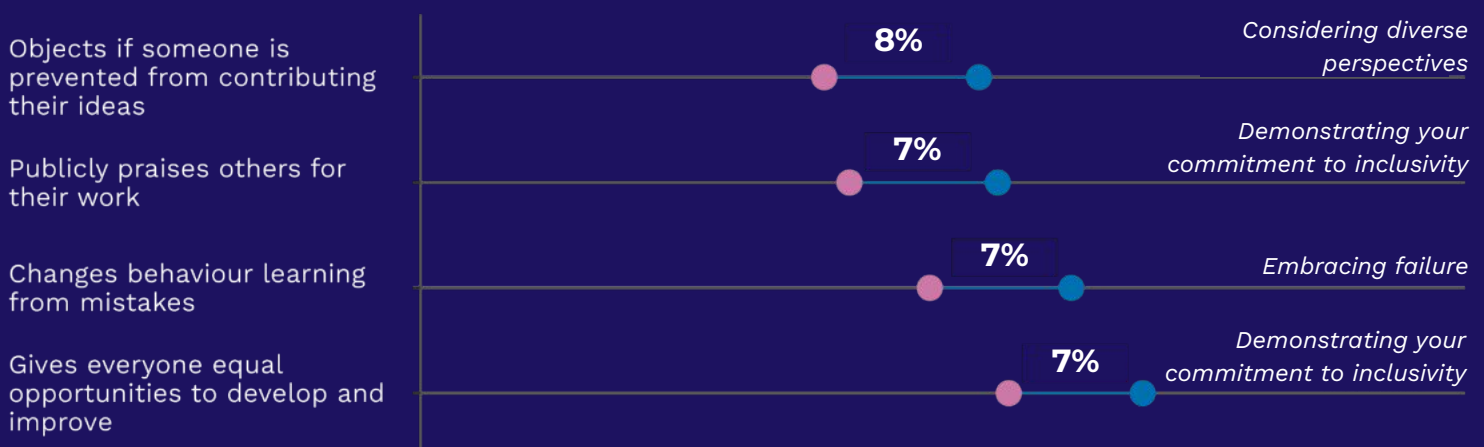


2.2.

Is collaboration happening as effectively as you think?

The four behaviours with the largest difference between managers and non managers, all relate to effective collaboration and ideas sharing. Managers seem to think this is happening more often than others observe it happening. This is a big risk when it comes to cross-functional, innovative teams.

These four behaviours have the biggest difference between scores managers gave versus scores non-managers gave.



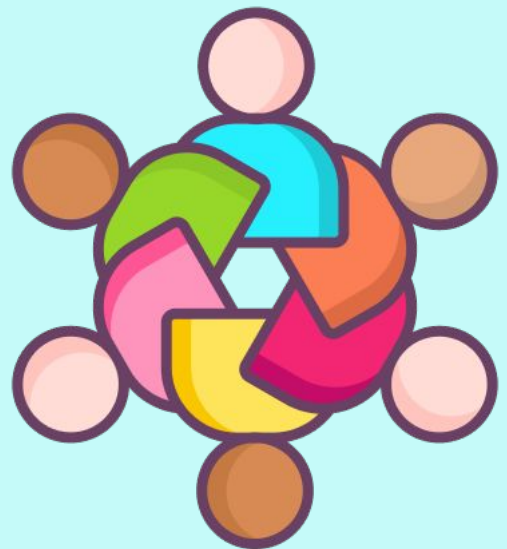
“Managers need help developing cultures where collaboration thrives.”

Worried about this in your context?

Keep reading and we'll share the actions you should take.

03

**The biggest
risk: lack of
psychological
safety**



3.1.

Startups need support creating a psychologically safe culture

If people don't feel able to ask for feedback, challenge each other and collaborate then there's little chance of innovation.

We gather data on behaviours via Culture+. We also gather data on feelings of belonging via an engagement survey. A clear pattern emerged: behaviours connected to feedback and feelings connected to psychological safety are the weakest areas.

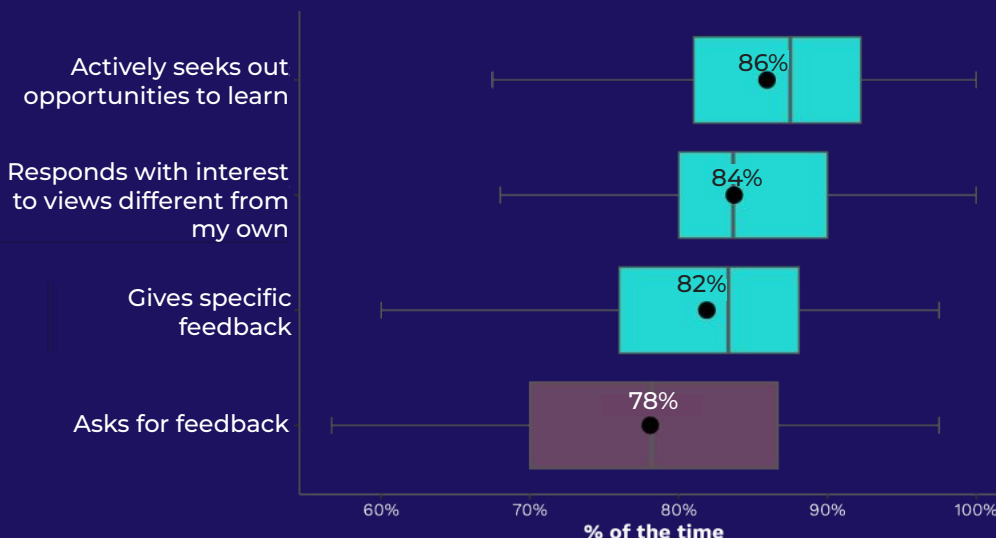
We think there's a link between these two things. Feedback flourishes when people feel safe speaking up, hearing opposing opinions and pushing each other to be better. These are also the conditions needed for psychological safety.

Creating an environment of safety is really tough in this particular context: things move very quickly, it's volatile and often unpredictable.

It's essential we help startups crack this. The ability to innovate and invent will determine whether or not each startup is successful.

Boxplot distribution of user scores

Mean represented by dot
scores



Feedback is the lowest scoring cell.

The lowest scoring behaviours in this cell are the two foundational skills of feedback: asking for it and giving specific feedback. It's worrying that people are missing 1 in 5 opportunities to ask for feedback. Regular, specific feedback leads to trust, better decisions and products.

3.2.

What did we learn from the belonging survey?

We ran a survey with six Culture+ startups to measure feelings of belonging. The questions we asked were designed to measure sentiment in three key areas: belonging and inclusion, psychological safety, and authenticity and uniqueness.

For 5 of the 6, psychological safety clearly emerged as an area of concern. This question had the least positive responses of all the questions asked for these 5:

Survey question: *If I make a mistake on this team, it is never held against me*

Accepting that mistakes are part of the process, and dealing with them without blame or lingering negativity is core to psychological safety. Without it, people will stop taking the risks necessary to progress.

It's also important to note that this is a subtle way some people might be treated unfairly – in a culture where blame is attached to mistakes, we know that those from marginalised groups are likely to be given less grace. Put simply, if you're in a minority in a workplace, it's likely you're very familiar with this feeling.

“

Innovation doesn't happen without psychological safety.

”

Want to ensure you're doing everything you can to improve safety and innovation in your organisation?

Keep reading and we'll share our recommendations.

04

**High scores
are not the
full picture**



4.1.

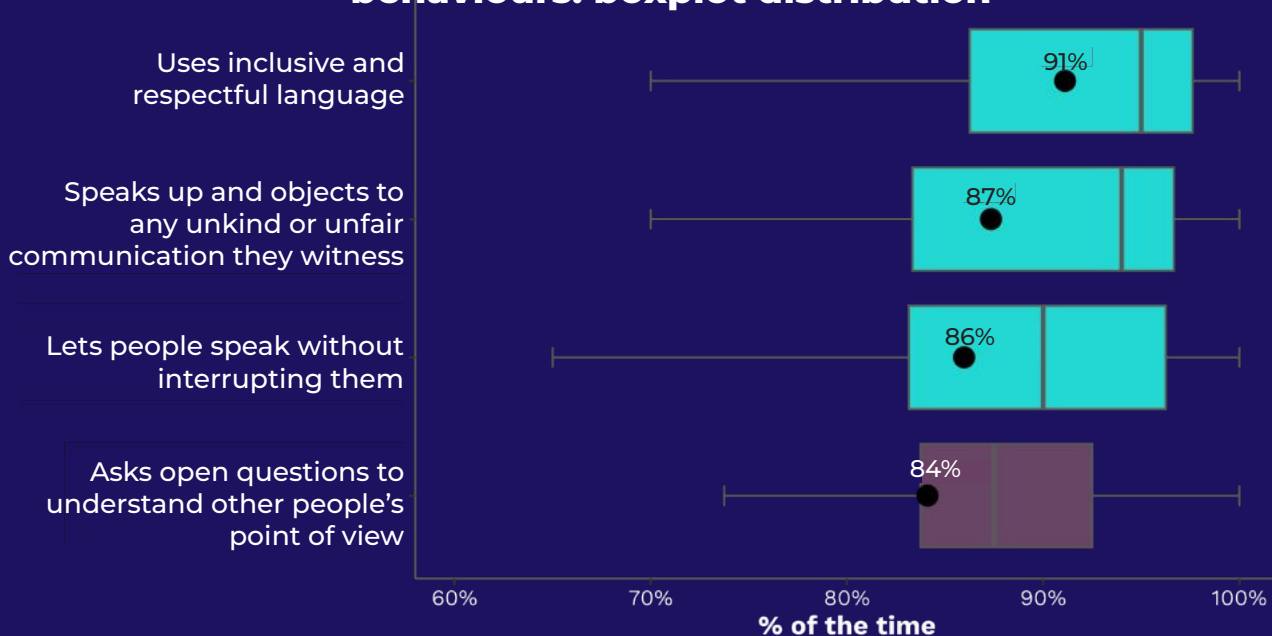
The big picture looks good, but may be hiding the nuances

Inclusive communication emerged as a strength. It was the top scoring cell.

Using inclusive and respectful language is the highest scoring behaviour. Nine out of ten times, the typical user did these behaviours when they had the opportunity to do so. This behaviour could be considered a great baseline to build on.

The graph below shows the breakdown of the scores for each behaviour in this cell. It's important to note the range of scores. Even a small number of people not doing these behaviours consistently will have an impact on the culture of an organisation.

Reviewer scores for inclusive communication behaviours: boxplot distribution



The dot represents the scores of the typical user, the solid box is where the vast majority of responses lie, half above the vertical grey line and half below. The horizontal grey line represents the range of responses (we've removed outliers).

4.2.

High average scores not the full picture

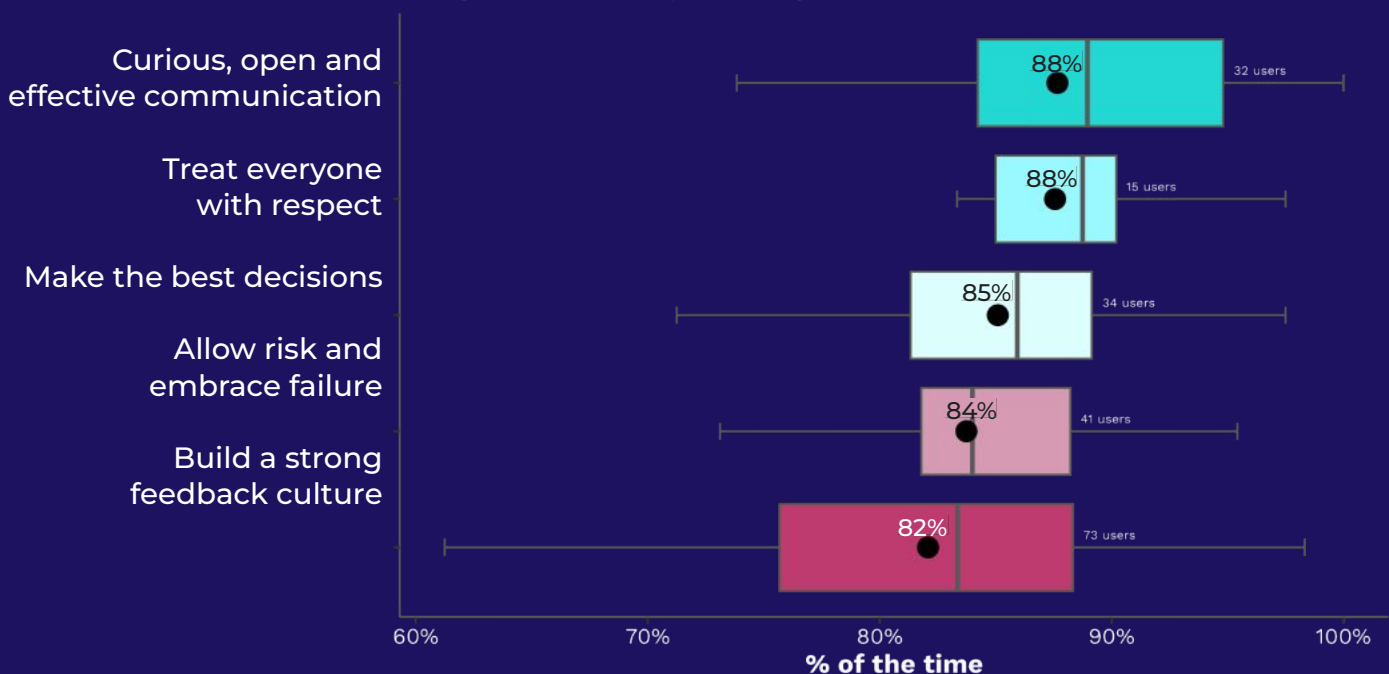
When we look at the average scores for the key focus areas, the picture is pretty positive. The graph below shows the average and range of scores given for each of these core cells. It's important to note we've removed outliers for clarity, some people are getting more negative scores.

There's a lot of good work happening but, as previously shared, it's important not to dismiss the fact that those who are not in the majority group may be having a less positive experience.

The range of scores also shows a lot of room for improvement, particularly in valuing feedback.

How often users were observed performing behaviours, by cell: boxplot distribution

Average of distribution represented by dot



The dot represents the scores of the typical user, the solid box is where the vast majority of responses lie, half above the vertical grey line and half below. The horizontal grey line represents the range of responses (we've removed outliers)

4.3. One example of that nuance? People who get low scores may not be treating their colleagues the same way

We found something interesting in the data: when people got lower scores from their reviewers, there was also a lot less agreement between their reviewers.

This tells us that some people are observed behaving very well by everyone (high performers), while lower performers are observed behaving well by some people and not so well by others.

It's important not to lose sight of this nuance in the positive picture of high average scores: a single person not behaving inclusively towards you is enough to disrupt your feelings of belonging.

Relationship between user score and disagreement from reviewers

Each dot represents one user (N=62). Lower and rightward is better



Conclusion and recommendations



Conclusion

Our findings suggest there are some real areas of strength within the organisations we've supported.

However, it's also clear that there are risks identified. Psychologically safe cultures, where people feel able to give and receive feedback, make mistakes and collaborate effectively, are the foundation of innovation. It's tough to create and sustain them in this context but it's also the key to success or failure.

It's also possible that the positive picture is influenced by the fact that this is a largely homogenous group. We need to take seriously the evidence showing women and certain age groups are having a less positive experience of some behaviours.

We're committed to gathering the data and evidence we need to continue pushing for more, demanding better.

Get in touch if you want to help (hi@thehoneycombworks.com).

*Don't let the experiences
of the majority be the only
thing you focus on*

Recommendations



1. Focus on feedback

Use Culture+ and any other structured process you have to really embed feedback into your culture. This will help managers get a true sense of what's happening, it will improve collaboration and help build trust and psychological safety. It's important to start with the basics of what is helpful feedback. **You can find feedback resources in the [Culture+ platform](#).**

Without structured feedback, you've no way to know how things are truly going.

2. Model bravery for psychological safety

This area needs attention. Dig into the details in your context. How do you respond when things don't go well? What is happening that makes people more or less able to take risks and innovate? We've created [a workshop template](#) to help you have these conversations with your team. Get in touch if you'd like us to support you with this.



You have to walk the walk and take risks on difficult conversations.

Recommendations



3. Check in with managers

Our findings indicate that managers may be missing some of what's happening with their teams. A good first step could be to discuss some of these key behaviours with managers and have them share as priority with their team. You can also get in touch with us directly, we're happy to have a conversation about tailored support for your management team.

Do you know what's going on for your managers?

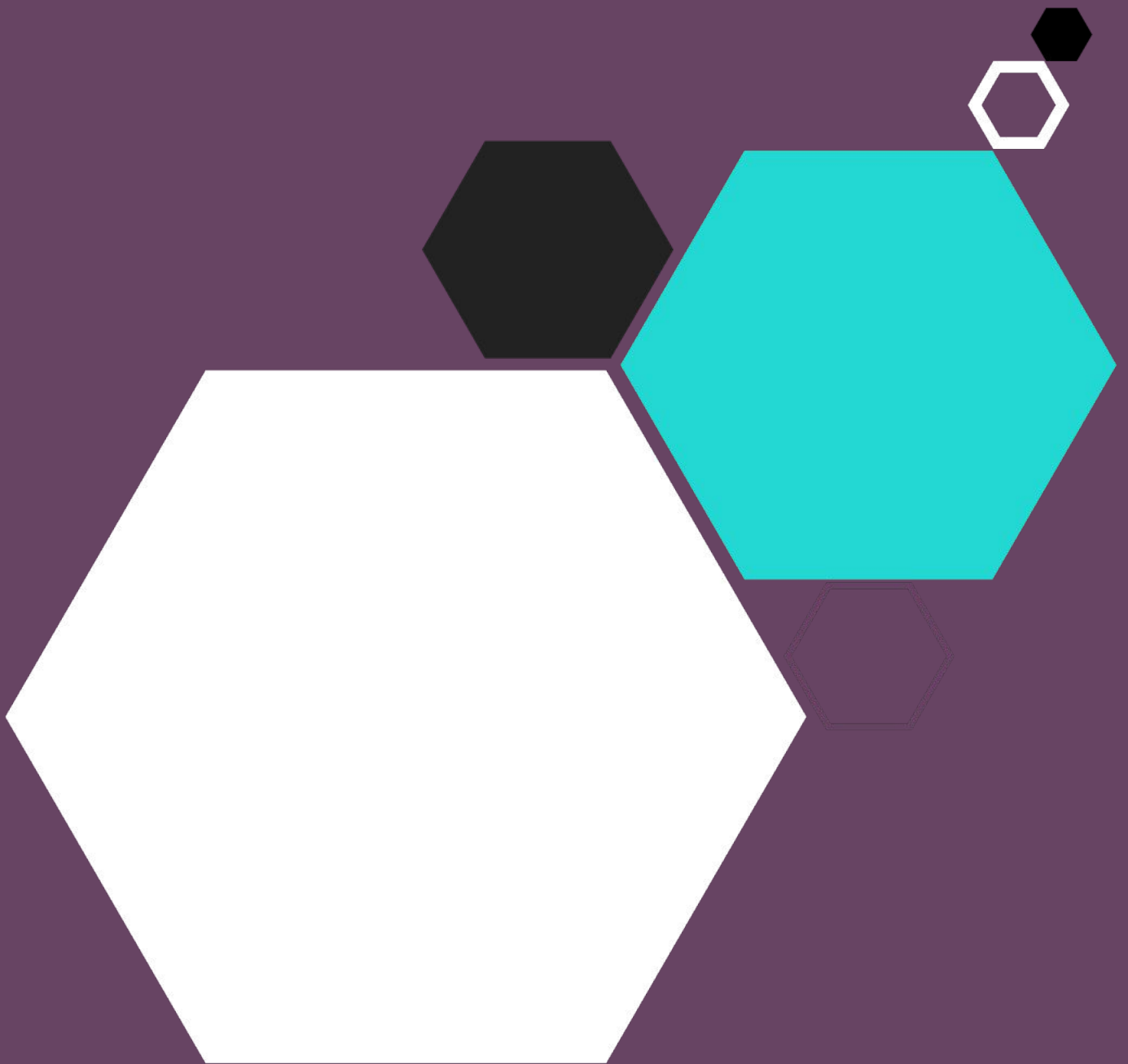
4. Continue your commitment to building diverse teams

It's clear there continues to be a lack of diversity in engineering startups. It must continue to be a priority to correct if we want to build the best engineering industry possible. Continue to pay attention to how people are treated differently, particularly if they are not part of a majority group. We'd also suggest digging into our recruitment resources to ensure you're doing everything you can as your team grows.



What are you doing to build (and sustain) a more diverse engineering industry?

More insights and appendices



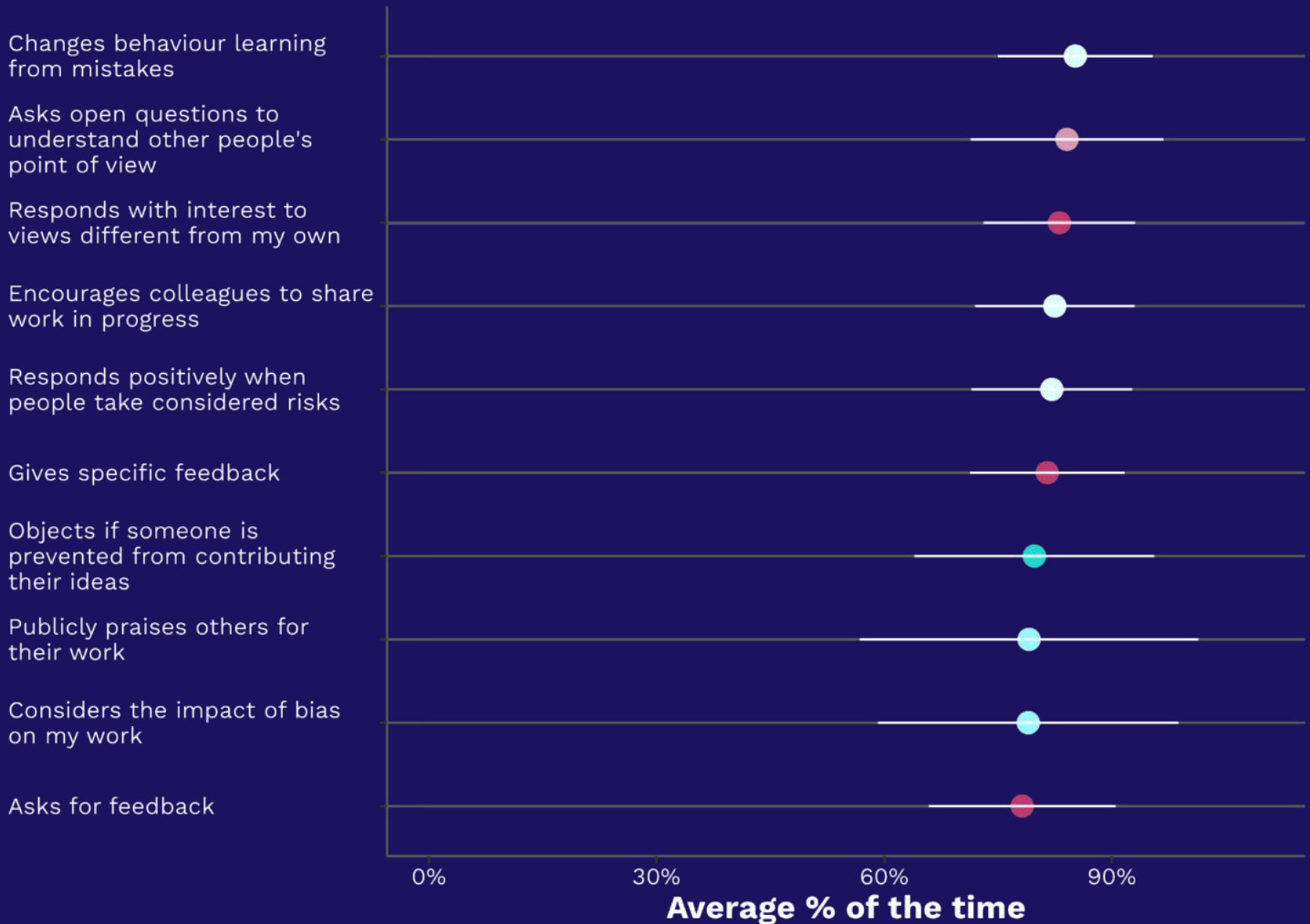
Average scores for all behaviours

These graphs show the average score for the lowest scoring behaviours and how close most scores are to that score.

Average user scores by behaviour*

Ten lowest scoring behaviours

*White line represents standard deviation not range



Cell

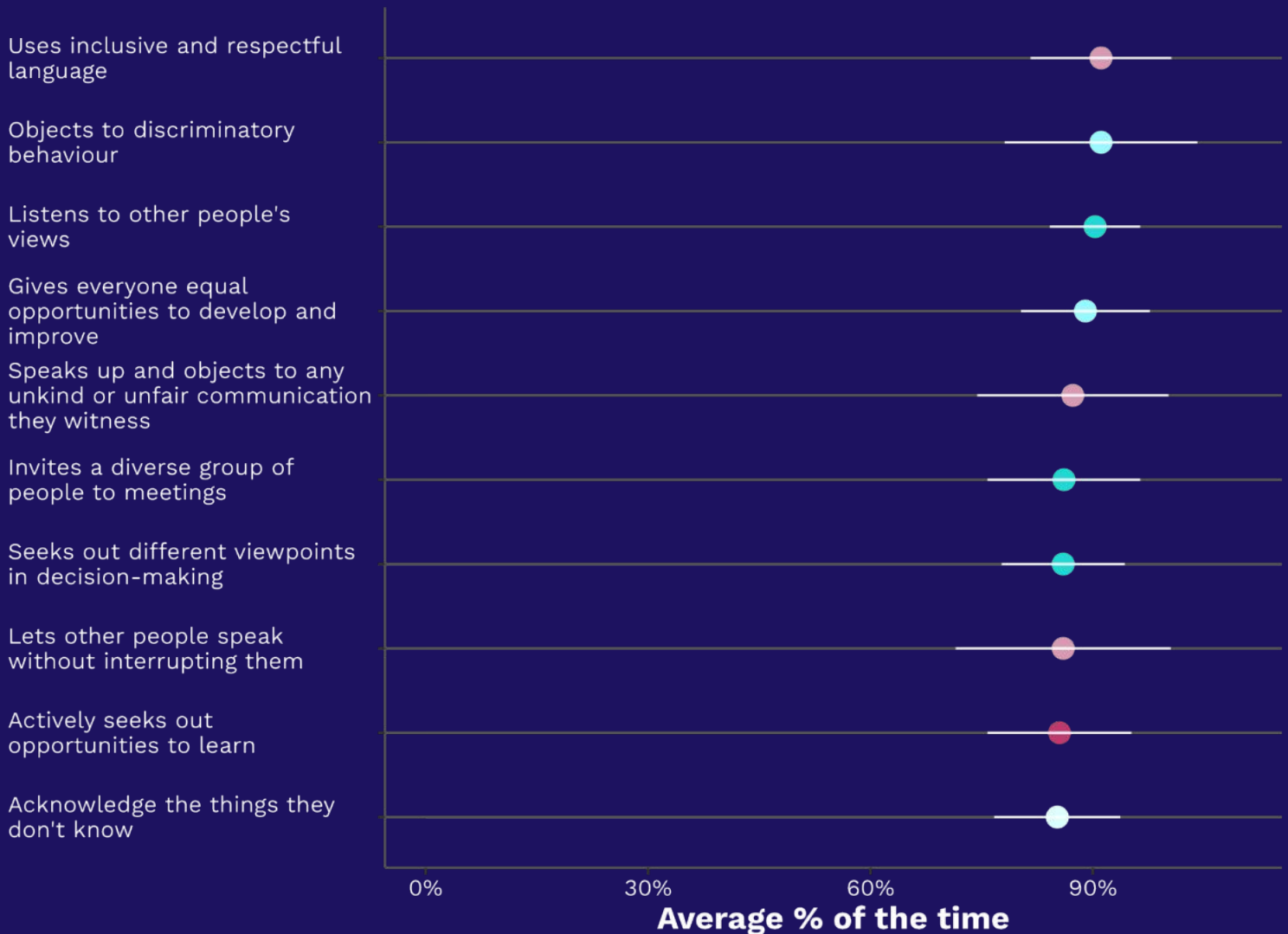
- Considering diverse perspectives
- Demonstrating your commitment to inclusivity
- Embracing failure
- Inclusive communication
- Valuing feedback

Average scores for all behaviours

These graphs show the average score for the highest scoring behaviours and how close most scores are to that score.

Average user scores by behaviour*

*White line represents standard deviation not range

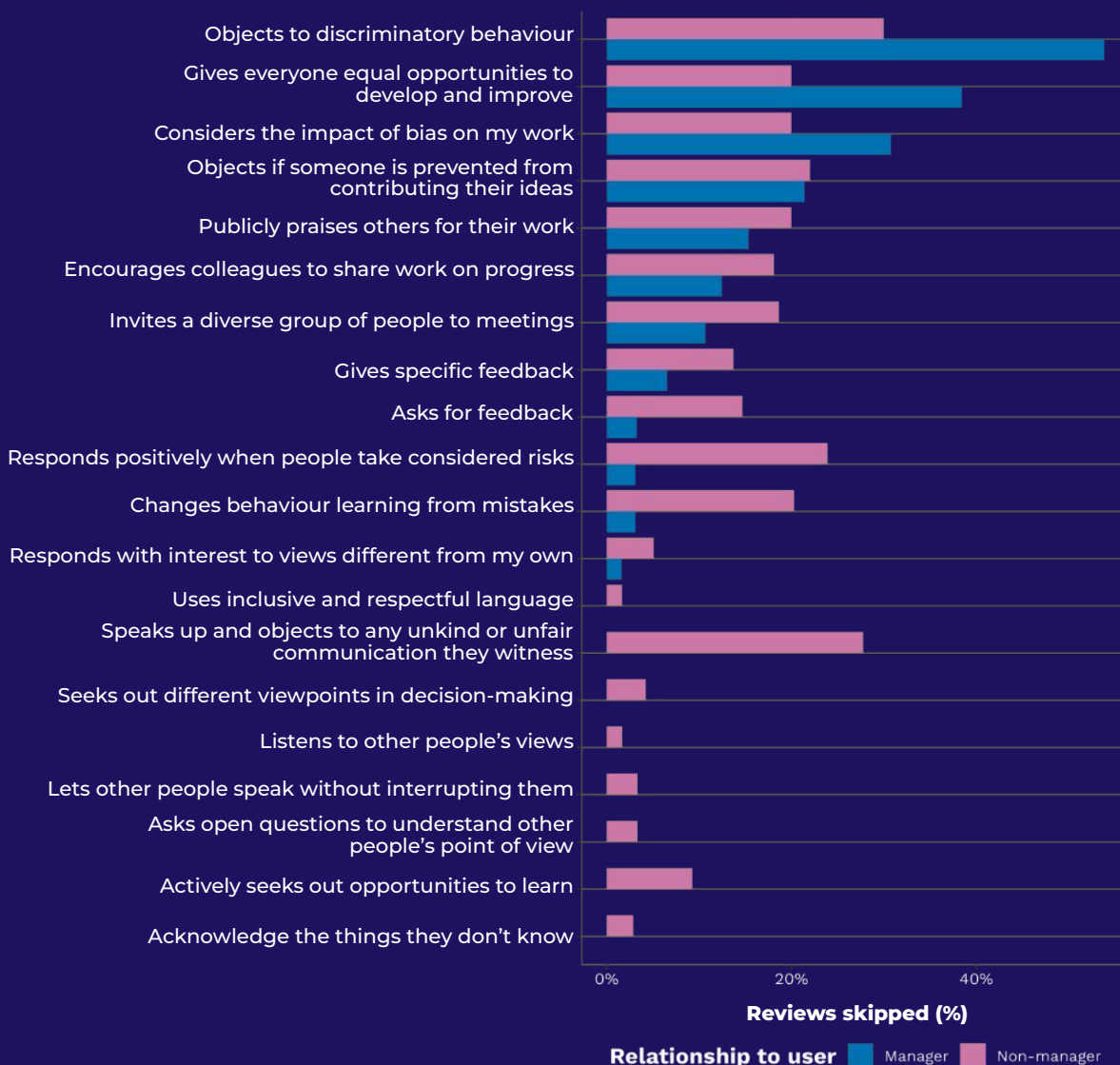


Cell

- Considering diverse perspectives
- Demonstrating your commitment to inclusivity
- Embracing failure
- Inclusive communication
- Valuing feedback

Most skipped behaviours: people said they weren't in a position to give feedback

Percentage of skipped reviews by behaviour and reviewer relationship

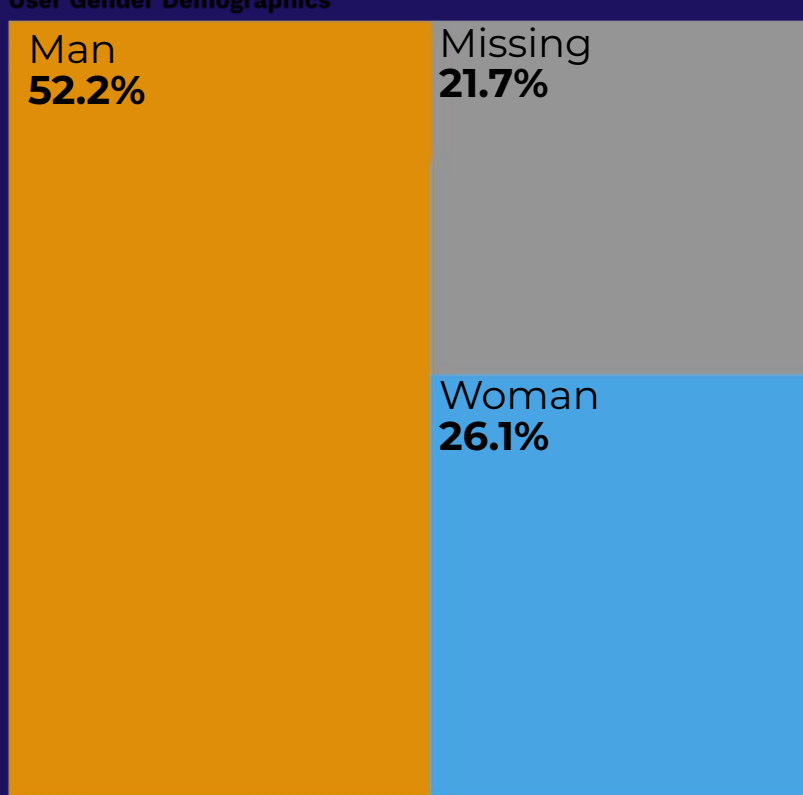


Almost 50% of managers skipped 'Objects to discriminatory behaviour' because they were not in a position to observe this. This could indicate a lack of awareness or knowledge from managers.

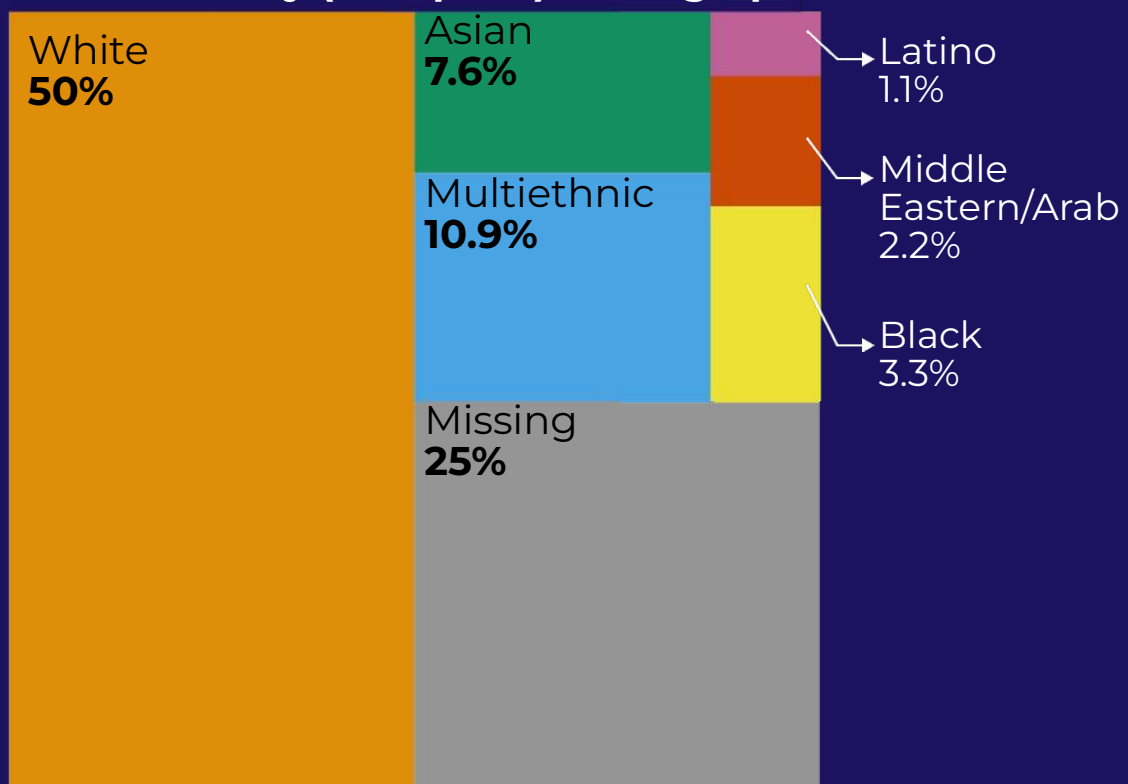
It's ok for people to skip behaviours, we don't want feedback not based on observation. However, we think the high percentage of reviewers choosing to skip behaviours, adds to our finding about feedback: greater understanding of the expectations and value of feedback is needed in this context.

Who are the users of Culture+?

User gender demographics



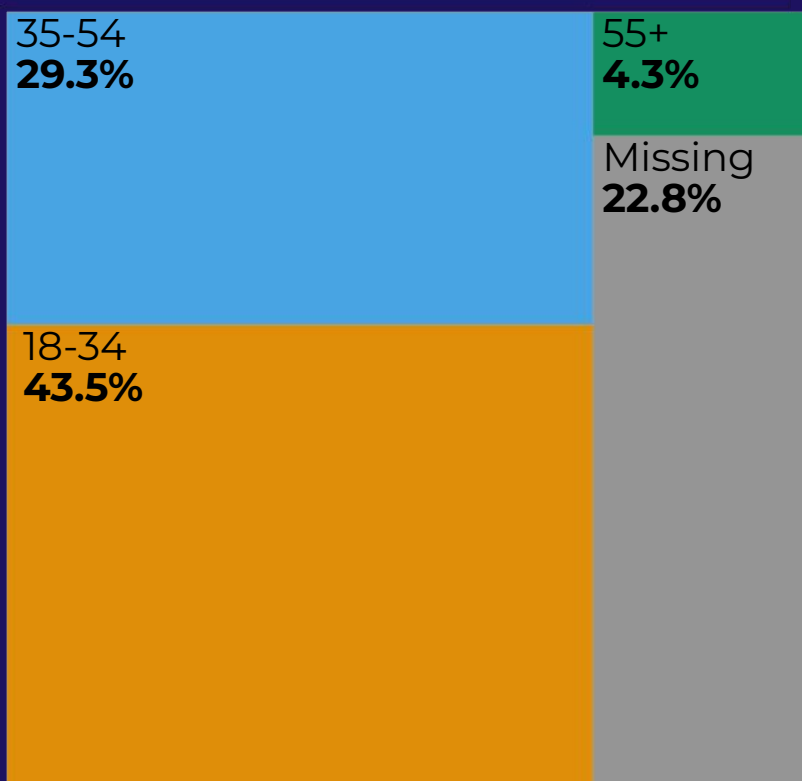
User ethnicity (collapsed) demographics



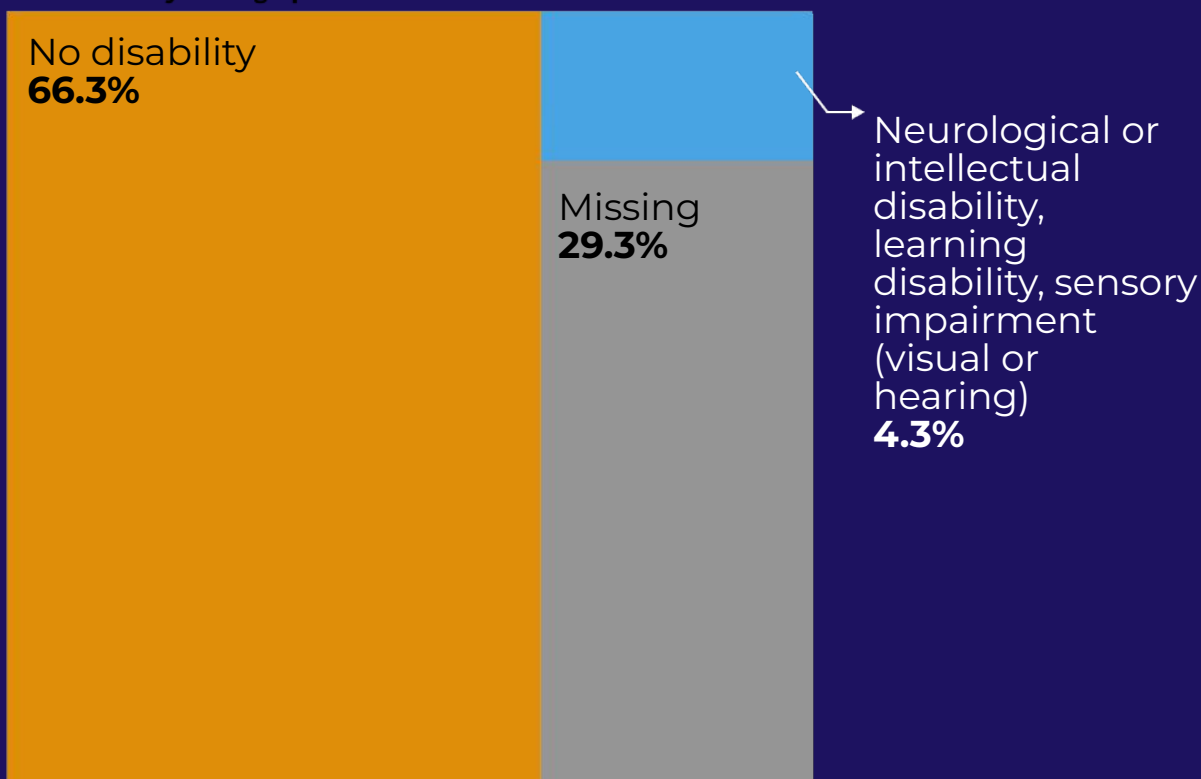
Note: these questions are optional, missing refers to those who chose not to answer.

Who are the users of Culture+?

User age demographics



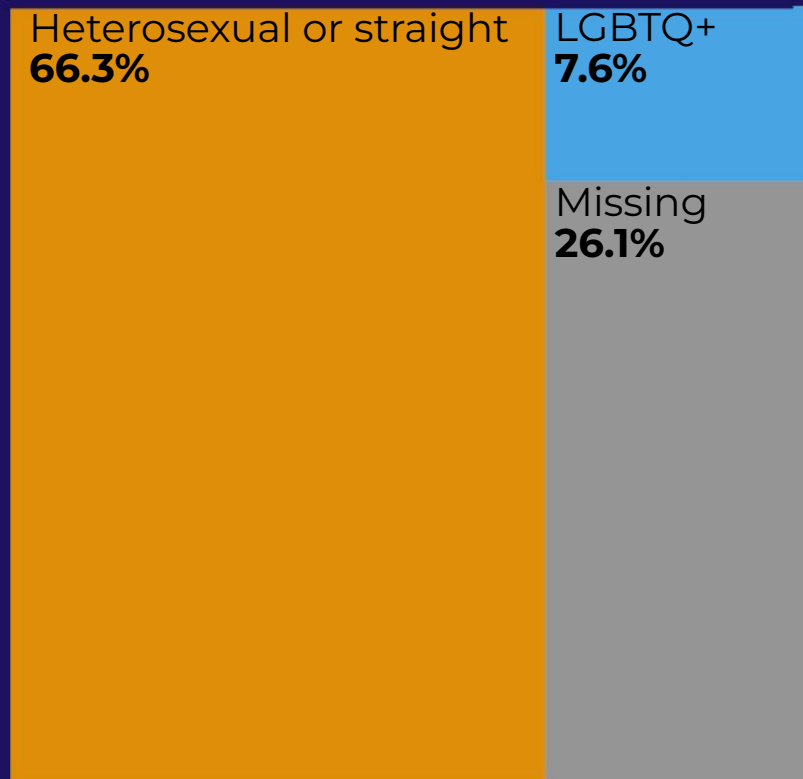
User disability demographics



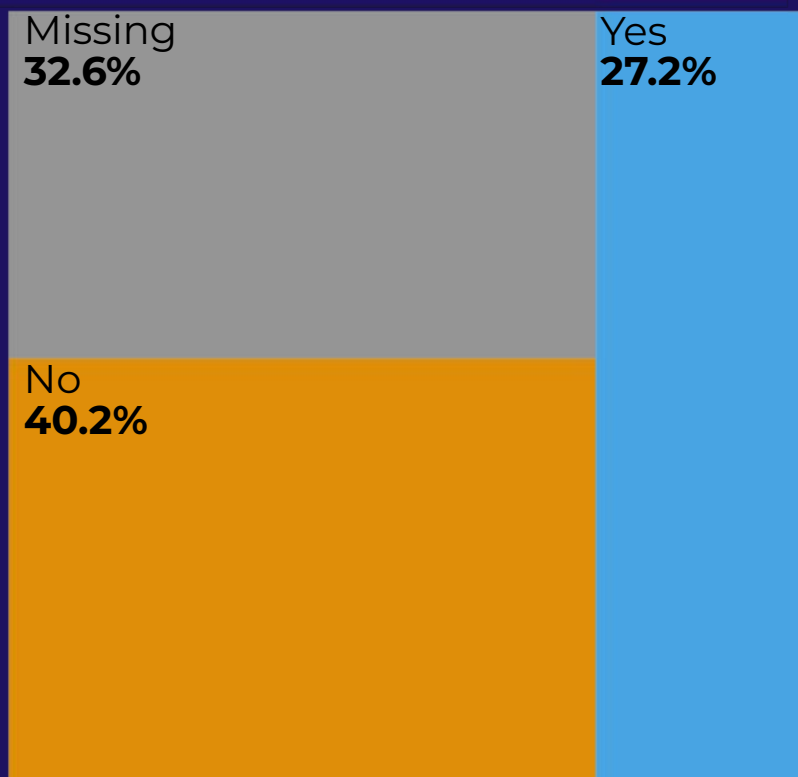
Note: these questions are optional, missing refers to those who chose not to answer.

Who are the users of Culture+?

User sexual orientation demographics



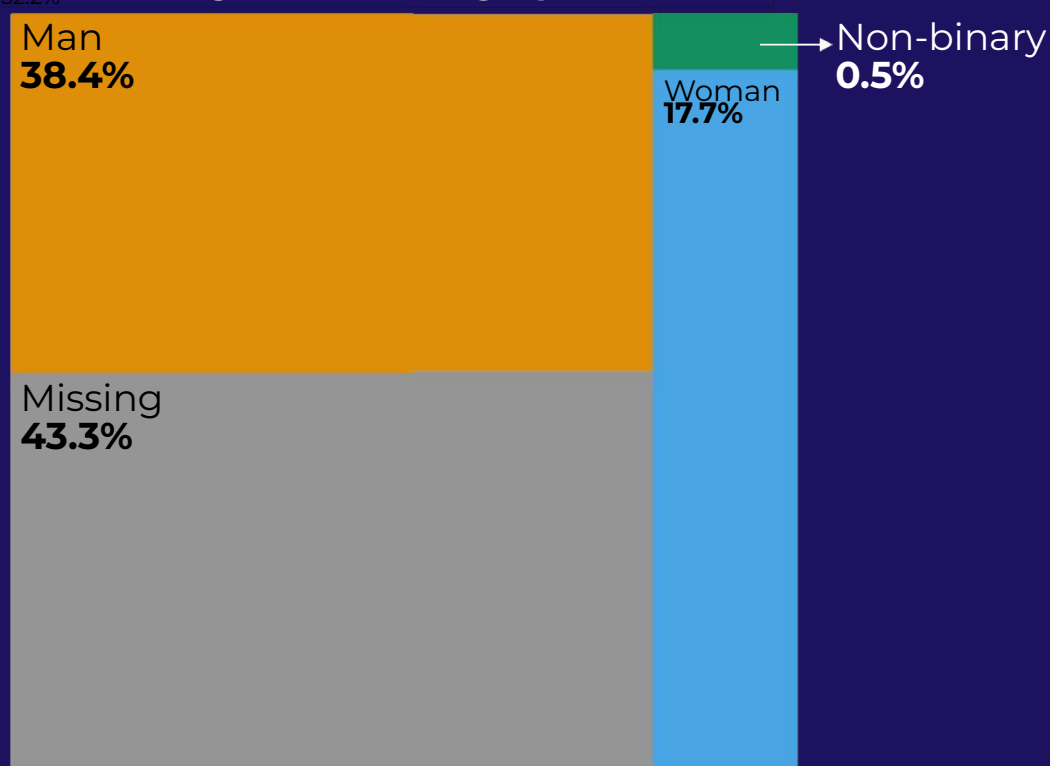
User mental illness demographics



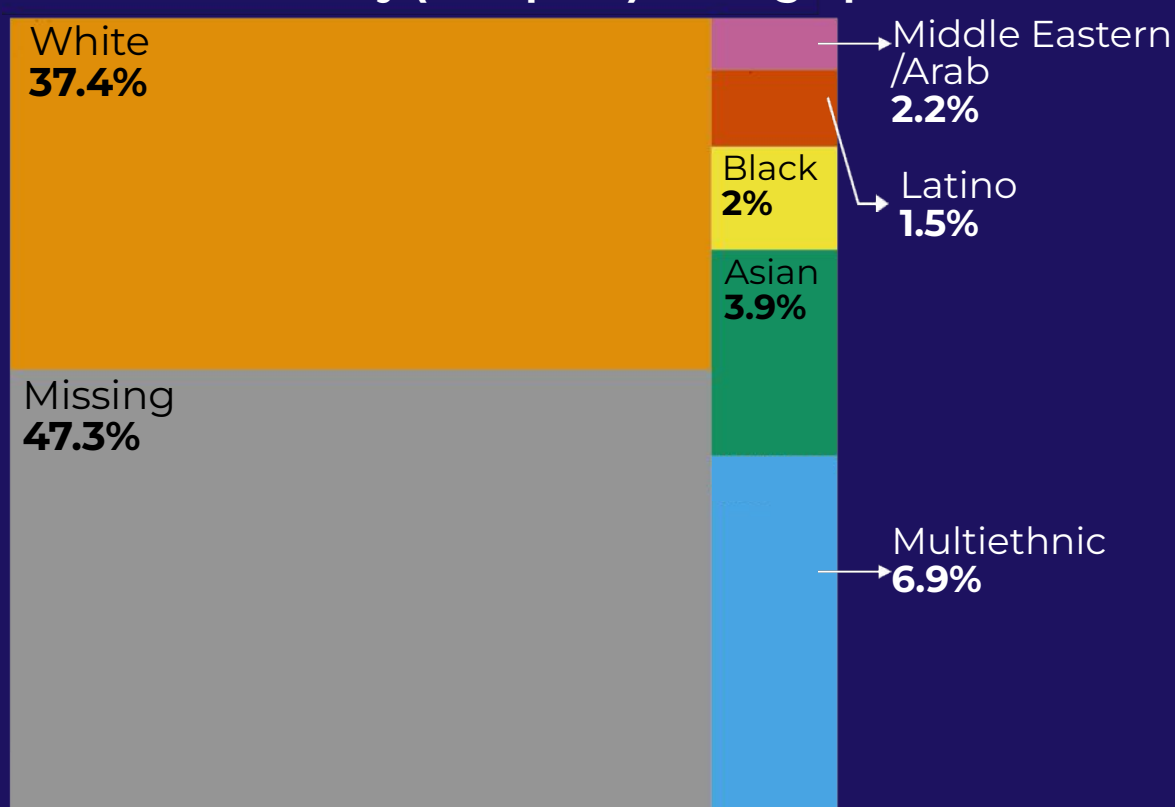
Note: these questions are optional, missing refers to those who chose not to answer.

Who gave them their scores?

Reviewer gender demographics



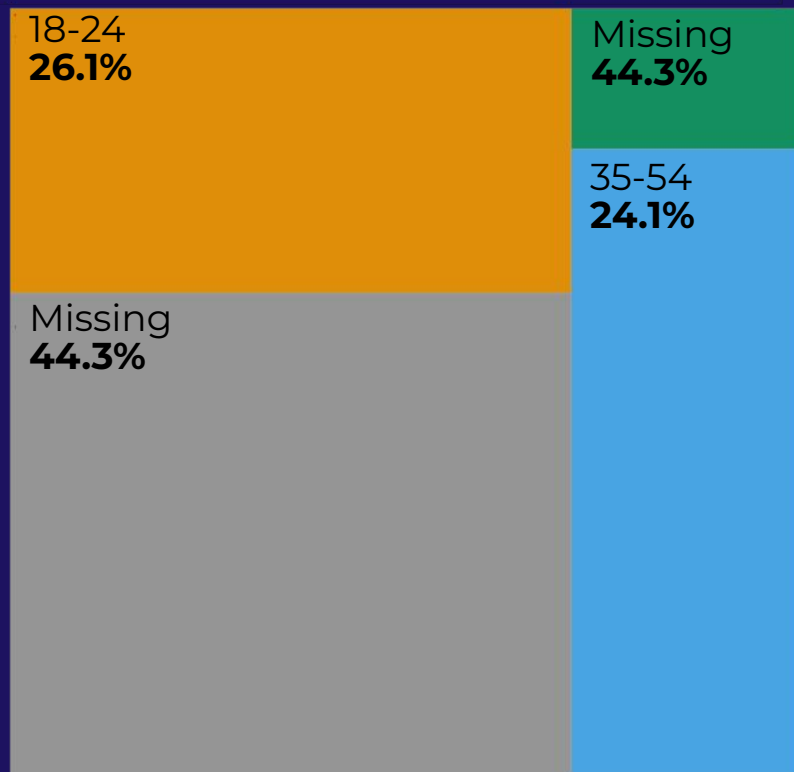
Reviewer ethnicity (collapsed) demographics



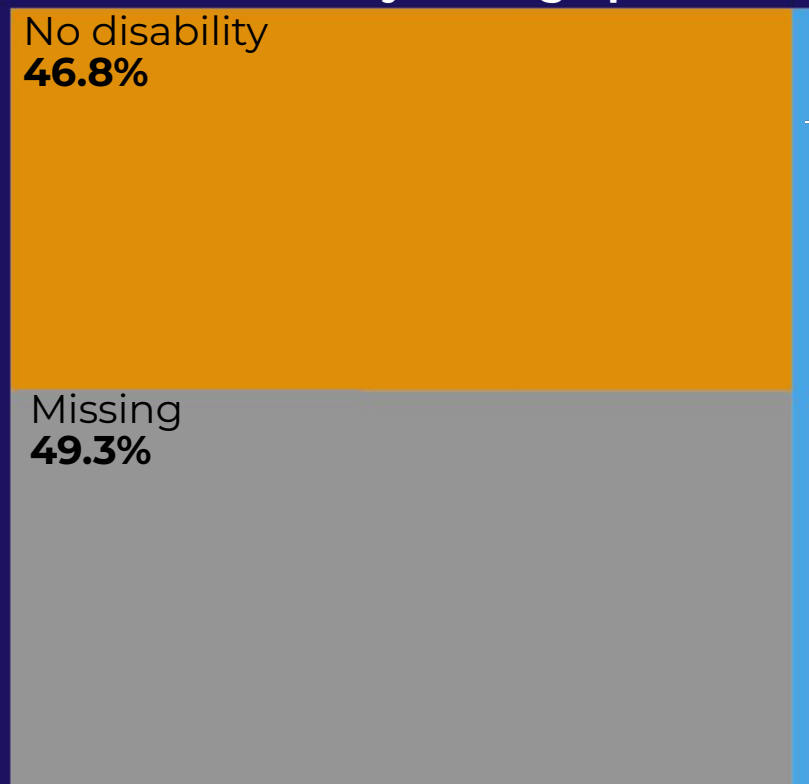
Note: these questions are optional, missing refers to those who chose not to answer.

Who gave them their scores?

Reviewer age demographics



Reviewer disability demographics

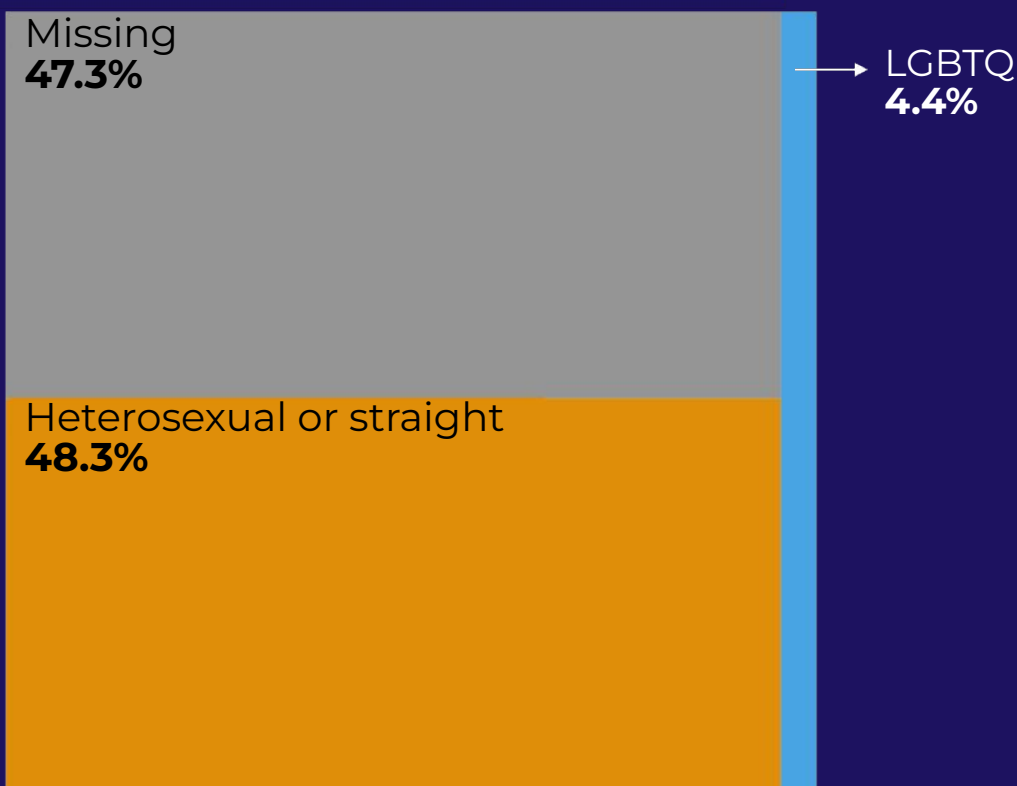


→ Neurological or intellectual disability, learning disability, sensory impairment (visual or hearing)
3.9%

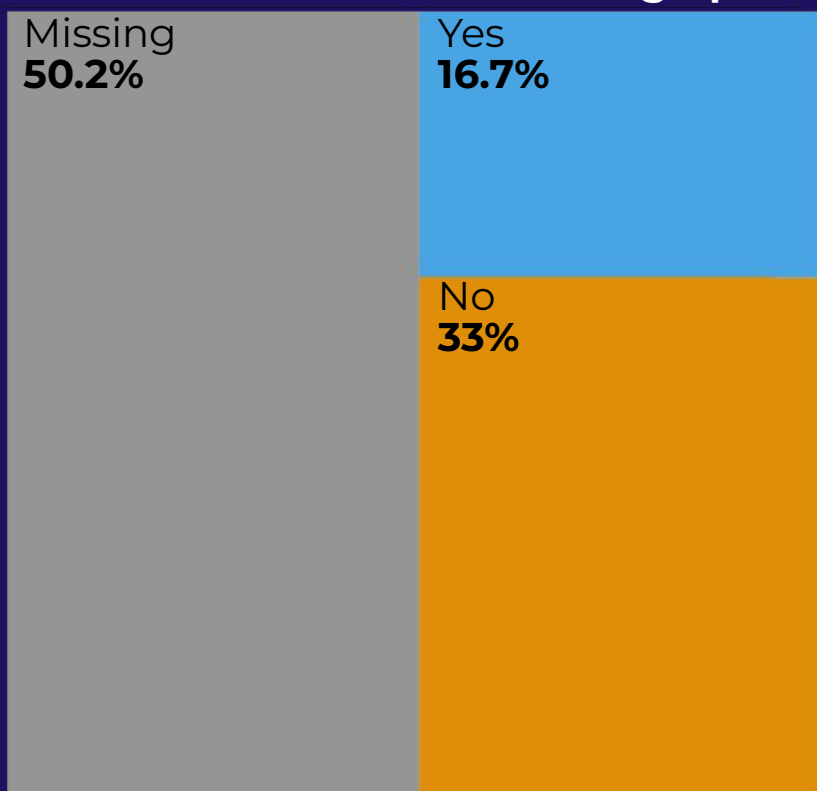
Note: these questions are optional, missing refers to those who chose not to answer.

Who gave them their scores?

Reviewer sexual orientation demographics



Reviewer mental illness demographics



Note: these questions are optional, missing refers to those who chose not to answer.

A comment on the demographics

The group of people choosing to engage with Culture⁺ as users is more diverse than the reviewers they've invited to give them feedback.

This is likely because those from under-represented groups are more motivated to engage with efforts to improve cultures. They've probably had more challenging work experiences. The reviewers' demographics are likely more representative of the engineering profession as a whole.

A note on methodology: In order to ensure the data we report is representative of those who are active in the platform, we only analyse data connected to users who've received 3 or more reviews. This is also aligned with the data users and organisations have access to through Culture⁺.

Thank you

For more inquiries:

Contact us: hi@thehoneycombworks.com

