

## CREATING CULTURES WHERE ALL ENGINEERS THRIVE: FEEDBACK ON RELIGION

### 1 INTRODUCTION

This report presents feedback from engineers with different and no religion about their experiences of the culture of engineering, and of inclusion in the engineering profession. The feedback comes from a survey of 6,799 engineers conducted in 2017.

This report should be read as a supplement to the publication *Creating cultures where all engineers thrive: a unique study of inclusion across UK engineering*, launched by the Royal Academy of Engineering in 2017. The *Creating cultures* publication presents insights from the study including survey findings for engineers overall, together with more detailed findings on gender, ethnicity, age and company size.

There was sufficient data in the survey to provide feedback from four groups of engineers: no religion, Christian, Muslim, and Hindu.

As the section below shows, the numbers of Muslim and Hindu respondents are small and therefore the findings should be viewed with some caution.

### 2 DEMOGRAPHICS

#### RELIGION IN ENGINEERING

- A total of 6,631 engineers (98% of all respondents) shared information about their religion in the survey. The two largest groups of engineers are those with no religion (49%) and those who are Christian (41%).
- The next largest group of engineers by religion are Muslim (2%) and Hindu (1%).
- The numbers of engineers who reported that they are Buddhist, Jewish or Sikh are very small; when combined, engineers with these religions make up 1% of respondents. A further 4% of respondents preferred not to say and 2% selected the 'other' box on religion.
- Religious belief or non-belief can be deeply personal and some of the comments under 'other' described dual religious families or heritage, for example Catholic and Jewish as well as other religious or church affiliations such as Catholic, Church of England, Greek Orthodox and Seventh Day Adventist. Other beliefs included in the 'other' comments were: Bahá'í, Humanism, Quaker and Jehovah's Witness.

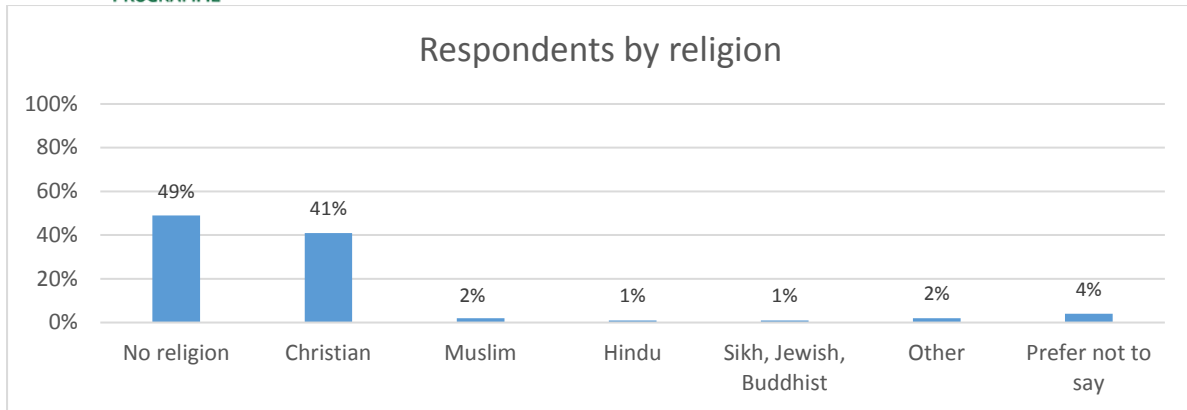


Figure 1

### GENDER AND RELIGION

- Women make up 17% of overall respondents to the survey. Similarly, they make up 18% of respondents with no religion and 16% of Christian respondents. However, women are overrepresented among Muslim and Hindu respondents, making up 21% of Muslim respondents and 12% of Hindu respondents.

### ETHNICITY AND RELIGION

- Engineers from black, Asian and minority ethnic (BAME) backgrounds make up 7% of survey respondents. However, only 4% of BAME respondents stated no religion and 4% are Christian. Conversely, 97% of Muslim respondents are also BAME and all Hindu respondents are also BAME.

### AGE AND RELIGION

- Muslim and Hindu engineers are more concentrated in younger age groups (up to age 45). In the 46 and over age group, there is less Muslim and Hindu representation than respondents with no religion or who are Christian.
- 28% of respondents with no religion are aged 26 to 35, as are 17% of Christian respondents compared with 31% of Muslim and 44% of Hindu respondents.

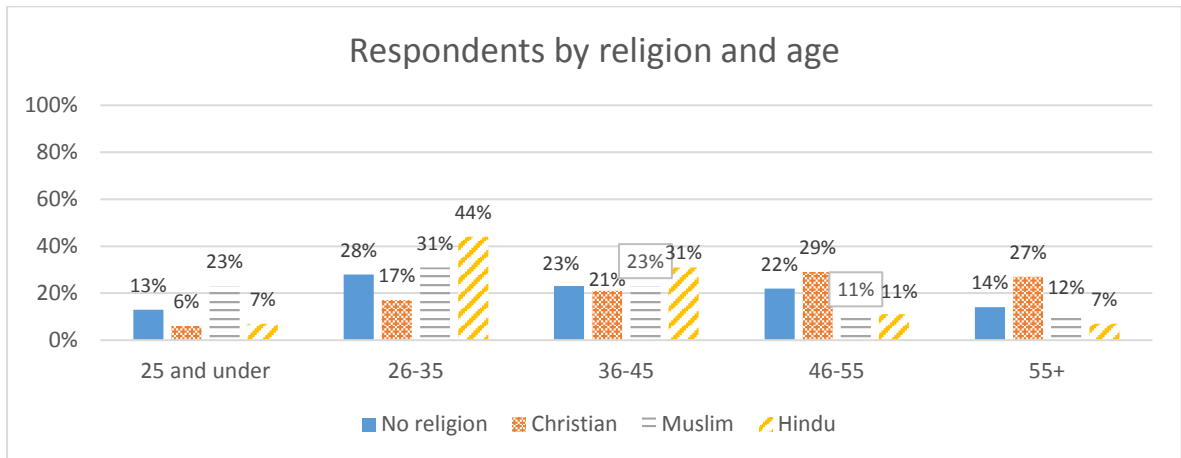


Figure 2

### DISABILITY AND RELIGION

- 5% of the overall survey respondents have a disability. Similarly, 5% of respondents with no religion also have a disability as do 6% of Christian respondents. However, 3% of Muslim respondents and no Hindu respondents also have a disability.

### SEXUAL ORIENTATION AND RELIGION

- LGBT engineers make up 4% of overall survey respondents. They make up 5% of respondents with no religion; 3% of Christian; 7% of Muslim and 3% of Hindu respondents.

### WHERE ENGINEERS WORK

- While Christian engineers and those with no religion work both on-site and off-shore, all Muslim and Hindu respondents are site-based.
- Muslim (71%) and Hindu (74%) engineers are more likely to be a member of a professional engineering institution (PEI) than Christian (66%) or engineers with no religion (64%).
- Muslim (57%) and Hindu (61%) are slightly more likely than Christian (51%) or no religion (46%) respondents to be registered engineers.
- Christian (11%) respondents are more likely to work in senior management roles than Muslim (4%), Hindu (5%) or respondents with no religion (7%). Muslim respondents are more likely than any other group to be graduates (28%).

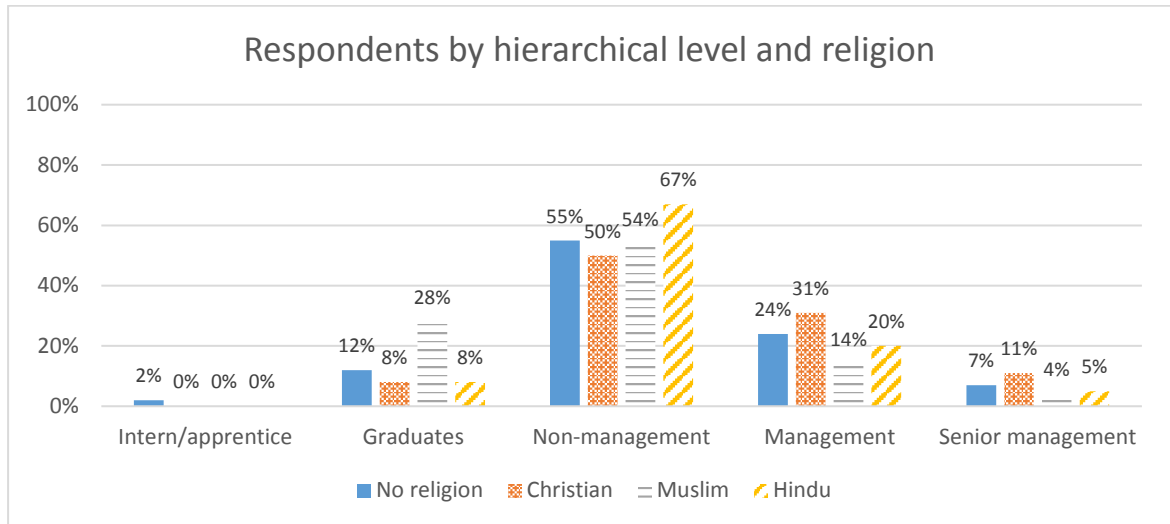


Figure 3

### 3 THE CULTURE OF ENGINEERING

In the report *Creating cultures where all engineers thrive: a unique study of inclusion across UK engineering*, engineers overall describe the culture of engineering as: problem-solving, safety-conscious, proud, loyal, team-oriented, and flexible in places. It is also seen: as friendly, but somewhat impersonal; as having a strong attachment to tradition; and as a culture in which people love their jobs, but are often not clear about what they need to do to progress their careers.

Similarly, the most commonly chosen descriptor of the culture of engineering by respondents from across all religious groups is *informal and friendly* (no religion – 56%, Christian – 55%, Muslim – 54%, Hindu – 58%).

In other descriptions of the culture of engineering there are small but persistent differences between respondents with no religion and who are Christian compared to Muslim and Hindu respondents:

- ❖ 50% of respondents with no religion, 50% who are Hindu and 51% who are Christian described the culture of engineering as ‘collaborative’. Slightly fewer Muslim respondents (43%) described it in this way.
- ❖ Muslim respondents (54%) were more likely to describe the culture as ‘slow to change’ than respondents with no religion (47%), who are Christian (42%) or Hindu (43%).
- ❖ 84% of respondents with no religion, who are Christian or Hindu described the engineering culture as one where ‘we focus on doing the best job we can, not on who people are or where they come from’. Muslim

respondents were less likely to agree or strongly agree with this statement (75%).

- ❖ Hindu respondents were most likely to agree or strongly agree with the description of engineering as 'more comfortable dealing with facts and figures than people' (no religion – 45%, Christian – 45%, Muslim – 53%, Hindu – 58%).
- ❖ Muslim (26%) and Hindu (30%) respondents were more likely than respondents with no religion or who are Christian (13%) to say that 'it's important to fit in with other people' in engineering.
- ❖ Muslim respondents were less likely than the other groups to say that more opportunities to progress would make engineering an even better environment to work in (no religion – 64%, Christian – 63%, Hindu – 61%, Muslim – 54%).
- ❖ Muslim respondents were less likely to say they like their job most or all of the time (no religion – 76%, Christian – 81%, Hindu – 85%, Muslim – 67%).
- ❖ Muslim and Hindu respondents were slightly more likely than those with no religion or who are Christian to say that they are planning to leave the profession for reasons other than retirement in the next 12 months (no religion – 3%, Christian – 3%, Muslim – 7%, Hindu – 5%).
- ❖ Muslim and Hindu respondents are also less likely to say that they'd recommend engineering as a great career choice to friends and family (no religion – 83%, Christian – 83%, Muslim – 70%, Hindu – 75%).

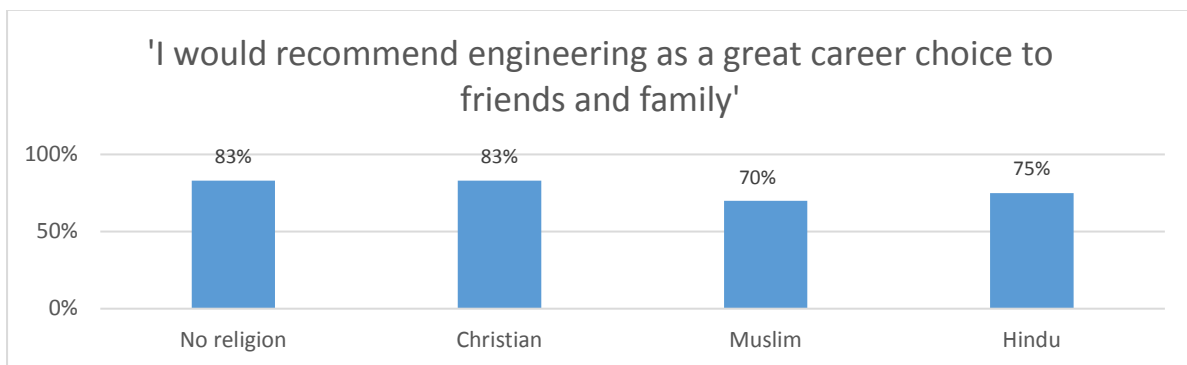


Figure 4

#### 4 INCLUSION IN ENGINEERING

##### INDICATORS OF INCLUSION

The report on *Creating cultures where all engineers thrive: a unique study of inclusion across UK engineering*, describes seven indicators of inclusion in engineering. These are:

- 1 **OPENNESS:** The extent to which engineers feel able to be open about who they are, and about their life outside work, and confident to speak up on inappropriate behaviour to themselves or other people, mistakes or safety risks, for instance.
- 2 **RESPECT:** The extent to which engineers feel treated with respect, by managers, leaders and colleagues, and don't feel that assumptions are made about them because of their gender, ethnicity or any other difference.
- 3 **RELATIONSHIPS:** How engineers relate to each other, and the extent to which relationships are friendly, collaborative, free of offensive banter, bullying or harassment.
- 4 **CAREER:** The extent to which engineers feel supported in their careers, by their manager and by the fair implementation of talent management processes such as promotion.
- 5 **FLEXIBILITY:** The extent to which engineers have opportunities to work flexibly, without it being a barrier to career progression.
- 6 **LEADERSHIP:** The extent to which engineers are convinced by their managers' commitment and action on diversity and inclusion.
- 7 **DIVERSITY:** A diverse workforce at all levels.

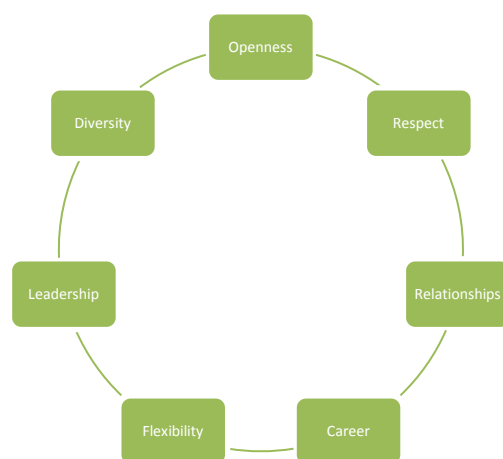


Figure 5

What do the survey findings tell us about the experiences of inclusion in engineering for respondents across different religious groups?

## INCLUSION OF ENGINEERS BY RELIGION

Respondents across all four groups on religion report that feeling included at work increases their motivation, performance, commitment and engagement. To a lesser extent it also improves collaboration with colleagues and their feeling of health and wellbeing.

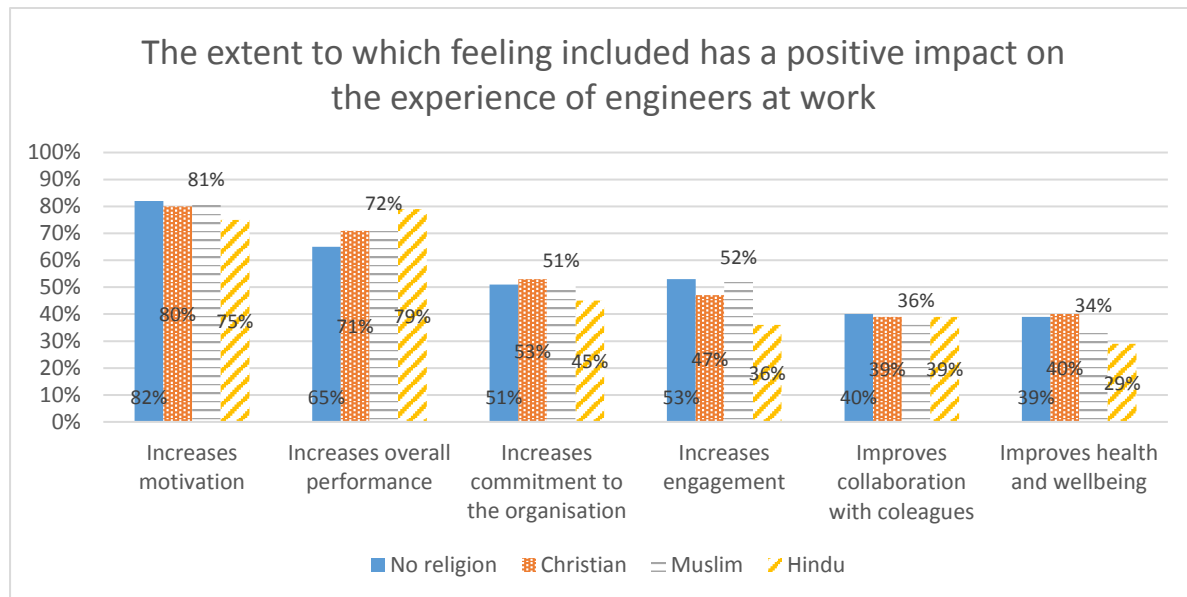


Figure 6

Despite the overall positive impact of inclusion, the pattern of often small but persistent differences between respondents who are Christian and have no religion compared to Muslim and Hindu respondents continues in how inclusive they experience the culture of engineering. Overall, the data shows that Muslim respondents experience the culture as least inclusive compared to all the other groups.

- ↓ 78% of respondents with no religion, 77% of Christian and 76% of Hindu respondents experience the culture of engineering as quite or very inclusive. 64% of Muslim respondents described the culture in this way.
- ↓ 83% of respondents with no religion and 81% of Christian respondents feel quite or very included in the engineering profession while 77% of Muslim and 76% of Hindu respondents said this.
- ↓ 51% of Muslim and 45% of Hindu respondents want to see greater diversity in engineering to make it a better environment to work in, compared to 28% of no religion and 21% of Christian respondents. Similarly, making engineering more inclusive is important to 36% of Muslim and 33% of Hindu respondents compared to 21% of no religion and 23% of Christian respondents.

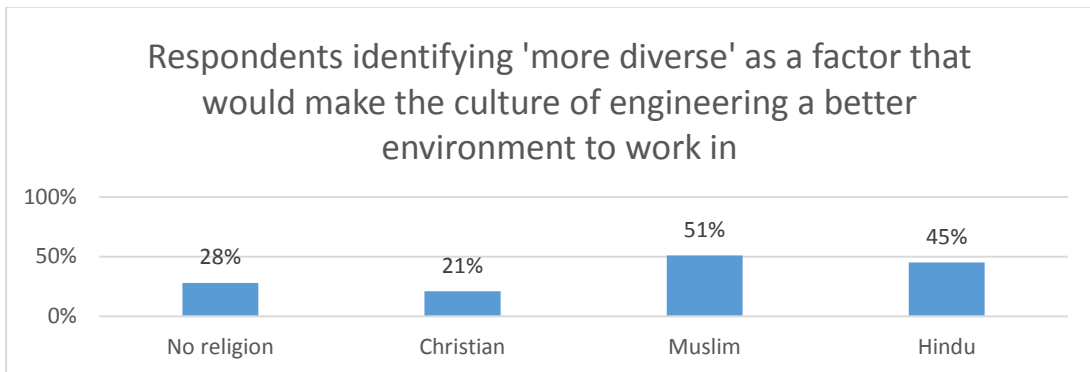


Figure 7

To understand what it is that leads to Muslim and, to a lesser extent, Hindu engineers experiencing the culture as less inclusive than no religion and Christian engineers – and what to do about it – the responses across the four groups to questions on each of the seven indicators of inclusion need to be looked at. These questions are listed on pages 52 and 53 of the *Creating cultures* report.

## OPENNESS

Overall, the level of openness experienced by respondents across all four of the groups on religion is high. Almost all of these respondents said that they feel confident to speak up most or all of the time if they think their own safety or the safety of others is at risk (no religion – 97%, Christian – 98%, Muslim – 96%, Hindu – 96%). The majority of respondents also feel able to speak up if they see a better way of doing things (no religion – 90%, Christian – 91%, Muslim – 83%, Hindu – 88%).

However, in other areas, Muslim engineers in particular, and to a lesser extent Hindu engineers, reported slightly lower levels of openness experienced in the engineering culture compared to engineers with no religion or who are Christian.

- ❖ Muslim and Hindu respondents are significantly less likely than respondents with no religion or who are Christian to say they feel they can speak up about inappropriate behaviour towards them most or all of the time (no religion – 84%, Christian – 84%, Muslim – 64%, Hindu – 72%).
- ❖ Muslim and Hindu respondents are slightly less likely than Christian or respondents with no religion to agree or strongly agree that 'I can be myself in my organisation' (no religion – 87%, Christian – 88%, Muslim – 80%, Hindu – 78%).
- ❖ Muslim and Hindu respondents are less likely than Christian or respondents with no religion to say they feel able to be open about their



lives outside work (no religion – 83%, Christian – 86%, Muslim – 74%, Hindu – 75%).

- ❖ 68% of Muslim respondents and 71% of Hindu respondents say they can speak openly about their beliefs compared to 76% of Christian respondents and 79% of respondents with no religion.

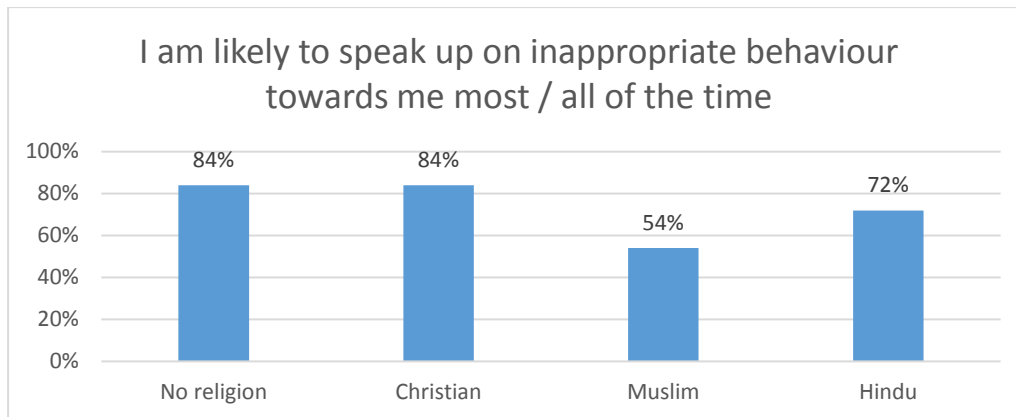


Figure 8

## RESPECT

Respondents across all four groups on religion report high levels of respect experienced from leaders, managers and colleagues.

- ❖ Almost 90% of respondents across all four groups on religion said they are treated with respect by their manager most/all of the time (no religion – 89%, Christian – 88%, Muslim – 87%, Hindu – 87%).
- ❖ The majority of respondents across all four group on religion said that they are listened to by their manager most/all of the time (no religion – 80%, Christian – 81%, Muslim – 78%, Hindu – 74%).

However, Muslim and Hindu respondents were significantly more likely than Christian respondents or those with no religion to say that people make assumptions about them because of their nationality/ethnicity.

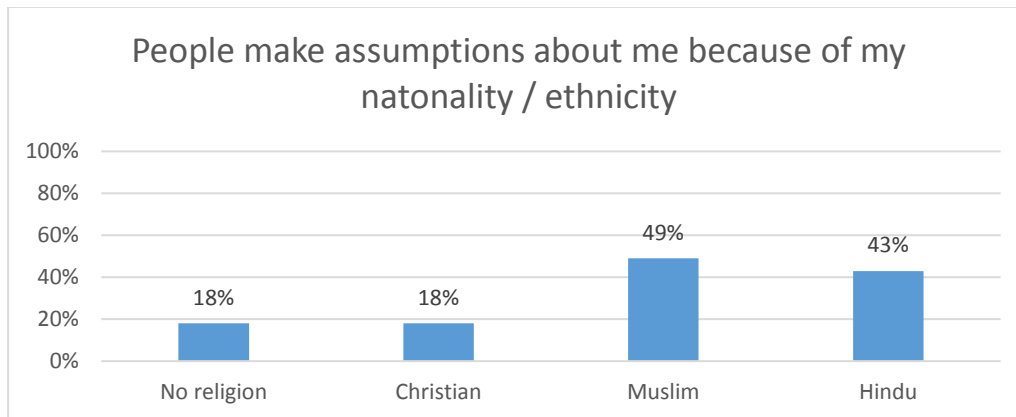


Figure 9

## RELATIONSHIPS

Respondents from all four of the groups on religion report similarly on relationships driving inclusion in the engineering culture.

- ❖ At least half of respondents across all four groups described the culture of engineering as 'informal and friendly' (no religion – 56%, Christian – 55%, Muslim – 54%, Hindu – 58%).
- ❖ Few respondents from any of the groups said that 'offensive behaviour gets passed off as banter' (no religion – 11%, Christian – 11%, Muslim – 16%, Hindu – 9%).

However, Muslim respondents are slightly less likely to describe the culture of engineering as 'collaborative' (43%) compared to Hindu (50%), Christian (51%) and respondents with no religion (50%).

Muslim respondents are most likely to say they've experienced bullying or harassment in the past 12 months (26%) compared to Hindu (17%), Christian (14%) or respondents with no religion (13%).

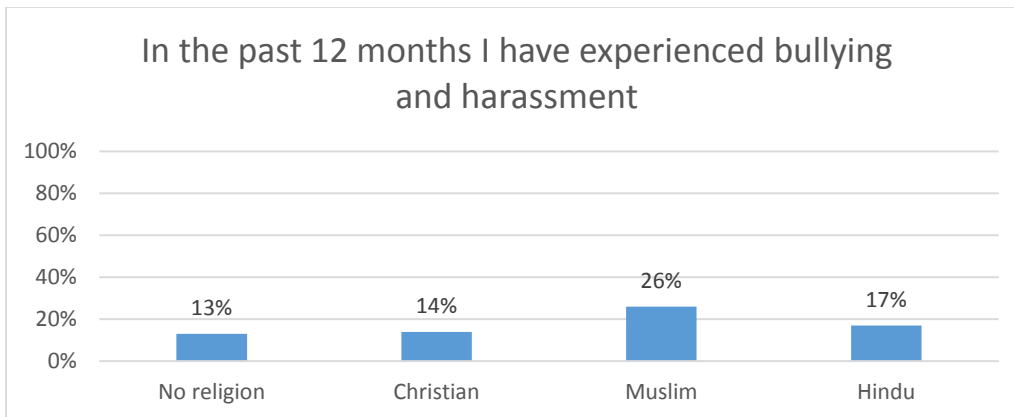


Figure 10

## CAREER

Clearer and more open career paths is a priority for all engineers in helping to make the culture of engineering more inclusive. However, Muslim respondents in particular are less likely to describe the career process in engineering as fair compared with other groups on religion.

- ❖ Over half of all four groups on religion said they are clear what they need to do to progress their career in engineering (no religion – 53%, Christian – 57%, Muslim – 58%, Hindu – 61%).
- ❖ Muslim respondents (65%) were slightly less likely than Hindu (71%), Christian (73%) and respondents with no religion (71%) to say that 'work is fairly allocated'.
- ❖ Muslim respondents (55%) were significantly less likely to say that 'performance is fairly assessed' compared with Christian (67%), Hindu (64%) and respondents with no religion (67%).
- ❖ Muslim respondents (36%) were significantly less likely to agree and Hindu respondents are slightly less likely to agree that 'the promotion process is fair' compared to Christian (55%) and respondents with no religion (55%).

## FLEXIBILITY

Respondents across all four of the religion groups agreed or strongly agreed that 'my manager supports me to work flexibly if I want to', although Muslim respondents are slightly less likely to say this (no religion – 81%, Christian – 81%, Muslim – 76%, Hindu – 81%).

## LEADERSHIP

- ❖ At least one in four respondents across each of the four groups on religion said that their manager values diversity and inclusion (no religion – 75%, Christian – 77%, Muslim – 78%, Hindu – 79%).
- ❖ There was a high degree of confidence across all four groups that ‘my manager would tackle bias if brought to their attention’ (no religion – 83%, Christian – 82%, Muslim – 80%, Hindu – 81%).

However, all four groups said that there is more that managers can do to lead on inclusion with their teams.

- ❖ Around two-thirds of respondents across all groups said ‘my manager is a good role model when it comes to creating an inclusive environment’ (no religion – 69%, Christian – 69%, Muslim – 66%, Hindu – 67%).
- ❖ Just over half of respondents said that ‘my manager sets clear standards for the team on creating an inclusive environment’ (no religion – 52%, Christian – 58%, Muslim – 54%, Hindu – 57%).

## DIVERSITY

- ❖ Muslim (65%) and Hindu (67%) respondents were significantly more likely to look for ‘a diverse workforce at all levels’ as evidence of inclusion than Christian (48%) and respondents with no religion (51%).

## 5 CONCLUSIONS

The number of survey respondents with a religion other than Christianity or no religion is small. The numbers of Sikh, Jewish and Buddhist engineers are so low that it is not possible to report on them here. While the numbers of Muslim and Hindu respondents are also limited, they are enough to report on their experience of the culture of engineering, albeit with some caveat on reliability.

Despite this caveat, it is important to note that overall Muslim and to a lesser extent Hindu respondents experience the culture of engineering as less inclusive than Christian or respondents with no religion. They are less likely to say that they enjoy their job or to recommend engineering as a great career choice to friends and family. Yet, Muslim engineers make up proportionately the largest group of engineers responding to the survey and are more represented in younger age groups compared to Christian respondents and respondents with no religion.

Like the majority of engineers, Muslim and Hindu respondents describe the culture of engineering as informal and friendly and are keen to see more opportunities to progress and clearer career paths to make the culture of engineering a better environment to work in. But unlike their colleagues who are Christian or have no religion, Muslim engineers are significantly more likely to

report that they have experienced bullying and harassment in the past twelve months and significantly less likely to say that performance is fairly assessed or that the promotions process is fair. Both Muslim and Hindu respondents are also more likely than Christian or respondents with no religion to say that 'people make assumptions about me because of my nationality / ethnicity'.

Given these findings, three indicators of inclusion stand out as most important in helping to drive up inclusion for engineers across all groups on religion and, in particular, addressing issues of inclusion for those from minority religious groups in UK engineering. These are:

- Openness
  - o Creating an environment where people from all religions and no religion feel safe and confident to speak up about inappropriate behaviour at work.
- Relationships
  - o Creating zero tolerance for bullying and harassment in engineering, particularly for engineers from minority religious groups.
- Career
  - o Ensuring a fair and transparent career progression process for everyone in engineering.