DIVERSITY AND INCLUSION PROGRESSION FRAMEWORK

2017 BENCHMARKING REPORT:
SCIENTIFIC BODIES

CONTENTS

SECTION 1   EXECUTIVE SUMMARY

This report provides the key findings of the 2017 Diversity and Inclusion Progression Framework benchmarking exercise for scientific bodies.

The Science Council has set itself a strategic ambition to work towards a science workforce that reflects the diversity of society. A diverse science workforce is a critical source of competitive advantage, providing greater creativity and better connection with customers and stakeholders. The Progression Framework and this benchmarking exercise is part of a programme of work on diversity and inclusion being undertaken by the Science Council.

For further information on the Progression Framework and the diversity and inclusion programme of work, please go to: http://sciencecouncil.org/professional-bodies/diversity-equality-and-inclusion/.

The Framework, launched in early 2017 in collaboration between the Royal Academy of Engineering and the Science Council, assesses progress on diversity and inclusion in eight areas of work across four progressive levels of good practice.

The eight areas of work are:

1   Governance and Leadership
2   Membership and professional registration
3   Meetings, conferences and events
4   Education and training, accreditation and examinations
5   Prizes, awards and grants
6   Communications, marketing, outreach and engagement
7   Employment
8   Monitoring and measuring

The four levels of good practice are:

Level 1: Initiating
Level 2: Developing
Level 3: Engaging
Level 4: Evolving

A total of 21 scientific bodies participated in this benchmarking exercise together with 20 professional engineering institutions (PEIs). Six of the scientific bodies are also PEIs.

1   SCIENTIFIC BODY MEMBERSHIP AND WORKFORCE

- Between them, the scientific bodies participating in the benchmark have more than a quarter of a million members.

- The number of people employed by scientific bodies varies greatly with some staffed solely by volunteers. The majority (17) have more than 50% representation of women on their staff.

- Diversity in the staff of scientific bodies is less evidence at more senior levels. Only 3 scientific bodies have at least 50% representation of women on their boards and six have no ethnic diversity on their boards.

- The average percentage of women members across the scientific bodies is 34%.

- Two thirds of scientific bodies have no data on the ethnicity of their membership. 29% of scientific bodies that are able to provide data on ethnicity of membership have less than 10% black, Asian and minority ethnic (BAME).
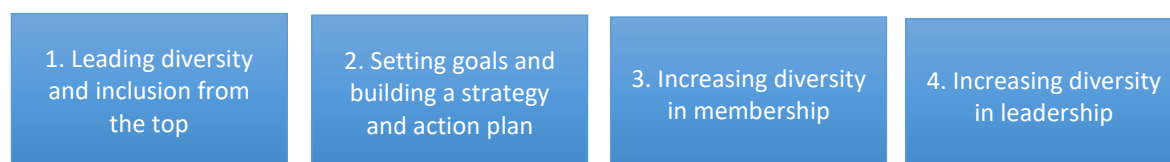
2 SELF-ASSESSMENT OVERVIEW

The table below presents the median self-assessment scores for all organisations participating in the 2017 benchmarking exercise, overall and by sector.

	Median self-assessment level for all participating organisations	Median self-assessment level for PEIs[i]	Median self-assessment level for scientific bodies[ii]
1.1 Governance and leadership	2	2	2
1.2 Membership and professional registration	2	2	2
1.3 Meetings, conferences and events	2	2	2
1.4 Education and training, accreditation and examinations	1	1	1
1.5 Prizes, awards and grants	1	1	1
1.6 Communications, marketing, outreach and engagement	2	2	2
1.7 Employment	2	2	2
1.8 Monitoring and measuring	2	2	2

- Scientific bodies self-assess their performance to be strongest in Governance and Leadership (section 1.1), with four rating themselves at Level 3. Almost all scientific bodies report that they have a named board level lead or sponsor for diversity and inclusion.

- The area of the Framework where there is most development to be made is in Education, training, accreditation and examinations (section 1.4). Fifteen scientific bodies self-assess at Level 1 (initiating) in this area with only one self-assessing at Level 3.

- The majority of scientific bodies rate themselves at Levels 1 or 2 on Monitoring and Measuring (section 1.8); Communications, Marketing, Outreach and Engagement (section 1.6) and Membership and Professional Registration (section 1.2).

3 GOOD PRACTICE, AREAS FOR DEVELOPMENT AND CHALLENGES

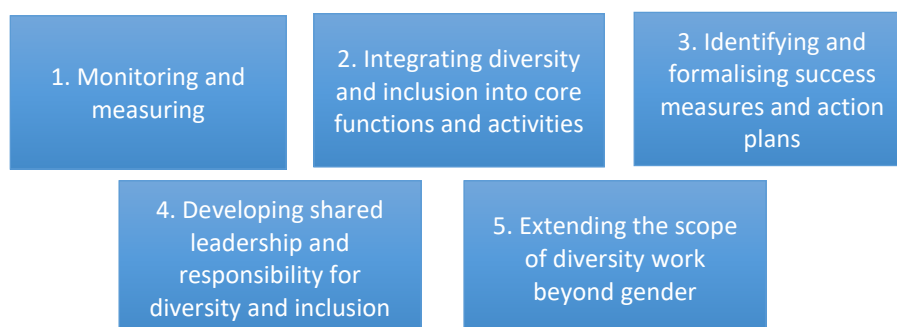Eight broad areas of good practice were highlighted in the feedback to scientific bodies participating in the benchmarking exercise. These good practices were demonstrated by some but not all participating scientific bodies.

1. Leading diversity and inclusion from the top	2. Setting goals and building a strategy and action plan	3. Increasing diversity in membership	4. Increasing diversity in leadership

| 5. Engaging with members and other stakeholders to inform approach | 6. Integrating diversity and inclusion into communications | 7. Building a more diverse workforce | 8. Creating a more inclusive working culture |

Figure 1

Five areas for development were also identified:

| 1. Monitoring and measuring | 2. Integrating diversity and inclusion into core functions and activities | 3. Identifying and formalising success measures and action plans |

| 4. Developing shared leadership and responsibility for diversity and inclusion | 5. Extending the scope of diversity work beyond gender |

Figure 2

Between them, scientific bodies reported five main challenges ahead, which represent risks to progress on diversity and inclusion in the future:

| 1. Lack of data | 2. Internal resources | 3. Shared responsibility | 4. Communicating progress | 5. Current demographics |

Figure 3

4   RECOMMENDATIONS

There are six recommendations for scientific bodies resulting from the 2017 Progression Framework benchmarking exercise. In order to make progress on diversity and inclusion it is recommended that scientific bodies:

1. Engage with and involve members, staff and other stakeholders to help drive diversity and inclusion

2. Develop a strategy and action plan for diversity

3. Expand monitoring activity to different demographic groups and areas of activity

4. Integrate diversity into a range of scientific body activities

5. Regularly communicate on progress and plans for diversity

6. Broaden activity beyond gender and age to include other aspects of diversity, with a particular focus on ethnicity

SECTION 2   INTRODUCTION

This report presents the key findings of the 2017 Diversity and Inclusion Progression Framework benchmarking exercise for professional engineering institutions (PEIs) and scientific bodies.

The Science Council has set itself a strategic ambition to work towards a science workforce that reflects the diversity of society. A diverse science workforce is a critical source of competitive advantage, providing greater creativity and better connection with customers and stakeholders. The Progression Framework and this benchmarking exercise is part of a programme of work on diversity and inclusion being undertaken by the Science Council.

For further information on the Progression Framework and the diversity and inclusion programme of work, please go to: http://sciencecouncil.org/professional-bodies/diversity-equality-and-inclusion/.

The Progression Framework was launched early in 2017, in a collaboration between the Royal Academy of Engineering and the Science Council. The Framework asks professional bodies about progress on diversity and inclusion in eight areas of their work by setting out four levels of good practice on each. Further information about the development of the Progression Framework and the background to the benchmarking exercise is provided in Appendix 1.

Participants in the 2017 benchmark have already received a confidential report containing specific feedback on the performance of their own organisation.

This report presents the key findings from the benchmarking exercise for all scientific bodies, including sector-specific benchmarking results, good practices, areas for development, future trends, risks to progress and recommendations for future action including future iterations of the benchmark. It also includes early feedback from 2017 benchmarking participants on their experience of completing the Framework and the report.

Two further reports on the findings are also available. These are:

- A report presenting the key combined findings for PEIs and scientific bodies, including a look at similarities and differences between the two sectors. A copy of the combined report can be obtained from the Science Council website@: https://sciencecouncil.org/professional-bodies/diversity-equality-and-inclusion/

- Overall findings from the benchmarking exercise for PEIs. A copy of this report can be obtained from the Royal Academy of Engineering website: https://www.raeng.org.uk/policy/diversity-in-engineering/professional-engineering-institutions

SECTION 3   DIVERSITY IN SCIENTIFIC BODIES: LEADERSHIP AND WORKFORCE

3.1   Overview of participants by sector

35 organisations took part in the 2017 Progression Framework benchmarking exercise.

By sector, participating organisations comprised:
- 20 professional engineering institutions (PEIs) from a possible 35, including joint members (57% of eligible organisations)
- 21 scientific bodies (Science Council members) from a possible 41 members, including joint members (51% of eligible organisations)

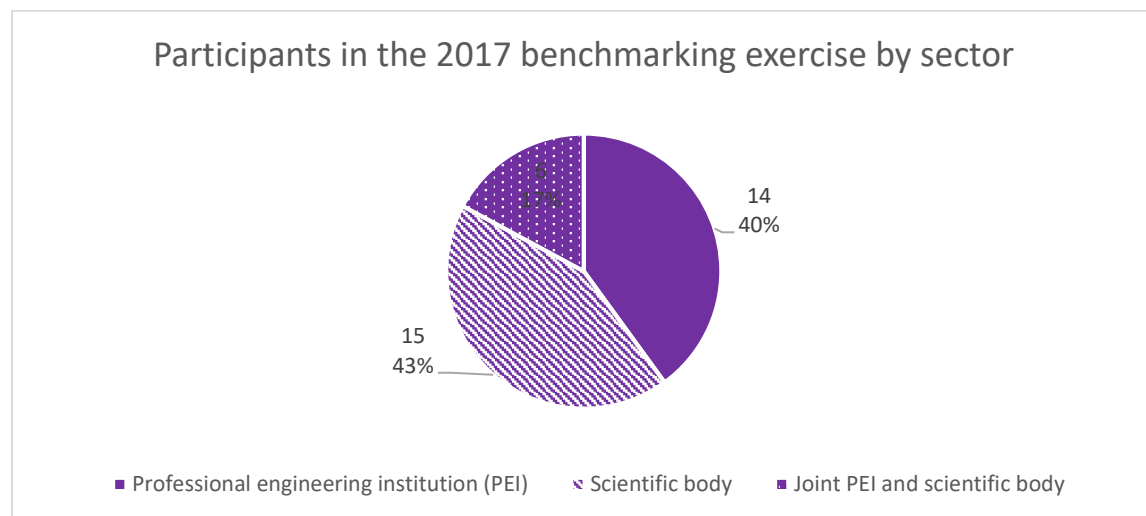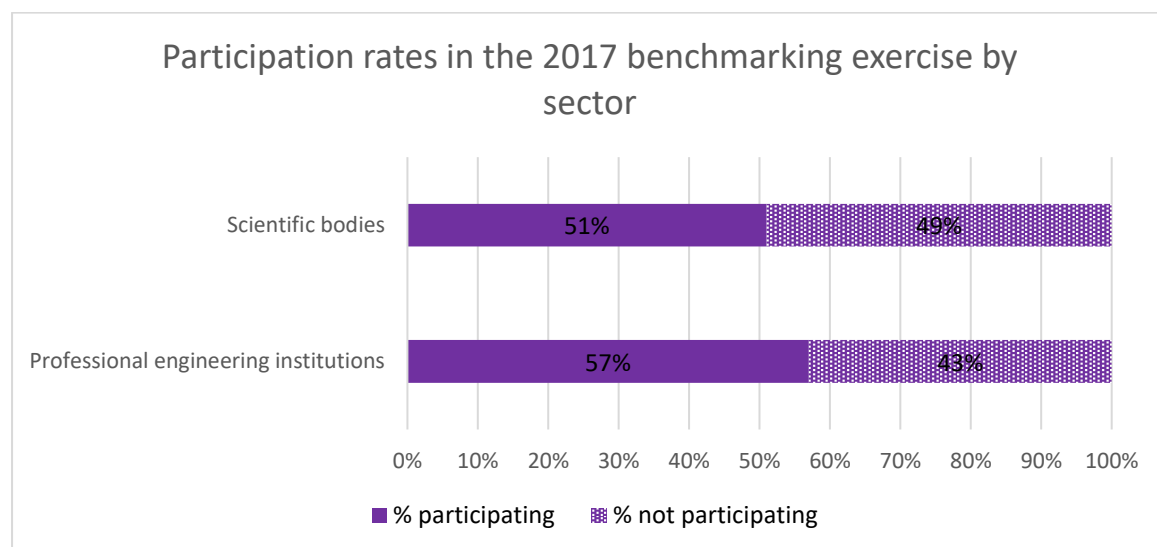6 organisations that are both PEI and Science Council members.

Figure 4

Figure 5

3.2 Board diversity in scientific bodies

Gender

All participating scientific bodies have representation from women on their Boards and a third have at least 50% of women on their boards. But there is less representation of women chairing board committees. 4 scientific bodies do not monitor the representation of women chairing board committees and women chair at least half of all board committees in less than a quarter of the scientific body organisations.

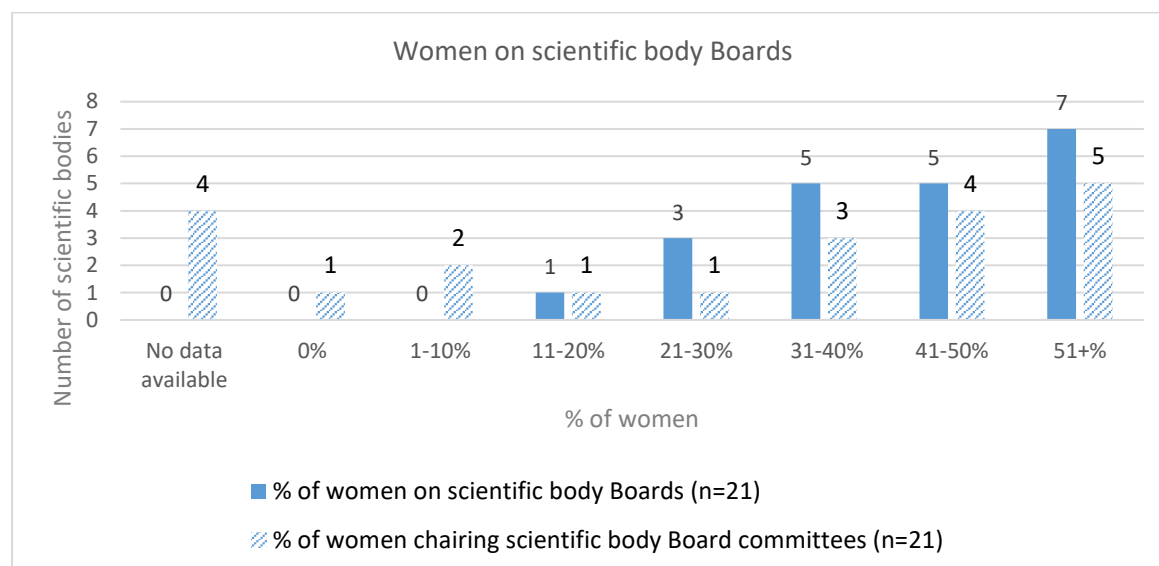**Women on scientific body Boards**

Figure 6

Ethnicity

Fewer scientific bodies were able to provide data on ethnicity at Board level than gender. Seven scientific bodies were unable to provide data on the ethnic make up of their boards and 12 have no BAME people on their boards.
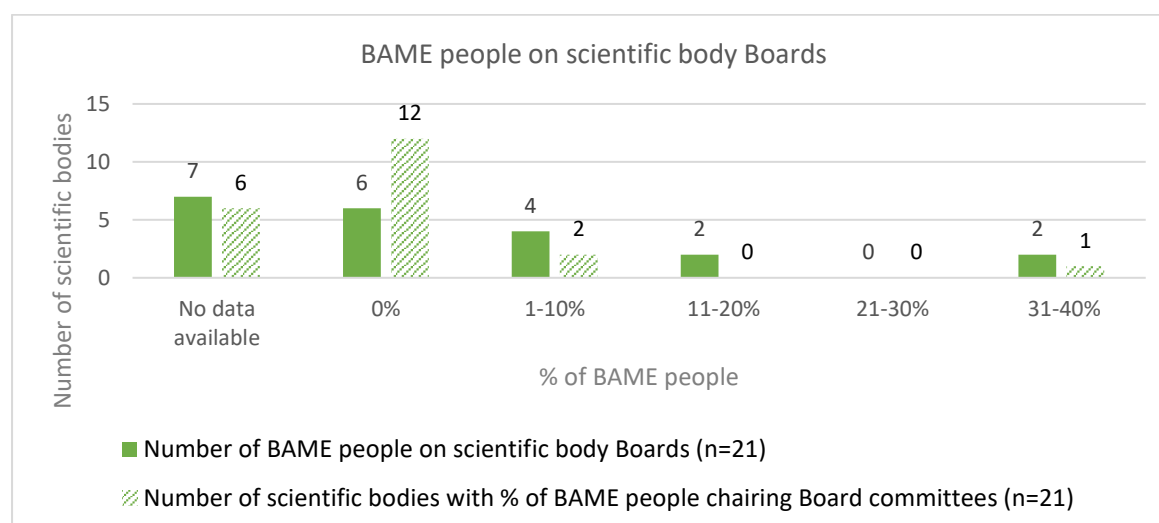
BAME people on scientific body Boards

Figure 7

3.3   Diversity in employment

Overview

All but one participating scientific body provided data on their number of employees. Staff numbers varies greatly between the scientific bodies from one scientific body reporting it is entirely run by volunteers through to over 500 as the highest number of staff.
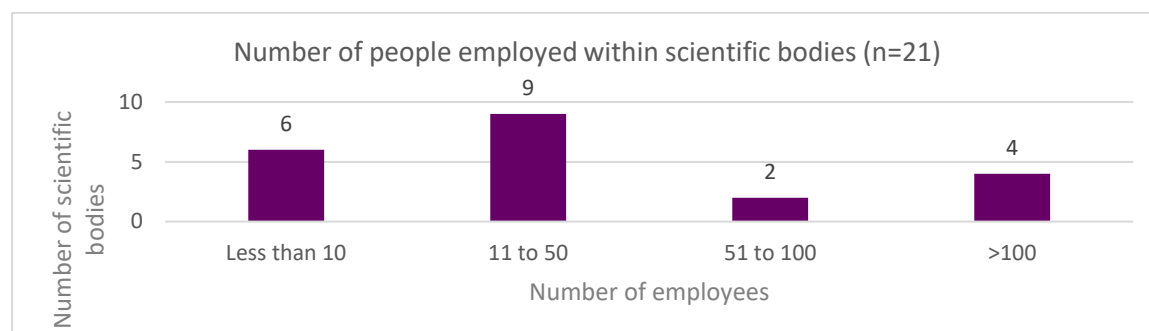
Number of people employed within scientific bodies (n=21)

Number of employees	Number of scientific bodies
Less than 10	6
11 to 50	9
51 to 100	2
>100	4

Figure 8

Gender diversity in employment

All but three scientific bodies provided data on the employee gender diversity. The majority (17) have more than 50% of women on their staff with the highest representation being at 75%.

The representation of women in scientific bodies decreases with seniority. Only six scientific bodies have a senior leadership that is more than 50% female.
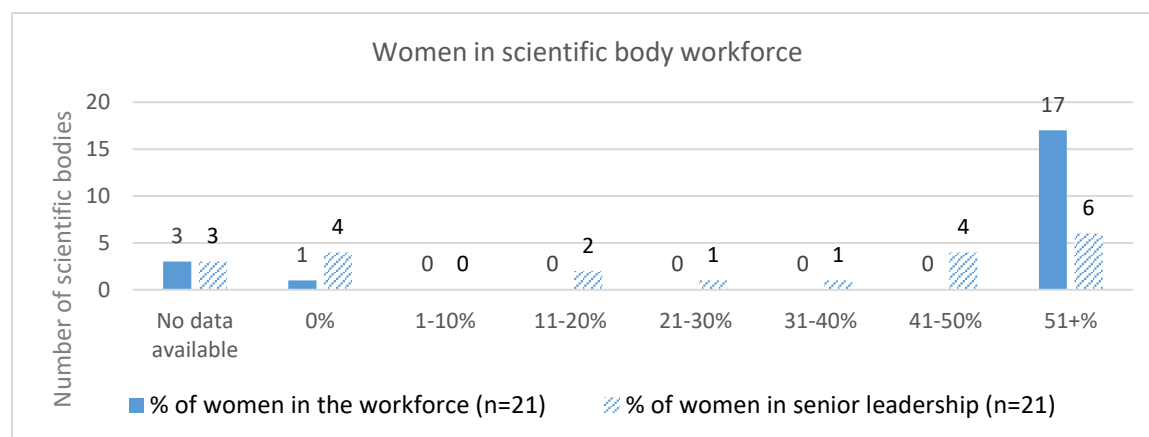
Women in scientific body workforce

	No data available	0%	1-10%	11-20%	21-30%	31-40%	41-50%	51+%
% of women in the workforce (n=21)	3	1	0	0	0	0	0	17
% of women in senior leadership (n=21)	3	4	0	2	1	1	4	6

Figure 9

Ethnic diversity in employment

Fewer scientific bodies were able to provide data on the ethnicity of their workforce (5 were unable to provide data). 3 scientific bodies employ no BAME people and in 8, over 10% of staff are BAME people, with the highest representation being at 35%. Fifteen scientific bodies have no BAME people in senior leadership.
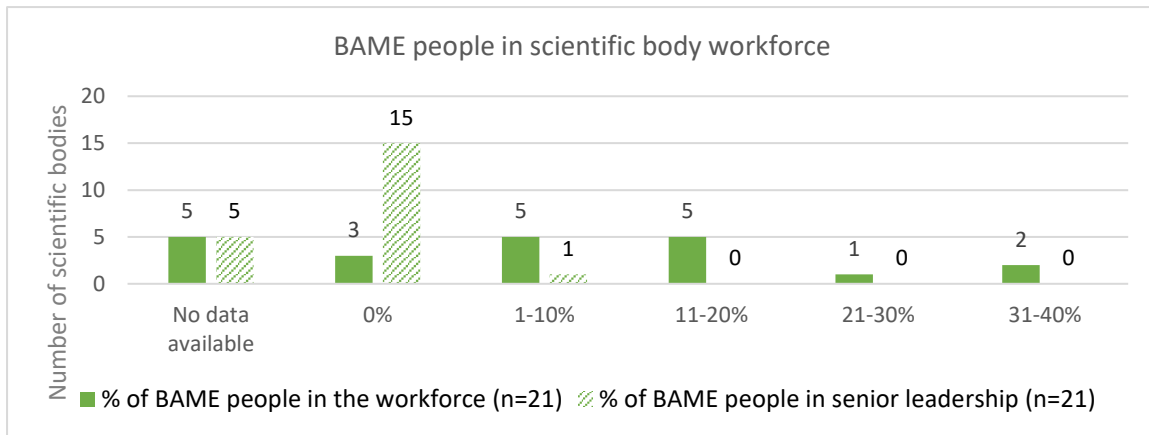
Figure 10

Disability diversity in employment

15 of the 21 scientific bodies provided data on the representation of employees with a disability and 9 report that they have no staff with a disability. Five scientific bodies were not able to provide any information on reasonable adjustments. Amongst the others, the number of reasonable adjustments reported being made in the last 12 months ranged from 3 to over 10. Reasonable adjustments reported included flexible working, special dietary requirements and access arrangements. No information was provided by scientific bodies on types of disability.
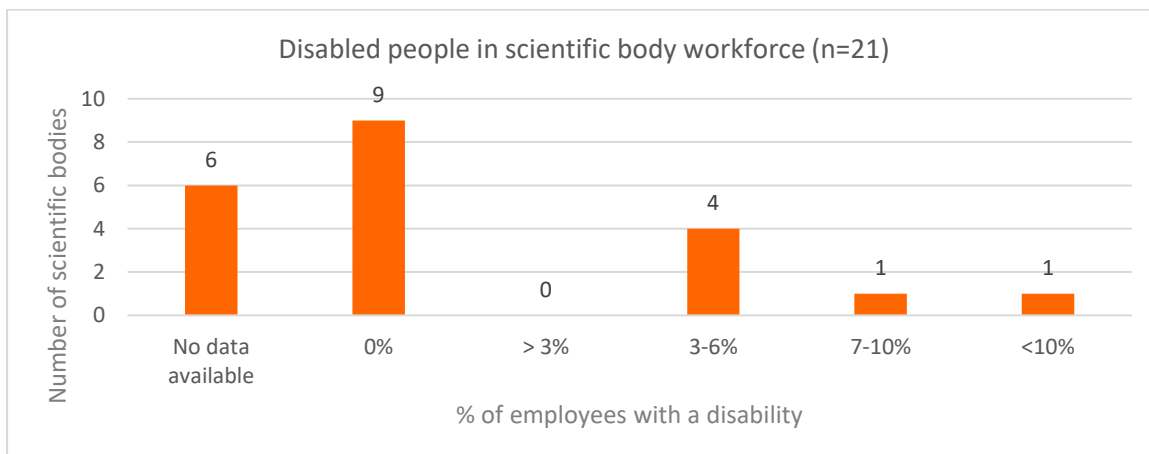

Figure 11

SECTION 4   DIVERSITY IN SCIENTIFIC BODY MEMBERSHIP

Between them, participating scientific bodies have over a quarter of a million members. Almost half
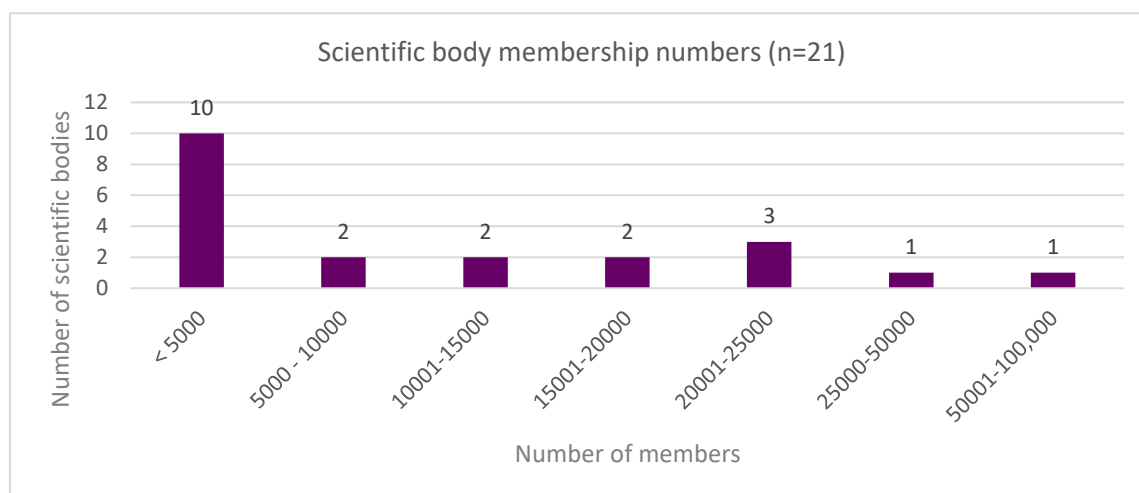the scientific bodies (10) have less than 5,000 members and two have over 25,000 members each.

Scientific body membership numbers (n=21)

Figure 12

Gender diversity in scientific body membership

All but one scientific body was able to provide data on the gender breakdown of their membership.
The average percentage of women members across all participating scientific bodies is 34%. The
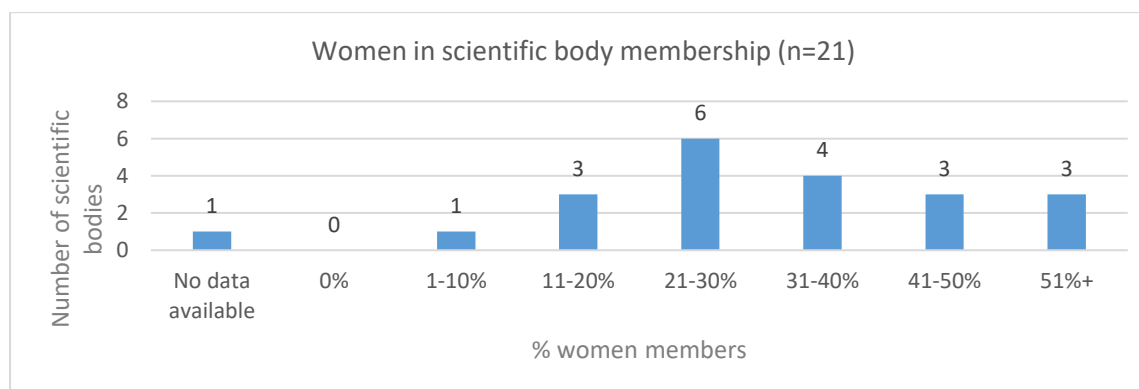highest level of women members in any one scientific body is 75%.

Women in scientific body membership (n=21)

Figure 13

Ethnic diversity in scientific body membership

Unlike gender, very few scientific bodies collect data on the ethnicity of their members. 14 out of 21
scientific bodies are currently unable to provide data on the ethnic make-up of their members.
According to The Royal Society, 10.5% of the scientific workforce in the UK is from a black, Asian or
minority ethnic (BAME) background[1]. Of the seven members able to provide data, the average level
of BAME members is 19% and five participating scientific bodies have more than 10% of their
members from BAME backgrounds.

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[1] ' A picture of the UK scientific workforce', The Royal Society, 2014
(https://royalsociety.org/~/media/Royal_Society_Content/policy/projects/leading-way-diversity/picture-
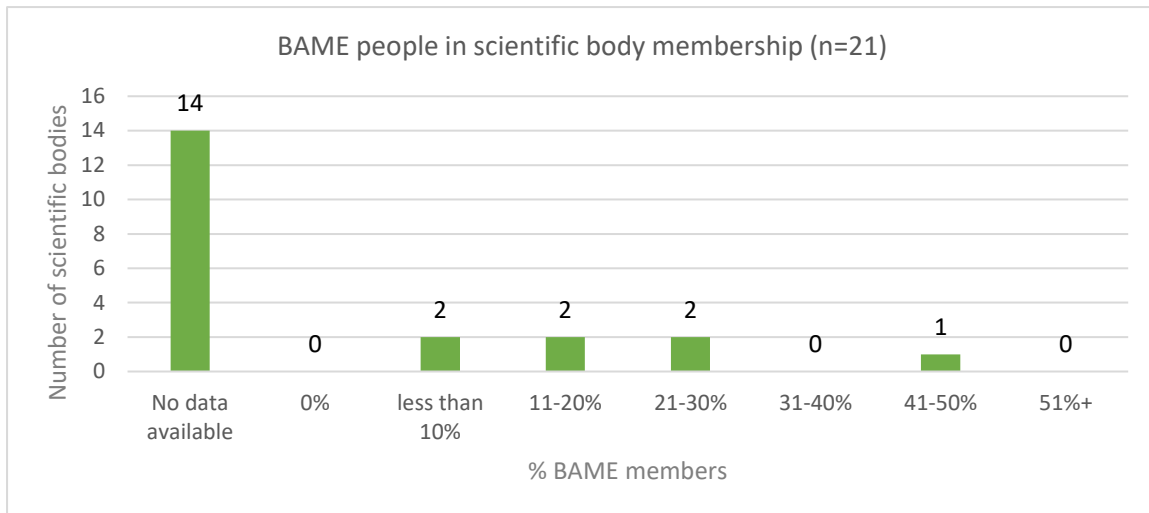uk-scientific-workforce/070314-diversity-report.pdf)

Figure 14

Disability in scientific body membership

The majority of scientific bodies (14) have no data on disability in their membership. 2 scientific bodies report that less than 2% of their members have a disability and 2 report that between 7-10% have a disability.
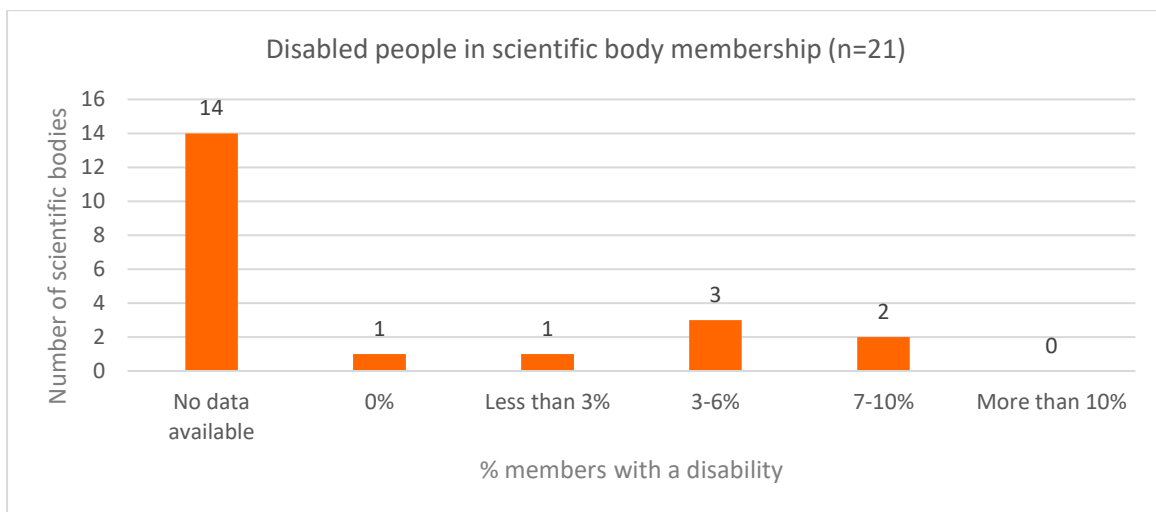
Figure 15

Age and scientific body membership

All but six scientific bodies could provide data on the age of their members. The ages of female and male members were similar and generally ranged from 16 through to 90s. The youngest member amongst the scientific bodies is 11 and the oldest 104.

Diversity in prizes, awards and grants

Between them, scientific bodies awarded around 300 prizes, awards and grants in the past 12 months[2]. 14 scientific bodies keep data by gender and only five keep data on ethnicity. Five scientific bodies gave 50% or more of prizes, awards and grants to women. Only 3 scientific bodies recorded that they gave prizes, awards or grants to any BAME people.

Figure 16

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2   This excludes one scientific body that reported around 30,000 awards and certificates have been made in the past 12 months.

SECTION 5:   PROGRESSION FRAMEWORK RESULTS FOR SCIENTIFIC BODIES: BY SECTION

5.1   Overview

In completing the Framework for the 2017 benchmarking exercise, participants were asked to self-assess their progress in each of the eight categories, by allocating a score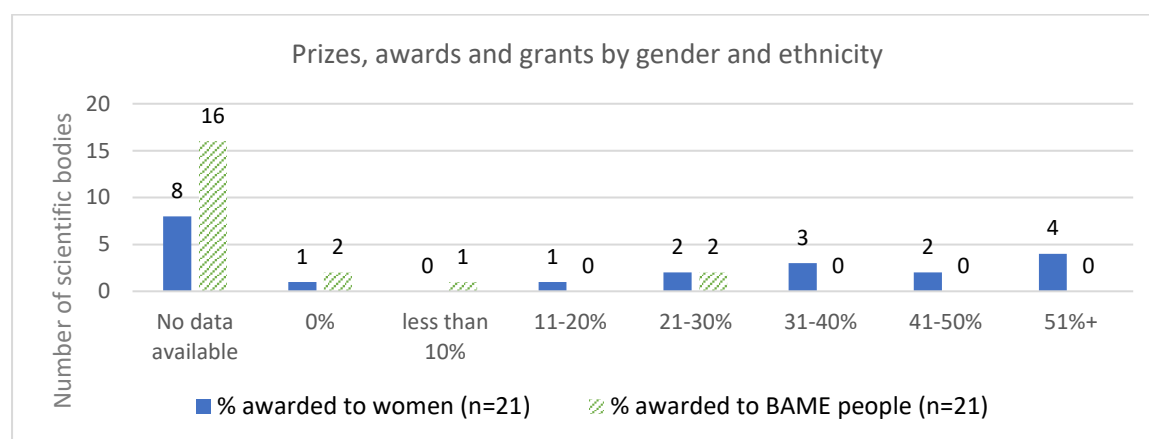 on a simple Excel spreadsheet as follows: score 1 where progress is self-assessed to be at Level 1, score 2 where progress is self-assessed to be at Level 2 etc. The highest score is 4, where progress is self-assessed to be at Level 4. Participants were invited to score 0 if they were unable to record any activity at Levels 1 to 4.

The eight categories to which participants were asked to allocate a score are:

1   Governance and leadership
2   Membership and professional registration
3   Meetings, conferences and events
4   Education and training, accreditation and examinations
5   Prizes, awards and grants
6   Communications, marketing, outreach and engagement
7   Employment
8   Monitoring and measuring

The following table presents the median self-assessment scores for all participating organisations in the 2017 benchmarking exercise, overall and by sector.

	Median self-assessment level for all participating organisations	Median self-assessment level for PEIs[iii]	Median self-assessment level for scientific bodies[iv]
1.1 Governance and leadership	2	2	2
1.2 Membership and professional registration	2	2	2
1.3 Meetings, conferences and events	2	2	2
1.4 Education and training, accreditation and examinations	1	1	1
1.5 Prizes, awards and grants	1	1	1
1.6 Communications, marketing, outreach and engagement	2	2	2
1.7 Employment	2	2	2
1.8 Monitoring and measuring	2	2	2

Overall there is no difference in the self-assessment of PEIs and scientific bodies in terms of progression on diversity and inclusion. In six of the eight categories of the Framework, participants across both sectors assess their progress as Level 2 (Developing). In two of the eight categories of the Framework, participants assess their progress as Level 1 (Initiating).

Notably, when splitting the responding scientific bodies into three groups by size (10 employees or less, 11-30 employees and 31 employees or more), number of employees makes no difference to the median scores in each group. This is also the case when looking at the median scores by size of membership (5,000 or less, 5-20,000 and more than 20,000).

5.2   Section results for scientific bodies

The graphs below present more detailed findings on the self-assessment from scientific bodies, for each of the eight categories of the Framework. Each graph shows the range and distribution of self-assessment scores by participating scientific bodies. The graphs indicate that:

- There is strongest performance in section 1.1, Governance and Leadership
    - 4 scientific bodies self-assess at Level 3 (engaging) and 11 at Level 2 (developing).
- The area of the framework where there is most progress to be made is in section 1.4, Education, training, accreditation and examinations
    - Fifteen scientific bodies self-assess at Level 1 (initiating) in this area with only one at Level 3.
- The majority of scientific bodies self-assess as Level 1 or 2 on sections 1.8 (monitoring and measuring), 1.6 (communications, marketing, outreach and engagement) and 1.2 (membership and professional registration).
- Only one scientific body self-assessed at Level 4 (evolving) on section 1.5 (prizes, awards and grants).

Figure 17
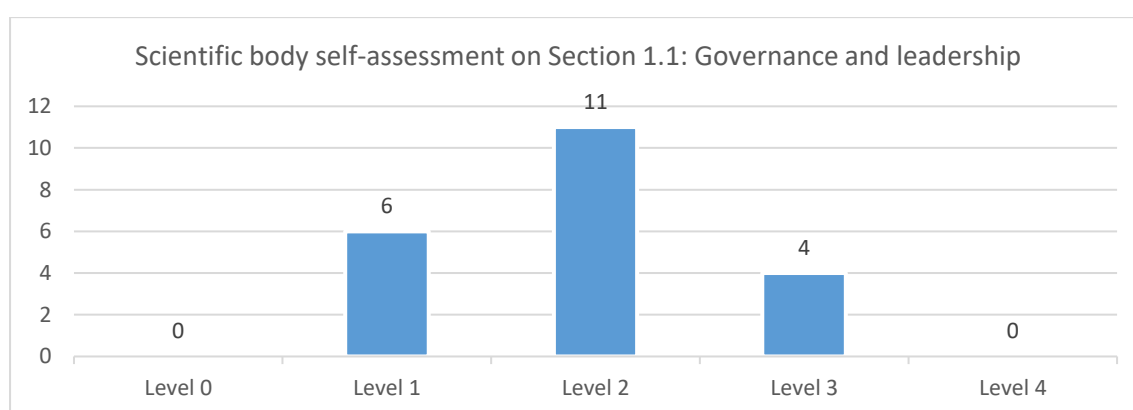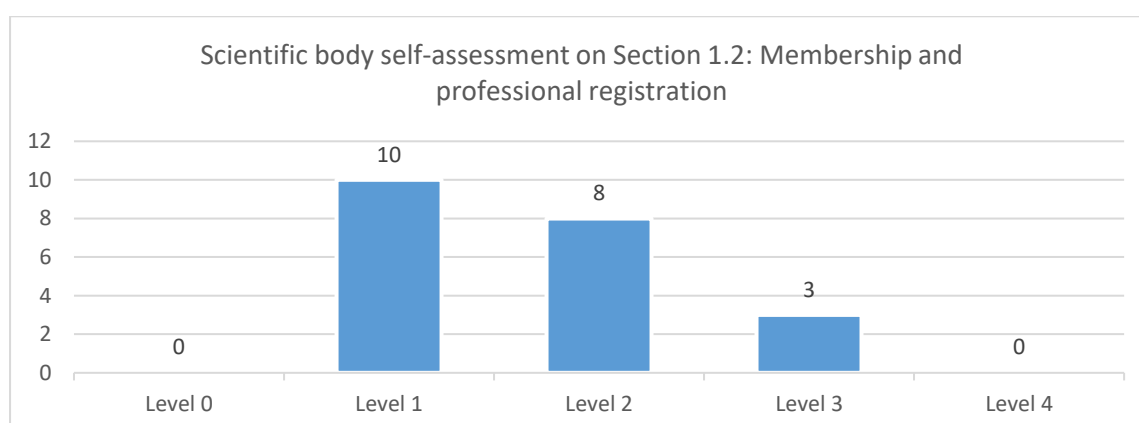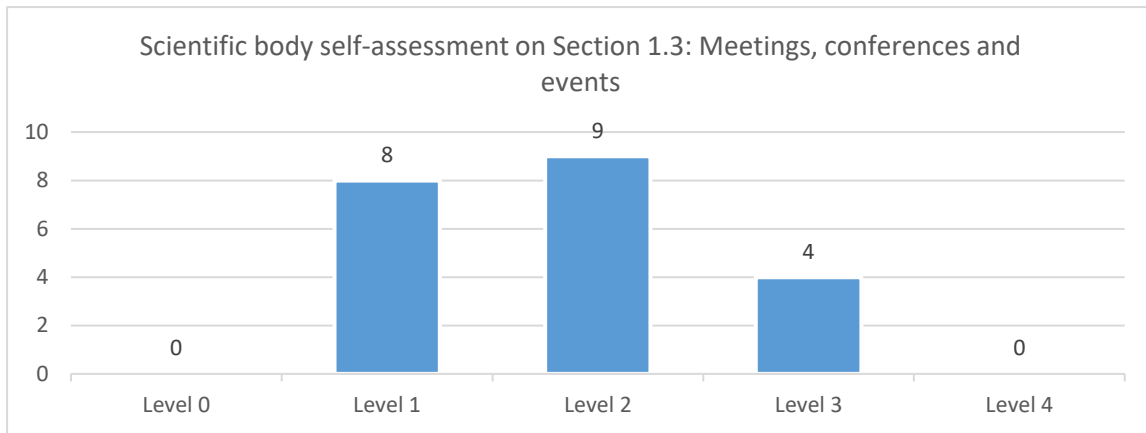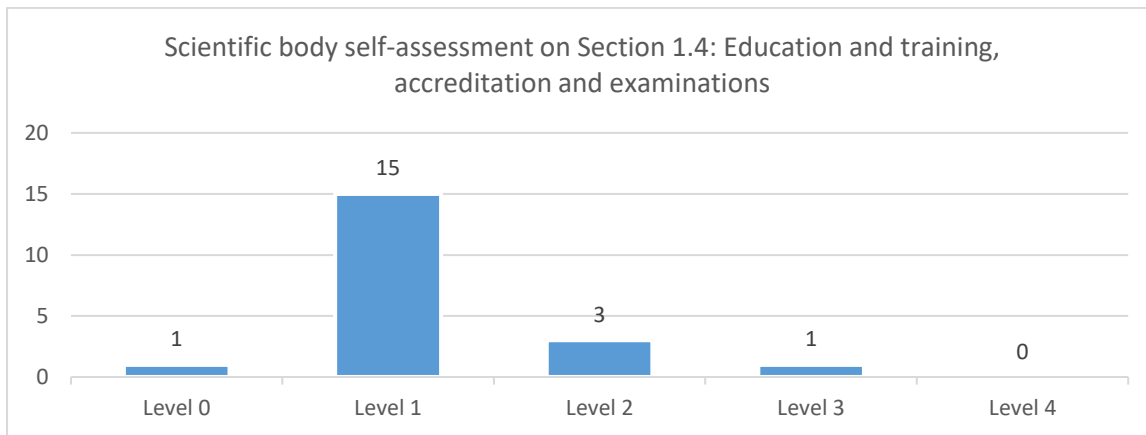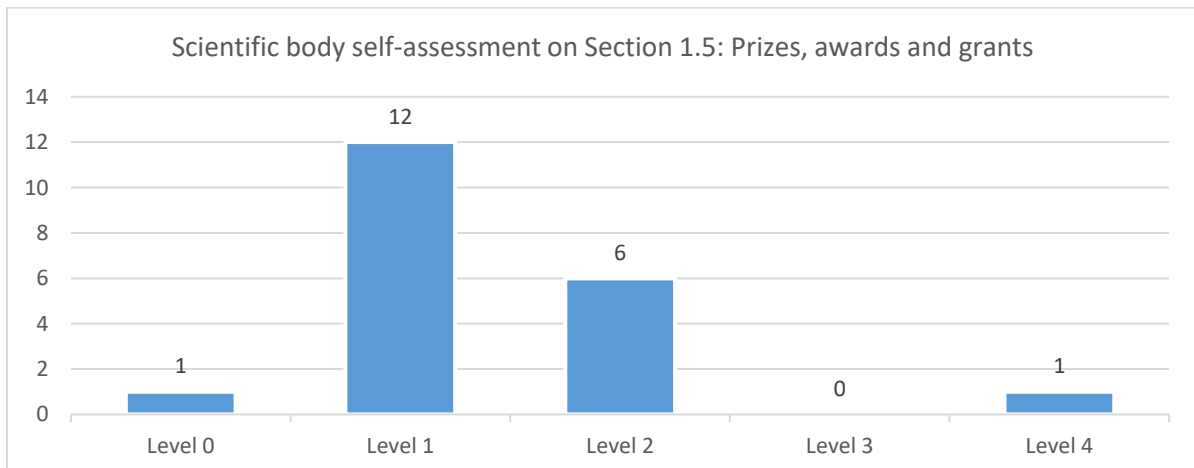

Figure 18

Figure 19

1 scientific body did not complete this section
Figure 20

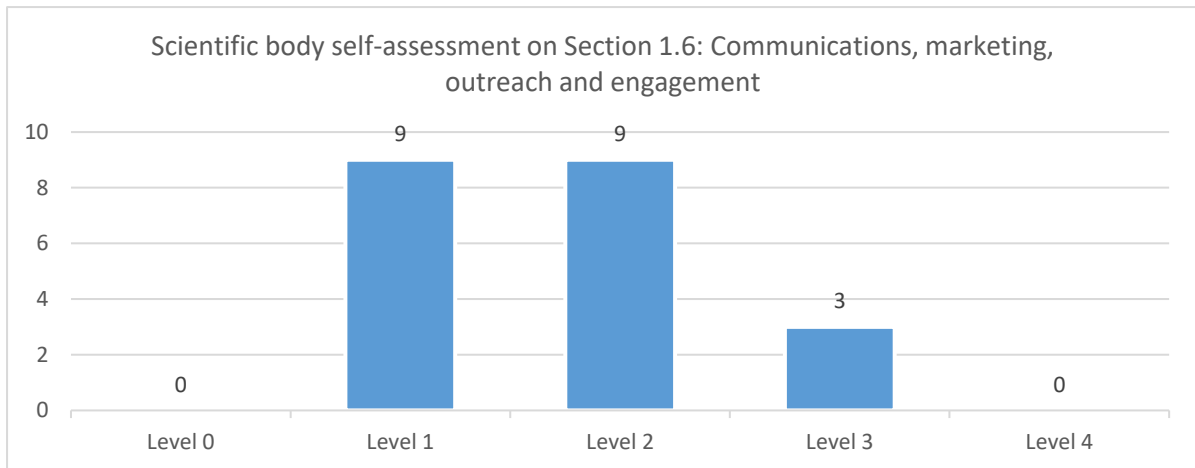1 scientific body did not complete this section
Figure 21

Figure 22
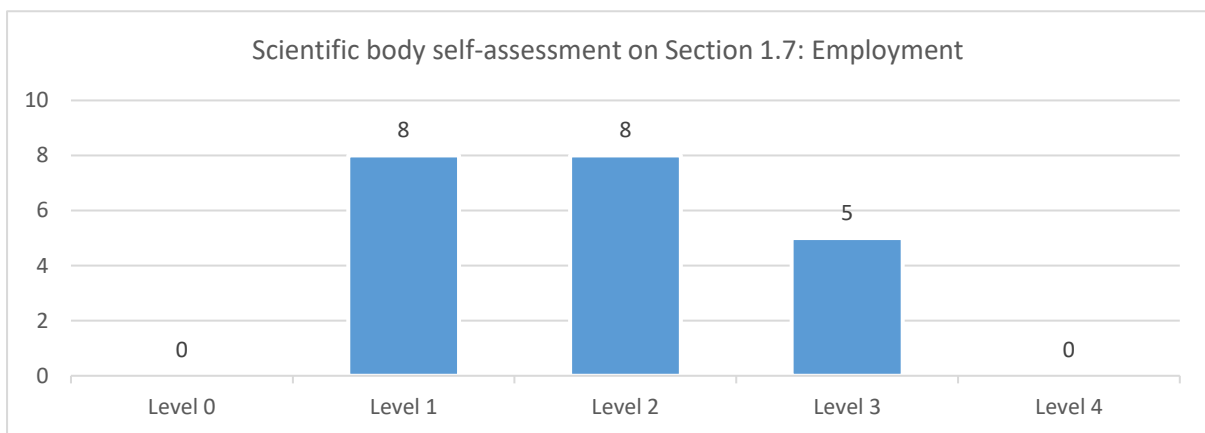
2 scientific bodies did not complete this section
Figure 23
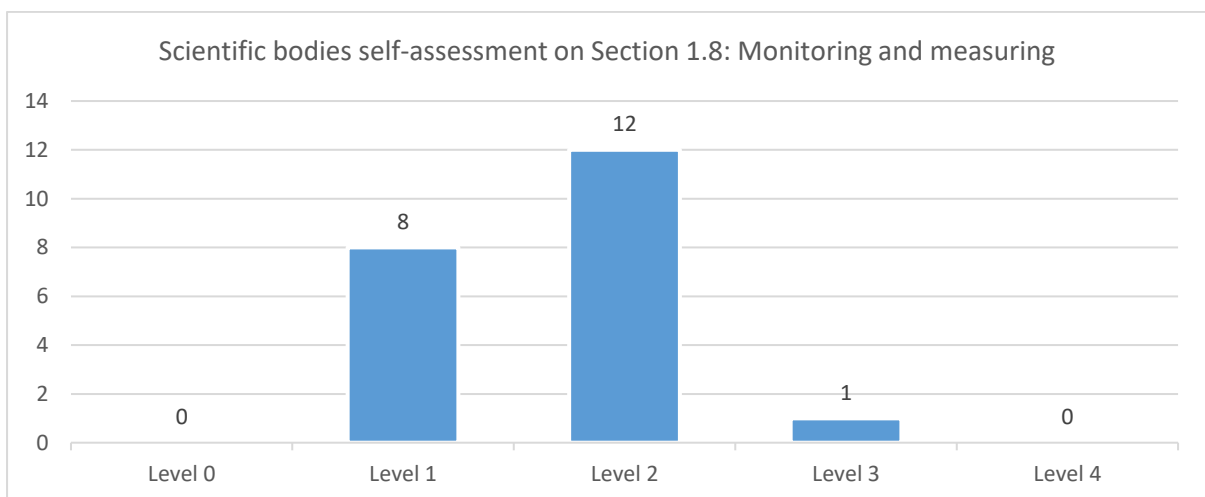
Figure 24

SECTION 6   GOOD PRACTICES AND AREAS FOR DEVELOPMENT

6.1   Good practices

In addition to the self-assessment scores shown in section 5, many of the scientific bodies shared written feedback on the actions they are taking in each of the eight areas of the framework and the successes they're most proud of. In this section, we present eight of the most common good practices from the benchmarking submissions. These are practices that were identified as strengths in the feedback to individual scientific bodies. Many of these good practices come from more than one organisation. Many also come from organisations that self-assess at Level 3 and above, but not all.

1. Leading diversity and inclusion from the top	2. Setting goals and building a strategy and action plan	3. Increasing diversity in membership	4. Increasing diversity in leadership
5. Engaging with members and other stakeholders to inform approach	6. Integrating diversity and inclusion into communications	7. Building a more diverse workforce	8. Creating a more inclusive working culture

Figure 25

Good practice 1:   *Leading diversity and inclusion from the top*

Governance and leadership stands out as the strongest area of progress across the scientific bodies (11 rated themselves at Level 2 and 4 at Level 3). Most scientific bodies have appointed a board level or equivalent member as a named lead or sponsor for diversity and inclusion. Several scientific bodies report that diversity and inclusion is a regular item on the board agenda.

Example: The importance of diversity and inclusion is reinforced by the role of the board level champion who is responsible for ensuring they are considered in all aspects of the organisation's activity.

Example: The organisation's new President has made diversity and inclusion a priority for their year in office and a champion has been appointed internally to lead this area of work.

Example: The leadership of the organisation have published a statement of commitment to diversity and inclusion; appointed a Board level and senior level champion to lead this work and created a diversity committee.

Good practice 2:   Setting goals and building a strategy and action plan

Some scientific bodies are ensuring they sustain progress on diversity and inclusion by setting clear goals and action plans. The goals and plans are built on the results of monitoring data and reviews.

Example: Diversity is embedded in the membership strategy that has made measurable impact on diversity in membership.

Good practice 3:   Increasing diversity in membership

Membership and professional registration is not one of the areas of the Framework that many scientific bodies self-assessed highly on. However, several participants did report that they've made good progress in increasing representation from female and younger members. The average percentage of women members across all participating scientific bodies is 34% and the highest level of women members in any one scientific body is 75%.

Example: Focusing on increasing the number of women members to better reflect the growing number of female graduates. Success includes women appointed at senior levels.

Example: Taking action to broaden the appeal of the Society and engage with younger members. As a result, parity has been achieved in the representation of women in professional and overall membership and they are well represented at conferences and in communications.

Example: Work has been undertaken to increase female applications to fellow and member status over the past 2-3 years. This has resulted in an increase in the ratio of female to male members.

Good practice 4:   Increasing diversity in leadership

Some scientific bodies are taking action to ensure there is diversity in leadership positions. Not only does this help to build diverse role models but also helps to ensure different perspectives are represented on key decisions.

Example: In one scientific body the representation of women in governance roles has increased by over 20% since 2015 and the average has reduced by over three years. The geographic spread of the council has also increased.

Example: In another scientific body, 45% of board members are women, including 40% of board committees that are chaired by women. And 36% of members are from black, Asian or minority ethnic backgrounds (BAME).

Good practice 5:   Engaging with members and other stakeholders to inform approach

Communications, marketing and outreach is an area where several scientific bodies shared the good practice actions they are undertaking and are proud of. In addition to the specific good practice within the framework, notable examples include scientific bodies partnering or engaging with other organisations to help drive diversity and inclusion in their sector and communicating their commitment to diversity and inclusion with members.

Example: Engage with women members and form a steering group to help inform the scientific body's work on diversity and inclusion.

Example: Raising awareness of the scientific body's commitment to diversity and inclusion with members through a communications campaign. The campaign received a very positive on-line response and generated volunteers to join the diversity committee.

Good practice 6:   Integrating diversity and inclusion into communications

Where scientific bodies are consciously working to increase diversity in their meetings, conferences and events, they are seeing positive progress.

Example: Setting an aspirational target for women speakers at events and offering childcare facilities at key meetings.

Example: The conference board pays close attention to diversity and inclusion, actively seeking gender balance and challenging any non-diverse panels. Accessibility information has been added to the conference website.

Good practice 7:   Building a more diverse workforce

There is a good diverse mix of employees across many of the scientific bodies, with a number specifically encouraging the development of diverse teams.

Example: Diversity in recruitment is welcomed and monitored and has resulted in building a diverse team.

Example: In one global scientific body diversity is reflected in both staff and members. Over 60% of staff are female representing six different nationalities and different disabilities.

Good practice 8:   Creating a more inclusive working culture

Scientific bodies are recognising the importance of a diverse and inclusive work culture to support their action on diversity and inclusion for members.

Example: The workforce is 100% flexible working with practical trials and steps taken to design different working practices.

Example: The organisation recognises the benefits of supporting a diverse workforce and has discussed opportunities to increase diversity at all levels. It has a number of policies surrounding the issues of equality, diversity and inclusion that are regularly reviewed and developed. Job interviews are conducted by staff that have had unconscious bias training. Many staff members adopt flexible working.

6.2   What are scientific bodies proud of?

Scientific bodies were also asked to record the actions they were most proud of on diversity and inclusion. Here are some of the examples they shared:

    i.   Raising awareness of and communicating with members on diversity and inclusion

 Example: Running an on-line and social media diversity and inclusion campaign to raise awareness of the scientific body's commitment to diversity and recruit volunteers to work on the diversity committee. The campaign was very well received.

ii   Monitoring the diversity of members

Example: Introducing a voluntary monitoring survey of fellows and members, attracting a good response.

iii   Working collaboratively with member and stakeholder organisations to advance diversity and inclusion

Example: Supporting member organisations with diversity and inclusion through collaboration and sharing of resource, experience and good practice.

iv   Diversity in membership

Example: Increasing the number of women members to better reflect the gender distribution of University graduates. Women appointed at senior levels provide positive role models for female students and promoting women in science.

v   Top level leadership of diversity and inclusion

Example: Board level leadership of diversity and inclusion.

vi   Diversity of the workforce and inclusive workplace

Example: A diverse workforce and board in a sector where gender diversity is low and a 100% flexible working.

vii   Building shared responsibility for diversity and inclusion

Example: The CEO speaks about diversity in all staff meetings. The new governance structure ensures that diversity and inclusion takes a priority role. Individual teamsconsider diversity and inclusion as central to their strategy.

6.3   Areas for development

The individual feedback to each organisation participating in the Framework identified a number of 'areas for development' where individual performance could be improved for the future. Five key areas for development emerge from the combined results of the completed Progression Frameworks across the 21 scientific bodies.
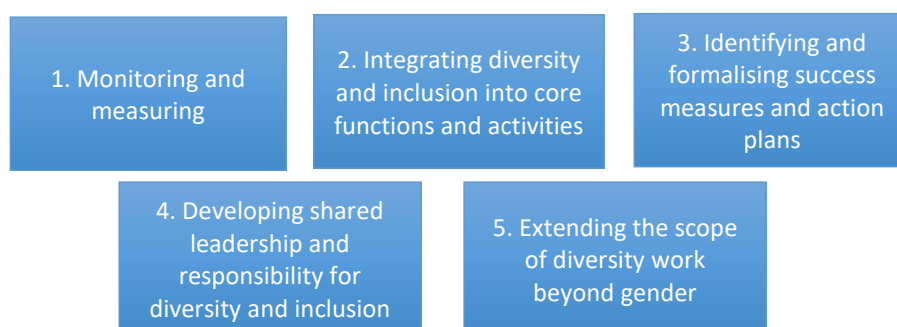
1. Monitoring and measuring	2. Integrating diversity and inclusion into core functions and activities	3. Identifying and formalising success measures and action plans
	4. Developing shared leadership and responsibility for diversity and inclusion	5. Extending the scope of diversity work beyond gender

Figure 26

1   Monitoring and measuring

Monitoring and measuring is not the area of the Framework where scientific bodies self-assessed lowest but it is the area that appeared most commonly as an area for development. Whilst almost all scientific bodies have monitoring data for members on gender and many on age, the majority do not yet monitor ethnicity or disability. Extending monitoring to other areas including ethnicity, disability and sexual orientation was also reported by many scientific bodies as something they were unsure how to progress and had concerns about the sensitivity of asking for this information from members. In short, it appeared as an area where many scientific bodies would benefit from some guidance and support.

2   Integrating diversity and inclusion into core functions and activities

The weakest area of scientific bodies' performance in the benchmark is in building diversity and inclusion into education, training, accreditation and examinations. However, the majority of scientific bodies also rated themselves at Levels 1 or 2 across communications, marketing, outreach and engagement, in membership and professional registration and prizes, awards and grants.

The need to build diversity and inclusion into different areas of activity was a common theme across the priority areas for action shared by the scientific bodies. Five scientific bodies included addressing

diversity and inclusion in prizes, awards and grants as a priority area for action; three within marketing, communications and outreach and three within meetings, conferences and events.

3   Identifying and formalising objectives, success measures and action plans

Whilst there are many examples of good practice actions being undertaken across the scientific bodies, few have a clear plan in place for how they will address the need for change. Objectives, with actions identified and indicators to track progress are all needed to ensure a coordinated and sustained approach to diversity and inclusion.

4   Developing shared leadership and responsibility for diversity and inclusion

Most of the scientific bodies are able to identify at least one person at a senior level who is leading on diversity and inclusion. However, more actively engaging others across the membership, committees and staff is needed in order to develop more of a shared leadership approach to diversity and inclusion and ensure it's embedded across all activities.

5   Extending the scope of diversity work beyond gender

The majority of scientific bodies are focusing their diversity and inclusion attention on gender and age. Far fewer are monitoring or taking action specifically to increase diversity and inclusion in other areas including disability, ethnicity or LGBT.

7   NEXT STEPS: PRIORITIES AND CHALLENGES AHEAD

7.1   Priorities and plans on diversity and inclusion

In completing the Progression Framework, scientific bodies were asked about their plans and priorities on diversity and inclusion for the coming 12 months. The range reflects the different stages of development on diversity and inclusion across the scientific bodies. They are:

1   Improving communications on diversity and inclusion
2   Improving collection and use of monitoring data
3   Putting strong foundations in place to support diversity and inclusion
4   Rolling out a diversity and inclusion plan
5   Taking specific diversity and inclusion initiatives
6   Addressing unconscious bias
7   Improving accessibility
8   Developing an action plan
9   Consulting with members and staff
10 Collaborating with stakeholders

Here are some examples of how respondents described their priorities for the coming 12 months:

Priority 1   Improving communications on diversity and inclusion

- Improving communications around positive stories is a priority.

Priority 2   Improving collection and use of monitoring data

- To formally compile all available demographic data across membership, employment, recruitment, governance, and event speakers into a master document, and set appropriate dates to monitor and review changes. Also, to phase in the collection of ethnicity and disability data across employment, governance and membership to similarly monitor and review in the future. If successful, we may consider further phase-in of data collection concerning religion or sexual orientation.

Priority 3   Putting strong foundations in place to support diversity and inclusion

- As a first step we will be getting in place the structural support for EDI through the continuation of the internal staff Equality and Inclusion forum, and the appointment of a board diversity champion. We will then look to improve our monitoring and evaluation (in particular around ethnicity) so we can understand where resources are best directed.

Priority 4   Rolling out a diversity and inclusion action plan

- A detailed EDI programme has been developed for implementation across the organisation. All functions and departments are required to deliver on their part of the programme to promote and progress diversity and inclusion, and ensure that we actively seek to become a truly inclusive organisation.

Priority 5   Taking specific diversity initiatives

- Our priority over the next 12-months is to create and launch a 'Returners Programme' for the sector to help address the much publicised skills gap.

Priority 6   Addressing unconscious bias

- Continuing progress on communication, addressing possible unconscious bias in nominations for awards.

Priority 7   Improving accessibility

- Importantly, we will continue to work on improving best practice in accessibility - both physically at our meetings but also accessibility to all of our activities (improving the website, advertising of schemes).

Priority 8   Developing an action plan

- Develop the new strategy to 2021 with KPIs and clearly communicate our commitment and plans internally and externally.

Priority 9   Consulting with members and staff

- Engaging the membership and key volunteers in diversity and inclusion and seeking their views.

Priority 10   Collaborating with stakeholders

- One of our main priorities is to build on the relationships we have developed with external partners since signing the Declaration in 2015. As a Learned Society with limited finances and expertise outside of our field, it is essential that we connect and foster relationships in order to ensure that we can broaden our influence where we may not have been able to do so alone.

7.2   Challenges ahead

Scientific bodies were also asked about what they see as their biggest challenges on diversity and inclusion. These challenges represent major risks to scientific bodies being able to successfully implement the priorities described above. Some of the challenges are internal to scientific bodies, relating to them as employers and institutions; others are challenges based in the organisations and individuals scientific bodies seek to influence. Five major risks to progress were identified:

1. Lack of data	2. Internal resources	3. Shared responsibility	4. Communicating progress	5. Current demographics

Figure 27

Risk 1:   Lack of data

Increasing understanding amongst members of the need for monitoring diversity and inclusion beyond gender and age and encouraging them to share demographic information was raised as one of the main barriers to progress.

Example: Obtaining valuable data is difficult - Membership data does not include ethnic, disability, age, sex etc. Where these do occur it is not obligatory to complete, therefore it doesn't give the data required and this data cannot be verified.

Risk 2:   Internal resources

Whilst many of the scientific bodies have a large membership, several have a small staff, and some are run solely by volunteers. Financial, human and time resources are seen by some as a challenge to making progress on diversity and inclusion.

Example: A significant challenge will be building resources - Currently we have one dedicated member of staff who devotes 0.25FTE to EDI, so implementing significant EDI programmes targeted at the membership body will be challenging.

Risk 3:   Shared responsibility

The need to encourage everyone within the organisation to take responsibility and ownership for diversity and inclusion was identified as an important challenge to address.

Example: Motivation! The membership is diverse and, as a lone Diversity Champion, it feels difficult to put a strategy into place.

Risk 4:   Communicating progress

How to communicate progress and the impact of actions in a quantitative way and the need to communicate success stories, especially when progress might be slow, was a vexing challenge for some scientific bodies.

Example: As a science based organisation with a large and varied Fellowship, one of the key factors we need to keep in mind is that not all of the positive outcomes of the work we are undertaking under the topic of Diversity, Equality and Inclusion will be immediately quantifiable or indeed visible. It could be very easy for people to become disheartened at not seeing immediate results. Complacency is also a possible issue, and one that we are keen to guard against."

Risk 5:   Current demographics

Scientific bodies are looking for guidance on the actions they can take to increase the diversity of their membership. This is a particular challenge when the scientific body is operating in a sector where little diversity is present.

Example: Another challenge we face is learning how to encourage more people from diverse backgrounds to become members, and moreover entering the higher levels of the organisation such as the Trustee boards and Panels.

SECTION 8   CONCLUSIONS AND RECOMMENDATIONS

8.1   Conclusions

1   There's a strong commitment to progressing diversity and inclusion within scientific bodies

What is striking in this first benchmarking exercise is the level of commitment amongst scientific bodies to progressing diversity and inclusion. 51% of all Science Council member scientific bodies participated in the benchmarking exercise. The strongest area of self-assessment is on Governance and Leadership with the majority of scientific bodies reporting they are Level 2 or 3. Most scientific bodies have appointed board level members as a named lead or sponsor for diversity and inclusion. And most have a clear sense of their forthcoming priorities.

2   Diversity and progress varies across scientific bodies

Overall, the average representation of women in scientific bodies is 34% but 4 have less than 20% women in their membership and 6 have more than 50%. Similarly, performance in most areas of the Progression Framework also varies across the scientific bodies. There is much scope to learn from good practice between scientific bodies.

3   There is little evidence of action on diversity and inclusion beyond gender

Most scientific bodies have data on the gender and age of their members and staff. Few monitor other diversity demographics. Of the 15 scientific bodies that could provide data on representation of BAME people on their boards, 12 say there is currently no ethnic diversity. Few scientific bodies are reporting any priority plans to expand their actions to different diversity areas other than to collect a broader set of diversity data. It's important to encourage all scientific bodies to develop actions that address diversity over wider range of demographic groups.

4   There's a need to broaden leadership of diversity and inclusion and action across different areas of activity

A step change could be achieved on diversity and inclusion if scientific bodies work to engage members and staff more widely and if the focus of activity on diversity and inclusion is built into every area of activity. Communicating the case for diversity and inclusion and building an action plan to meet objectives will help to set direction and expectations more clearly. A growing body of research and case studies highlight the positive contribution and competitive advantage diversity and inclusion provides, improving financial performance, engagement and innovation[3]. Few scientific bodies currently have a vision, strategy, objectives or action plan and key performance indicators for diversity and inclusion in place.

8.2   Recommendations

In this section we list six recommendations for action that will support scientific bodies in making further progress on diversity and inclusion. The recommendations address the conclusions noted above and the areas for development highlighted in this report. Many of these recommendations are aligned with those given in individual feedback to the scientific bodies.

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[3] Examples of research on the business case for diversity and inclusion include: "Creating Cultures Where All Engineers Thrive", Royal Academy of Engineering, http://www.raeng.org.uk/inclusivecultures; "Why Diversity Matters" McKInsey & Company, https://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters; "Innovation, Diversity and Market Growth", Center for Talent Innovation, http://www.talentinnovation.org/publication.cfm?publication=1400

Recommendation 1:   Engage with and involve members, staff and other stakeholders to help drive diversity and inclusion

We recommend that scientific bodies canvass the views of members, staff and other stakeholders on what is working successfully in advancing diversity and inclusion and what would help make the scientific body even more diverse and inclusive. Engaging with members, staff and stakeholders in this way can help to:

- Generate success stories of what's working well

- Promote a conversation, debate and greater understanding of why diversity and inclusion and the actions needed to advance it are important

- Build the case for diversity and inclusion

- Identify actions that can help make a positive difference

- Build engagement and shared responsibility for progress

Recommendation 2:   Develop a strategy and action plan for diversity and inclusion

Like any other change programme, it's essential that there's a plan in place to address diversity and inclusion issues. We recommend that scientific bodies work with a group of stakeholders (e.g. Board, committee and other members as well as staff) to build the case for diversity and inclusion, an action plan, objectives and key performance indicators with which to track progress towards diversity and inclusion goals. We recommend developing these using available data and feedback from staff, members and other stakeholders.

Recommendation 3:   Expand monitoring activity to different demographic groups and areas of activity

Monitoring data is key to assessing progress on diversity and inclusion. We recommend that scientific bodies extend data collection and monitoring activity beyond gender and age to also include ethnicity, disability, gender identity and sexual orientation. We also recommend broadening the range of activities that are monitored. This should include monitoring of speakers and panel members as well as participants (wherever possible) within meetings, conferences and events; participation and success in education and training, accreditation and examinations and in applications to and success in prizes, awards and grants.

Recommendation 4:   Build diversity into a range of scientific body activities

It's important that all areas of work within scientific bodies consider diversity and inclusion. We recommend critical next steps on this to include:

- Building diversity into prizes, awards and grants by ensuring all judging panels are demographically diverse wherever possible and trained in recognising and addressing unconscious bias. Also, actively encouraging diverse members to apply.

- Creating guidance on building diversity and inclusion across a range of demographics groups into communications, marketing, outreach and engagement and making sure everyone involved in these activities understands the organisation's commitment to increasing the diversity of speakers, panel members and participants.

- Building diversity and inclusion into education, training and accreditation and examinations by ensuring assessment, review boards and trainers reflect diversity wherever possible and that they have guidance and/or training in unconscious bias. Also, reviewing accreditation criteria and systems for unconscious bias and accessibility.

Recommendation 5:   Regularly communicate progress and plans on diversity and inclusion

We recommend that scientific bodies focus on communicating the case for diversity and inclusion with members, committees and staff as well as successes to date and plans for next steps. This will help keep member, staff and other stakeholders engaged throughout the diversity and inclusion journey.

Recommendation 6:   Broaden activity beyond gender and age

Currently, much of the diversity activity within scientific bodies is focused on gender and age. We recommend that this is extended to other diversity areas, including ethnicity, disability and LGBT. We recommend that scientific bodies consult with members; staff and other stakeholders from different backgrounds on what they think your organisation can do to make it even more diverse and inclusive across ethnicity, disability and LGBT.

SECTION 9   COMPLETING THE FRAMEWORK: COMMENTARY

This section includes commentary on the completion of the Framework, from the perspective of fbs consulting (www.forbusinesssake.com). fbs consulting was commissioned by the Royal Academy of Engineering and the Science Council to conduct the 2017 benchmarking exercise.

8.1   Commentary

This commentary relates to two aspects of the completion of the Framework: self-assessment scoring and data quality.

The Progression Framework is a self-assessed benchmark. One risk associated with self-assessed benchmarking is that of over or under-inflation of scores. This risk was considered during the development of the Progression Framework and in order to mitigate the risk of over-inflation in particular, participants were asked to:

- Highlight the components of the Framework that they took into account in deciding on their self-assessment score

- Provide an accompanying narrative for each self-assessment score, summarising the evidence on which the score was based.

In reviewing the self-assessment scoring the following observations were made:

- There was quite a lot of variation in the extent to which participants highlighted elements of the Framework and/or provided an accompanying narrative to explain their self-assessment. Eleven scientific bodies highlighted elements of the Framework to indicate the basis for their self-assessment, in some cases using a red-amber-green system, or similar, to indicate the extent of progress. Nineteen provided written evidence in the open text boxes, varying from minimal to very detailed in content. A small number of submissions made reference to external sources such as websites which were not reviewed in detail. One scientific body didn't provide any evidence or highlight any elements of the Framework to support their self-assessment.

- In general, over and under-inflation of scoring was not considered to be a major concern in reviewing the submissions. On the basis of the evidence submitted, one scientific body submitted scores which seemed like an under-inflation, in relation to the Framework.

- All but one of the scientific bodies completed Section 2 on progress, challenges and priorities for the future and.

- One of the recurrent themes in this report is the challenge which scientific bodies face on monitoring and measuring on diversity and inclusion. Where scientific bodies provided data with their submissions there were a few instances where its reliability and accuracy could be questioned. For instance some of the data on ethnicity was described as observational and some data entries appeared to lack accuracy (for example providing actual number of women on Boards rather than %). The data that was provided is a great starting point, but encouraging greater accuracy of completion is a definite priority for future benchmarking exercises.

Appendix 1:   Background to the Progression Framework

Over the last six years, the Royal Academy of Engineering (the Academy) has been leading a programme with the vision of an inclusive profession that inspires, attracts, recruits and retains people from all backgrounds. The programme is focused internally and externally; partnering and collaborating with stakeholders in engineering employment, professional bodies and third-sector organisations with the aim of challenging the status quo and driving change through visible and innovative interventions.

In 2012, the Academy worked with representatives from a number of professional engineering institutions (PEI) to develop an Engineering Diversity Concordat (available at http://www.raeng.org.uk/policy/diversity-in-engineering/professional-engineering-institutions). This is a voluntary agreement to support joint working on diversity and inclusion.

All 35 PEIs were invited to sign up to the concordat; as a result, 30 including the Engineering Council and the Academy have become signatories. The Concordat commits signatories to work together to communicate commitment to diversity and inclusion, take action to promote and increase it, and monitor and measure progress.

Although PEIs subsequently reported progress against these objectives, there was appetite for increased rigour in planning, measuring progress and benchmarking. In addition, independent evaluation of the effectiveness of the concordat highlighted that there was some ambiguity around what 'success' looks like and that a standardised tracking tool or dashboard should be shared with institutions to monitor plans and encourage increased commitment and ongoing progress. This resulted in the birth of the Diversity and Inclusion Progression Framework – developed for professional bodies by professional bodies.

In 2014, the Science Council developed the Declaration on Diversity, Equality and Inclusion to facilitate buy-in from its membership of professional bodies in the promotion of equality, diversity and inclusion (EDI). The aim is to create greater opportunity for all individuals to fulfil their scientific potential, irrespective of background or circumstances.

The Science Council sets the standards for professional scientists through registration. It also helps science to better serve society by attracting the widest possible talent to the science workforce and fostering a greater diversity of scientific ideas, research and technology.

The Science Council is committed to widening participation in science education and the workplace. To this end, the Science Council and its member bodies have declared a commitment to promote EDI throughout their communities and challenge prejudice and discrimination.

As a leading voice in science and the application of science, the Science Council seeks every opportunity to be proactive in promoting and communicating this vision to educators, employers, policymakers, opinion formers and other publics.

Appendix 2:   Progression Framework overview

The Progression Framework was developed in collaboration between the Royal Academy and the Science Council with the aim of helping professional bodies track and plan progress on diversity and inclusion.

The Framework asks professional bodies about progress on diversity and inclusion in eight areas of their work, by setting out four levels of good practice on each.

The eight areas are:

    9   Governance and Leadership
    10   Membership and professional registration
    11   Meetings, conferences and events
    12   Education and training, accreditation and examinations
    13   Prizes, awards and grants
    14   Communications, marketing, outreach and engagement
    15   Employment
    16   Monitoring and measuring

The four levels of good practice are:

Level 1: Initiating
Level 2: Developing
Level 3: Engaging
Level 4: Evolving

Further detail of the Progression Framework including descriptions and examples of each of the good practice levels can be found at http://www.raeng.org.uk/publications/other/diversity-progression-framework

Appendix 3:   Benchmarking methodology

In completing the Framework for the 2017 Progression Framework benchmarking exercise, participants were asked to self-assess their progress in each of the eight categories above, by allocating a score on a simple Excel spreadsheet as follows: score 1 where progress is self-assessed to be at Level 1, score 2 where progress is self-assessed to be at Level 2 etc. They were also asked to respond to a number of qualitative and measurement questions regarding progress on diversity and inclusion in their organisations.

Completed Frameworks were returned to for business sake consulting limited (www.forbusinessake.com), an independent consultants on diversity, inclusion and organisational change. The consultants were commissioned by the Royal Academy of Engineering and the Science Council to conduct the benchmarking analysis and signed a non-disclosure agreement which meant only the participating organisation and the consultant saw each submission.

Once received, the submissions for all participating organisations were combined by the consultants in a single Excel spreadsheet, including both self-assessment and text evidence. This allowed the consultants to calculate numerical benchmarks and to compare self-assessment levels and qualitative evidence from participating organisations, overall and by sector (PEI and scientific body).

For this report, Benchmarks 1 and 2 have been simply calculated using a median rather than a mean average. The median calculation generates a benchmark at Levels 1 – 4, compared to a mean calculation which generates a benchmark at one or two decimal points.

Benchmark 3 has been calculated using a mean average of organisations providing data on gender and ethnicity in membership and at Board level.

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[i] All PEI participants including those in joint Academy/Science Council membership
[ii] All scientific body participants including those in joint Academy/Science Council membership
[iii] All PEI participants including those in joint Academy/Science Council membership
[iv] All scientific body participants including those in joint Academy/Science Council membership