RAND EUROPE

Leveraging diversity for military effectiveness

Diversity, inclusion and belonging in the UK and US Armed Forces

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Preface

This report presents the findings of a RAND study that examined the opportunities for workforce diversity to enhance military effectiveness. Chiefly, the report outlines a framework to help guide the UK and US Armed Forces in their assessments of links between different kinds of diversity and military effectiveness, and how these links may be better leveraged[1] in future.

Funding for this research has been provided internally by the RAND Initiated Research (RIR) programme. The study was delivered jointly by RAND Europe researchers and colleagues from the RAND Corporation in the United States, which allowed the study team to examine both UK and US perspectives on the central study theme. While findings presented in this report are oriented towards military leaders in the UK and the United States, the study provides cross-cutting insights on a topic of critical importance and interest to many other nations and sectors.

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1 In the context of this study, 'leveraging diversity' is understood as actively harnessing the advantages that a diverse workforce contributes to an organisation (in this case the Armed Forces) to enhance organisational effectiveness.

Box 1 Structure of this report

This report is structured in five chapters:

- **Chapter 1: Introduction** discusses the study context, objectives and methodology, and presents the key study findings and contributions.
- **Chapter 2: Opportunities for the UK Armed Forces** discusses three selected opportunities for leveraging military diversity in the UK context. This focuses on illustrating a range of links between diversity and some of the key strategic priorities identified by the UK Armed Forces in the evolving strategic environment.
- **Chapter 3: Opportunities for the US Armed Forces** illustrates the framework in relation to the US context. Further to outlining the opportunities associated with diversity to address selected strategic priorities identified by the US Armed Forces, it discusses actionable steps the Armed Forces can take to realise these opportunities.
- **Chapter 4: Options for the UK and US Armed Forces** reflects on the study's cross-cutting findings and presents options for the UK and US Armed Forces to ensure links between diversity and military effectiveness are fully leveraged in the future.

The core report is supplemented by two technical annexes:

- **Annex A: Methodology** provides a more in-depth description of the research design and methodology used in the study.
- **Annex B: Overview of diversity, inclusion and belonging in the UK and US Armed Forces** provides further background information on the historical and current context of diversity, inclusion and belonging in the UK and US Armed Forces.

Summary

The UK and US Armed Forces face an increasingly complex and uncertain strategic environment that is, in various ways, changing how modern militaries operate and achieve their strategic, operational and tactical objectives.[2] In this evolving strategic environment, the Armed Forces need to effectively leverage all available advantages, including those stemming from their workforces, to maximise strategic and operational effectiveness.[3] Supported by a growing body of literature on diversity and inclusion,[4] many military organisations now recognise that workforce diversity is one such factor that contributes to organisational effectiveness.[5] There is however a need for a more comprehensive understanding of the full spectrum of potential advantages that can be gained by employing a diverse workforce, and how these advantages relate to evolving strategic priorities of the UK and US Armed Forces.

To address this requirement, this study considers how diversity may create opportunities for military organisations to enhance their strategic and operational effectiveness. In so doing, it addresses the following research questions (RQs):

- RQ1. What type of operational and strategic advantage can a diverse workforce create for UK and US Armed Forces?
- RQ2. What are some of the opportunities to harness operational and strategic advantages associated with different diversity characteristics (e.g. gender, age, neurodiversity)?
- RQ3. What options are there for the UK and US Armed Forces to leverage the advantages that can be gained by employing a diverse workforce?

The study team conducted a range of qualitative research activities to address these RQs. These included a large-scale literature review as well as semi-structured interviews with subject matter experts (SMEs) and practitioners from the UK and United States. The study team also held a series of internal analysis workshops with RAND experts to

2 Lim (2015).

3 Lim (2015).

4 See e.g. Janowitz & Moskos (1974), Miller (1997), Segal & Hansen (1992), Segal & Bourg (2002), Kraus et al. (2007).

5 For example, the UK MOD Defence Diversity and Inclusion Strategy recognises that diversity and inclusion are critical for Defence as 'a diverse and inclusive organisation is a stronger, healthier and more resilient organisation'. Similarly, the US Department of Defense has recognised that 'diversity and inclusion make us a stronger, better and more effective military'. Source: UK MOD (2018a, 5), US DoD (2020f, n.p.).

provide cross-cutting analysis of the identified links between diversity and organisational effectiveness, how these may relate to key strategic priorities for the UK and US Armed Forces, and what the overall implications for the Armed Forces may be.

The research activities cumulatively contributed to three key research outputs: a conceptual framework capturing how workforce diversity contributes to military effectiveness, six vignettes illustrating the framework in relation to various operational and strategic requirements identified by the UK and US Armed Forces, and analysis of key implications and options for the Armed Forces as they consider leveraging the various operational and strategic advantages provided by diversity.

The conceptual framework – presented in Figure 0.1 and further discussed in Chapter 1 of this report – aims to characterise how diversity may be leveraged as a strategic enabler in an evolving strategic landscape.[6] As the framework captures:

- Identifying and operationalising the opportunities associated with diversity starts with characterising the strategic environment and associated strategic priorities shaping workforce-related requirements of the UK and US Armed Forces. Correspondingly, diversity-related opportunities may best be maximised through recognising specific strategic priorities and requirements.
- The UK and US Armed Forces can leverage diversity in three key aspects, namely:
  - Enhancing organisational capacity for innovation, adaptation and quality of decision-making.
  - Fostering external legitimacy, enhancing ability to project influence and improving engagement with partners, allies and other domestic and international audiences.
  - Improving the Armed Forces' ability to attract, retain and foster skills needed to address current and evolving national security imperatives.
- In order to operationalise diversity-related opportunities, the Armed Forces need to consider how diversity can be effectively enabled through recruitment as well as how a diverse workforce can be effectively managed and rewarded. Finally, the Armed Forces need to continuously build their organisational capacity for effectively leveraging diversity.

An illustration of the framework and its constituent elements is provided through six vignettes captured in Figure 0.2 and presented in Chapters 3 and 4 of this report. The vignettes were selected and developed to highlight the wide spectrum of diversity-related opportunities as well as how these opportunities relate to the different priorities identified by the UK and US militaries in today's evolving strategic environment.

6 In this context, an enabler is understood as a factor 'that can be leveraged to support the implementation of [a range of activities] in support of strategic goals'. Adapted from: Jamil (2015).

Figure 0.1 Framework for leveraging diversity for military effectiveness

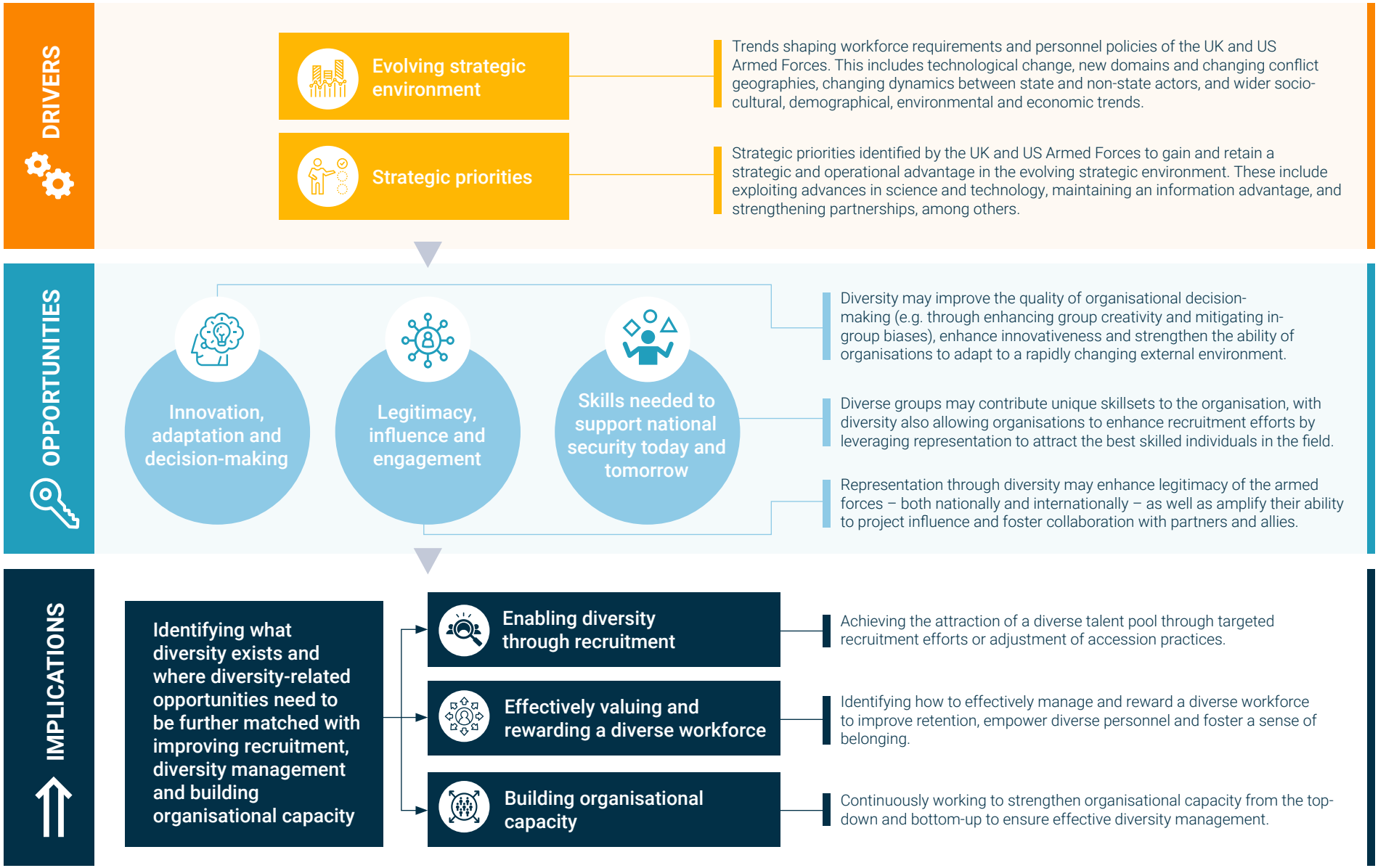


Figure 0.2 Overview of the study vignettes

UK Armed Forces

VIGNETTE 1

Achieving and maintaining information advantage

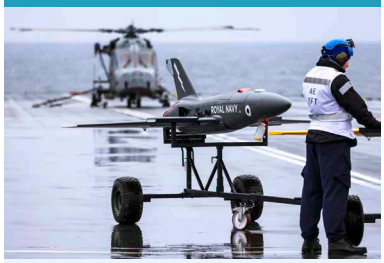
Information advantage is defined as 'the credible advantage gained through the continuous, adaptive, decisive and resilient employment of information and information systems'. In achieving and maintaining it, the Armed Forces can leverage unique skills of neurodiverse individuals.

VIGNETTE 2

Enabling permanent and persistent global engagement

Global engagement is key to the UK's ability to pre-empt strategic threats, identify hostile state actors, project influence and respond to strategic opportunities. Ethnic and cultural diversity can enhance the Armed Forces' ability to engage through enhanced cultural understanding, foster trust, and form lasting relationships.

VIGNETTE 3

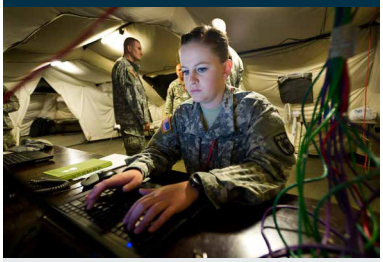


Developing effective, ethical and trustworthy AI-based systems

AI-based systems are critical in the UK's endeavour to ensure a strategic advantage through S&T. Diversity of thought may be a key enabler for developing ethical and trustworthy AI-based solutions through allowing teams to better test assumptions, develop un-biased predictions and risk assessments.

US Armed Forces

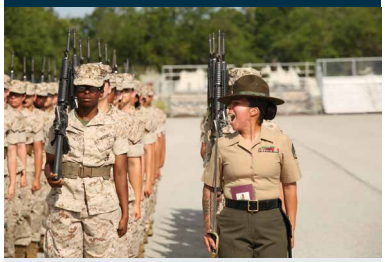
VIGNETTE 4



Recruitment of cyber warriors

Diversity can help the US Armed Forces recruit cyber warriors to enhance US capabilities in cyberspace. It can do so through expanding the pool of potential talent via the use of waivers for people with in-demand cyber skills who may otherwise not be eligible to join the military.

VIGNETTE 5



Recruiter diversity

In an increasingly competitive recruiting landscape for the US military, the diversity of military recruiters could help each military Service improve their outreach in markets that have been historically challenging for the military to reach or perform well in.

VIGNETTE 6

INDO-PACOM

The DoD necessitates personnel to be equipped with the cultural and linguistical capabilities necessary to effectively operate in the Indo-Pacific theatre – a key region of focus for the US. Recruitment and effective management of culturally diverse personnel can help the DoD build these capabilities, including culture-general knowledge and cross-cultural competence.

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As Chapter 4 of this report discusses in greater depth, the variety of diversity-related opportunities calls for a strategic and ambitious effort across all services and parts of the Armed Forces to further elevate diversity as an enabler of strategic and operational advantage. In practice, this effort should include a continuous assessment of the full spectrum of skills and competencies that the Armed Forces may already benefit from with current levels of diversity, as well as an assessment of specific gaps and priorities for recruitment and diversity management. Similarly, corresponding efforts will be required to enable all personnel to effectively contribute to the operational and strategic success of the UK and US militaries through fostering inclusion and belonging. This should include a continued push, building on recent advances, to address all factors that hinder diversity and inclusion, such as structural or perceived barriers to progression and promotion.

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Abbreviations

ADHD	Attention-Deficit Hyperactivity Disorder
AI	Artificial Intelligence
AVF	All-Volunteer Force
BAME	Black, Asian, Minority Ethnic
GCHQ	Government Communications Headquarters
DBH	Discrimination, bullying and harassment
DoD	Department of Defense
IOpC	Integrated Operating Concept
LGBT	Lesbian, gay, bisexual and transgender
MOD	Ministry of Defence
NATO	North Atlantic Treaty Organisation
NSSG	National Security Strategic Guidance
R&D	Research and development
RAF	Royal Air Force
RIR	RAND-Initiated Research
RQ	Research Question
S&T	Science and technology
SME	Subject-matter expert
STEM	Science, Technology, Engineering and Mathematics
WP	Work package

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Notwithstanding these contributions, all mistakes and omissions are the sole responsibility of the authors of this report.

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1 Introduction

This chapter introduces the context, objectives and scope of the study and briefly discusses the research design and methodology, as well as the core concepts that underpin the research. It then introduces the central output of the study – a framework for leveraging diversity for military effectiveness.

1.1. In a rapidly evolving strategic environment, the Armed Forces need to leverage all available advantages to maximise their effectiveness

The UK and US Armed Forces face an increasingly complex and uncertain strategic environment that is, in various ways, changing how modern militaries operate and achieve their strategic, operational and tactical objectives.[7] This strategic environment is shaped by a range of drivers (outlined in Table 1.1) that have various implications for how the UK and US Armed Forces conduct military operations and support national security, as well as manage their workforces.[8] In this context, the Armed Forces need to effectively leverage all available advantages to maximise their organisational effectiveness.[9]

Most militaries have criteria for who is – and who is not – eligible to join the Armed Forces, stemming from reasons including mission-specific justifications such as combat effectiveness and military readiness.[10] For example, the UK Armed Forces are excluded from the Equality Act employment provisions on disability and age on the basis of the 'need [of Armed Forces personnel] to be combat effective in order to meet a worldwide liability to deploy'.[11] However, to improve the representation of previously excluded or under-represented groups in their ranks, the UK and US militaries have enhanced their efforts to recruit individuals with diverse backgrounds, skills and abilities in recent decades.[12] Correspondingly, various changes have been made to organisational policies and practices regarding diversity in both the UK and the US Armed Forces.[13]

7 Lim (2015).

8 See e.g. Kepe et al. (2018), Winkler et al. (2019), Bellasio et al. (2021).

9 Lim (2015).

10 See e.g. UK MOD (2016), Davis et al. (2021).

11 UK MOD (2016, 2).

12 Basham (2009).

13 These changes include, for example, the opening of all combat roles to women and changes in policy allowing lesbian, gay, bisexual and transgender (LGBT) individuals to serve openly. Source: Kamarck et al. (2019).

Table 1.1 The evolving strategic environment and implications for the Defence workforce

	Further details and strategic priorities for UK and US Armed Forces	Implications for the Defence workforce
Rapid pace and increasing complexity of technological change	State as well as non-state actors are increasingly leveraging emerging technologies in pursuit of military objectives.[14] The UK and US Armed Forces have recognised S&T (science and technology) as an 'integral part' of national security and international policy, with a corresponding need to build and sustain a strategic advantage in S&T.[15]	Technological change is likely to increase the need for high-aptitude personnel and require the Armed Forces to reform its traditional workforce structures as well as workforce management approaches (such as recruitment and retention strategies).[16] This is to ensure the Armed Forces can attract and sustain key skills as well as build and foster a culture of innovation.
Emergence of new domains and changing conflict geographies	The future battlefield is likely to be characterised by increasing 'datafication', with control over data, information and narratives increasingly central to warfighting.[17] As such, the UK and US Armed Forces have recognised the need to continuously seek advantage and superiority in the information environment.[18]	New domains and conflict geographies will require investment in relevant skills and capabilities to enable the Armed Forces to effectively exploit the information environment. This trend also places greater emphasis on the crafting of narratives and interaction between the Armed Forces and various target audiences (domestic and international).[19]
Changing dynamics between and among state and non-state actors	As systemic competition with near-peer adversaries intensifies, the UK and US Armed Forces have placed increasing emphasis on maintaining a persistent forward global presence. This includes increased levels of international engagement and integration with allies, and recognising partnerships and alliances as a force multiplier for the UK and US Armed Forces.[20]	Increased international engagement requires more mobile, flexible and agile force structures. It also places greater emphasis on the UK and US Armed Forces' ability to harness the skills of politically and culturally astute personnel to enable continuous campaigning and active shaping of strategic activity.

14 Winkler et al. (2019), Bellasio et al. (2021).

15 HM Government (2021), Biden (2021).

16 Winkler et al. (2019).

17 UK MOD (2020a), Bellasio et al. (2021).

18 UK MOD (2020a), US DoD (2018).

19 UK MOD (2020a).

20 UK MOD (2020a), Biden (2021).

	Further details and strategic priorities for UK and US Armed Forces	Implications for the Defence workforce
Changing demographics, changing climate and socio-cultural change	Demographic, socio-cultural and environmental change has contributed to a context characterised by increased risk of systemic disruption. Correspondingly, resilience-building has been highlighted as a key priority for the Armed Forces to strengthen national capacity to 'anticipate, prevent, prepare for, respond to and recover from risks'.[21]	National resilience requires increased emphasis on fostering community cohesion, including new ways for engaging with domestic audiences. Resilience may also need to be built across different domains – including in cyberspace – requiring the military to attract new skills and expertise.[22]
Changing workforces and diminishing productivity gains	Defence has a wide range of direct and indirect economic benefits for national prosperity, stemming from investments made in its people and capabilities.[23] Driven by shifting workforces and diminishing productivity gains, the Armed Forces may face new challenges for supporting national prosperity.	The Armed Forces support prosperity by – among other factors – contributing to the development of a skilled workforce and supporting innovation and economic growth.[24] With changing workforces and diminishing productivity gains, the Armed Forces need to continuously ensure their own capacity to harness innovation and attract and retain the best talent.

Source: RAND analysis of existing literature.

Supported by a growing body of literature on diversity and inclusion,[25] many military organisations now recognise and foster the contributions of diversity to military readiness and other elements of organisational effectiveness.[26] As the Armed Forces adapt to an evolving strategic environment, there is however a need for a more comprehensive understanding of the **full spectrum of advantages that can be gained by employing a diverse workforce,** particularly in relation to key strategic priorities identified by the UK and US Armed Forces. This understanding should also build on the increase in representation of different personnel characteristics, attributes and demographics to help strengthen inclusion and belonging among the UK and US Armed Forces.[27]

21 HM Government (2021).

22 Biden (2021).

23 Black et al. (2021).

24 Biden (2021), UK MOD (2020a).

25 See e.g. Janowitz & Moskos (1974), Miller (1997), Segal & Hansen (1992), Segal & Bourg (2002), Kraus et al. (2007).

26 For example, the UK MOD Defence Diversity and Inclusion Strategy recognises that diversity and inclusion are critical for Defence as 'a diverse and inclusive organisation is a stronger, healthier and more resilient organisation'. Similarly, the US Department of Defense has recognised that 'diversity and inclusion make us a stronger, better and more effective military'. Source: UK MOD (2018a, 5), US DoD (2020f, n.p.).

27 As noted in Section 1.3, for the purposes of this study inclusion is understood as a state whereby 'everyone is included, visible, heard and considered' within an organisation. Belonging is understood as a state whereby 'everyone is treated and feels like a full member of the larger community and can thrive' within an organisation. Source: Harvard Human Resources (n.d., 1-2).

1.2. This study examines how the UK and US Armed Forces may leverage workforce diversity to enhance military effectiveness

A growing body of research has examined policies, practices and interventions that seek to improve diversity and inclusive employment across the military workforce.[28] This study builds on this line of work to consider **how diversity may create opportunities for military organisations to enhance their strategic and operational effectiveness**. It addresses three overarching RQs as outlined in Box 2.

Box 2 Study RQs

RQ1. What type of operational and strategic advantage can a diverse workforce create for UK and US Armed Forces?

RQ2. What are some of the opportunities to harness operational and strategic advantages associated with different diversity characteristics (e.g. gender, age, neurodiversity)?

RQ3. What options are there for the UK and US Armed Forces to leverage the advantages that can be gained by employing a diverse workforce?

The study revolves around several key concepts for which the study team adopted the following definitions:

- **Diversity** is understood as 'the different characteristics and attributes of individuals from varying demographics that are consistent with the military's core values, integral to overall readiness and mission accomplishment, and reflective of the nation [the Armed Forces] serve'.[29] This encompasses several types of diversity including demographic diversity (e.g. age, race or ethnicity), cognitive diversity (e.g. visual learners, introverts or extroverts), organisational and structural diversity (experiences in a branch of service, component or career field), global diversity (e.g. foreign language training, experience living abroad).[30]
- **Leveraging diversity** is understood as the process of actively harnessing the advantages that a diverse workforce contributes to an organisation (in this case the Armed Forces) to enhance organisational effectiveness. A key part of this process is inclusion and belonging, i.e. recognising, valuing and integrating an individual's unique perspectives and contributions, as well as ensuring a sense of psychological safety and acceptance for each individual's uniqueness, authenticity and non-conformity to group norms.[31]
- **Military effectiveness** is defined as the process through which military organisations convert resources (e.g. political, financial and human resources) into successful strategic, operational and tactical activity.[32] This definition goes beyond kinetic activity and warfighting to recognise wider strategic objectives that military organisations work towards

28 See e.g. Lim (2015), Schaefer et al. (2016), Lytell et al. (2016), Lim et al. (2021), Wong et al. (2021).

29 US DoD (2020a, 23). Note: Though this definition is from the US Air Force, the definition is compatible with other definitions used across the UK and the United States.

30 Lim (2015).

31 For a relevant discussion of inclusion and belonging, see e.g. Green & Young (2019).

32 This definition is adapted from that used by Millett et al. (1986), who define military effectiveness as: 'the process through which military organisations convert resources into fighting power'.

in the contemporary and future strategic environment.

The study leveraged a **qualitative research design** that is described in further detail in Annex A of this report. The research team conducted a comprehensive review of existing academic and non-academic literature (e.g. government reports, and policy and strategy documents) to identify existing findings regarding links between diversity and organisational effectiveness in the military, as well as in related contexts (e.g. international development, peacekeeping and research and development). Interviews were also conducted with SMEs and practitioners from the UK and the United States.[33] In total, the study team conducted 22 semi-structured interviews with SMEs and practitioners. These informed the characterisation of the evolving context of diversity in military organisations and the identification of key links between diversity and organisational effectiveness that were later captured in the study's framework. Annex A provides further details of the study interviews, including a list of SMEs and practitioners consulted.

Further to the literature review and interviews, the study team held internal analysis workshops with RAND experts to identify how the links between diversity and organisational effectiveness may relate to key strategic priorities for the UK and US Armed Forces. All data collection and analysis activities subsequently informed the development of the study's conclusions and recommendations.

Several scope-related caveats should be considered by readers of this report. Firstly, this research was conducted as an exploratory effort to identify potential opportunities for the UK and US militaries to enhance military effectiveness through diversity in the evolving strategic environment. By exploring different links between diversity and military effectiveness, this study focused on integrating evidence on these potential links into a coherent conceptual framework, rather than interrogating them through primary empirical research. Secondly, given the focus on the links between diversity and military effectiveness as well as limited access to sufficiently robust workforce data (e.g. on levels of neurodiversity in the military, or levels of diversity in specific military occupations), the study does not provide a comprehensive evaluation of current levels of diversity in the UK and US Armed Forces, and whether these levels match any particular ambitions for enhancing military effectiveness. While some potential gaps in existing levels of diversity are discussed in the study based on insights from interviewees and existing MOD (UK Ministry of Defence) or DoD (US Department of Defense) statements, a more comprehensive evaluation remains an area for follow-on research.[34]

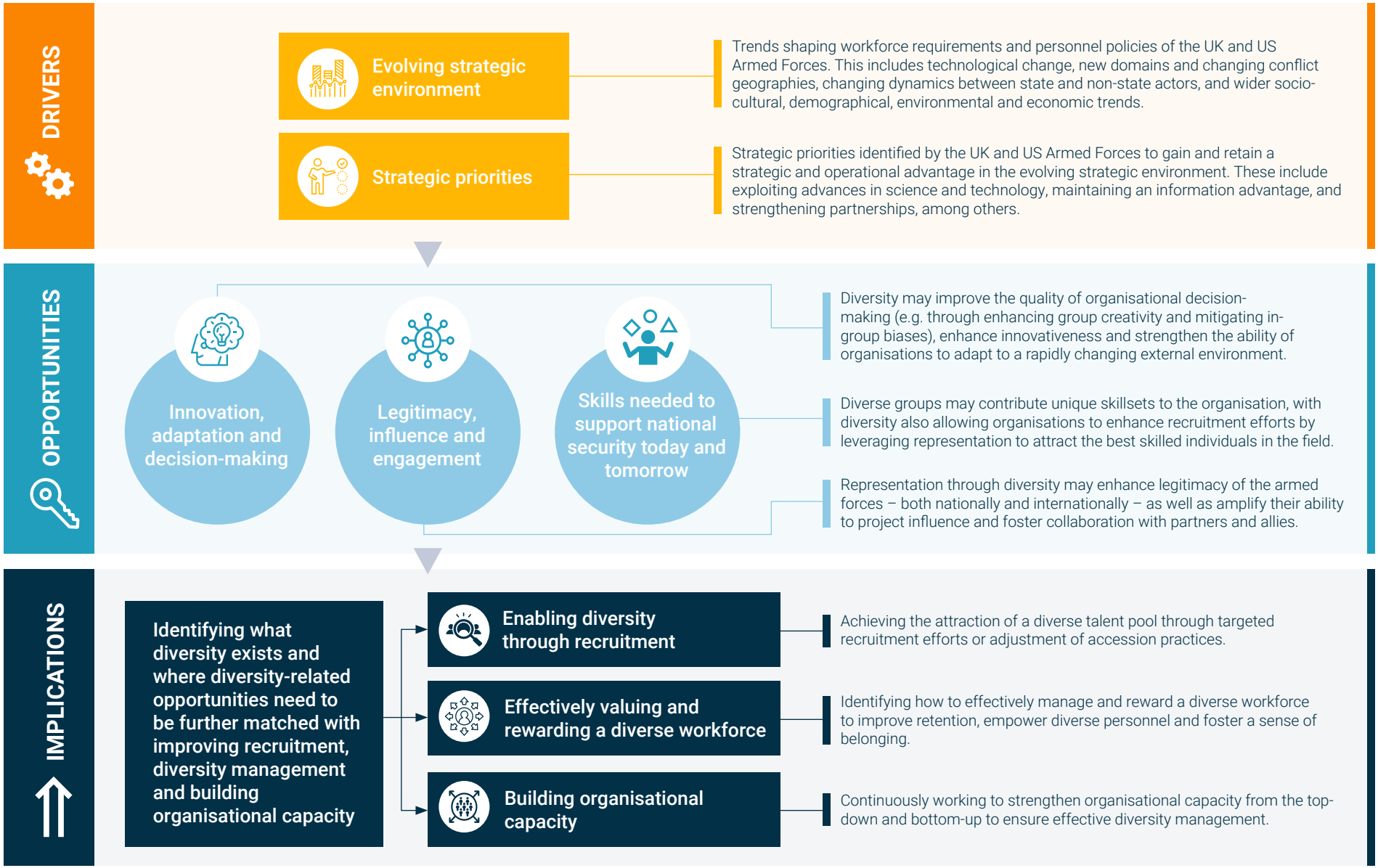
1.3. The study presents a framework to help military leaders harness the practical opportunities associated with diversity

The central output of this study is a framework – captured in Figure 1.1 below – to help the UK and the US Armed Forces meet the challenges of an increasingly complex strategic context by leveraging diversity. The framework was

33 Human Subject Protections (HSP) protocols have been used in this report in accordance with the appropriate RAND data protection policies, statutes and DoD regulations governing HSP. Views of the sources rendered anonymous by HSP are solely their own and do not represent the official policy or position of the MOD, DoD, the Armed Forces or the US and UK Government.

34 Annex A discusses some further caveats and limitations of the study and the adopted research approach.

Figure 1.1 Framework for leveraging diversity for military effectiveness



developed on the basis of the above-described data collection and analysis activities. Though this study does consider the potential challenges and organisational requirements associated with diversity-related initiatives in military organisations, the framework shifts focus in military diversity-related research to highlight **diversity as a strategic enabler for the UK and US Armed Forces** in an evolving strategic landscape.[35]

The framework's starting point for identifying and operationalising the opportunities associated with diversity are the strategic environment and associated strategic priorities shaping workforce-related requirements of the UK and US Armed Forces. By starting with these strategic drivers and priorities, the framework highlights that diversity-related opportunities may be maximised through a focus on specific strategic priorities and requirements. Additionally, the focus on strategic priorities aims to mitigate risks of diversity being leveraged in a tokenistic manner which, in effect, may undermine the tangible practical advantages the Armed Forces can gain by employing a diverse workforce.

Further to identifying the strategic priorities, the framework highlights that the UK and US Armed Forces can leverage diversity in three key aspects, namely:

Enhancing organisational capacity for innovation, adaptation and quality of decision-making. Existing literature recognises the role of diversity in improving organisational outcomes, such as innovation performance, problem-solving, knowledge creation and organisational commitment.[36] While studies have shown mixed results concerning the implications of diversity on team performance, overall, diversity is believed to increase team innovation and effective decision-making due to factors such as greater cognitive heterogeneity and debate in diverse teams.[37] These factors enable diverse teams to produce and exchange a wider range of information and knowledge, and generate a wide range of original ideas through different communication styles.[38] Existing literature has also noted that certain types of diversity (e.g. gender diversity) may encourage better communication and trust by increasing engagement and commitment of team members with and to a team.[39]

Fostering external legitimacy, enhancing ability to project influence and improving engagement with partners, allies and other domestic and international audiences. The principle of representation holds that 'an institution is representative when its social makeup and the range of its representations, values, and behaviours reflect those of a larger population of reference'.[40] In relation to the Armed Forces, representation of civilian society has been linked to various factors that shape the military's effectiveness, namely its legitimacy, engagement with and support from the civilian population.[41] In domestic contexts, representation consequently presents opportunities for

35 In this context, an enabler is understood as a factor 'that can be leveraged to support the implementation of [a range of activities] in support of strategic goals'. Adapted from: Jamil (2015).

36 Pesch et al. (2015), Ruiz-Jiménez & del Mar Fuentes-Fuentes (2016), Tshetshema and Chan (2019).

37 Tschetshcema & Chan (2019).

38 Pesch et al. (2015), Tshetshema and Chan (2019).

39 Mitchell (2008), Lee et al. (2015), Li et al. (2017), Ruiz-Jiménez and del Mar Fuentes-Fuentes (2016).

40 Boëne (2011, 11).

41 Soeters & van der Meulen (2007), Boëne (2011).

strengthening the military's contributions to national prosperity and social mobility, as well as its ability to recruit and retain talent by positioning the Armed Forces as an employer of choice.[42] Within overseas operational contexts, diversity may also improve the Armed Forces' effectiveness by improving cooperation with the local civilian population as well as military and civilian leaders, through enhancing trust, strengthening the military's understanding of the human terrain and improving its information-gathering capability.[43]

Improving the Armed Forces' ability to attract, retain and foster skills needed to address current and evolving national security imperatives. The Armed Forces have historically frequently sought to diversify their workforces to fill quantitative manpower needs,[44] particularly in times of national emergencies or high-end, existential threats.[45] While enhancing diversity of the military recruitment pool can help address *quantitative* personnel shortages, diverse groups may also make *qualitative* contributions to military effectiveness. This relates, for example, to the unique skills of neurodiverse individuals, which include ability to focus for prolonged periods of time on conventionally mundane tasks, high attention to detail and creativity.[46]

To illustrate these links, Chapters 2 and 3 of this report present short vignettes of particular opportunities associated with diversity in the UK and US Armed Forces. The vignettes seek to highlight various diversity-related opportunities linked to strategic priorities identified by the UK and US militaries, as well as examine in greater detail the above-described links between diversity and military effectiveness. Table 1.2 provides an overview of the vignettes.

Finally, building on identifying key diversity-related opportunities, the third element of the framework focuses on operationalisation, i.e. how the Armed Forces can practically realise the identified opportunities. This includes three mutually reinforcing elements, namely:

- Leveraging the contributions of diverse individuals by improving the ability of Armed Forces to recruit personnel from diverse backgrounds and with diverse skillsets and experiences.
- Ensuring diverse individuals, once recruited, are effectively rewarded and valued so as to enhance the Armed Forces' ability to retain and motivate a diverse military workforce.
- Continuously strengthening and adapting the Armed Forces' internal capacity (comprising relevant structures, processes and capabilities) to facilitate, rather than hinder, an effective leveraging of diversity.

Chapters 2 and 3 build on this introduction by illustrating the framework's logic in relation to key selected strategic priorities identified by the UK and US Armed Forces.

42 Soeters & van der Meulen (2007). Conversely, existing research has shown that a distancing of the military from wider social structures and values can undermine military effectiveness by positioning the military as an 'alien element' to wider society, thus generating civil–military friction that 'will reduce the military power, not of the military, but of the state as a whole'. Source: Rosen (1995, 6).

43 Heinecken & Soeters (2018), Bove et al. (2020).

44 Heinecken & Soeters (2018). For example, historical evidence on the changing roles of women in military organisations has indicated that 'when there [have been] shortages of qualified men, especially during times of national emergency, most nations have increased (and will increase) women's military roles'. Source: Segal (1995).

45 Segal (1995).

46 RAND Europe interviews, 12 May 2021 and 14 July 2021

Table 1.2 Overview of study vignettes

	UK Armed Forces (Chapter 2)			US Armed Forces (Chapter 3)		
	Vignette 1	**Vignette 2**	**Vignette 3**	**Vignette 4**	**Vignette 5**	**Vignette 6**
Strategic priority	Achieving and maintaining information advantage	Enabling permanent and persistent global UK engagement	Developing effective, ethical and trustworthy AI-based systems	Strengthening US capabilities, readiness and resilience in cyberspace	Enabling the US Armed Forces to meet recruiting standards in a competitive recruitment landscape	Strengthening US engagement in the Indo-Pacific theatre
Type of diversity	Neurodiversity	National background, cultural and ethnic diversity	Diversity of thought	Various, including neurodiversity	Demographic diversity	National background, cultural and ethnic diversity
Diversity opportunity	Improving the Armed Forces' ability to attract, retain and foster skills needed to address current and evolving national security imperatives	Fostering external legitimacy, enhancing ability to project influence and improving engagement with international partners and allies	Enhancing organisational capacity for innovation, adaptation and quality of decision-making	Improving the Armed Forces' ability to attract, retain and foster skills needed to address current and evolving national security imperatives	Fostering engagement with domestic audiences to facilitate recruitment	Fostering external legitimacy, enhancing ability to project influence and improving engage with international partners and allies

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2 Opportunities for the UK Armed Forces

As discussed in the previous chapter, the US and UK Armed Forces have a range of opportunities for leveraging the diversity of their workforces to enhance military effectiveness in relation to evolving strategic objectives and priorities. To provide practical illustrations of how these opportunities could be achieved, this chapter discusses three selected opportunities to harness diversity in relation to strategic priorities identified by the UK Armed Forces. Figure 2.1 provides an overview of the three examples.

The following sections provide more in-depth descriptions of each opportunity, illustrating potential elements of the military diversity framework. Each example addresses the following questions:

- What is the strategic priority?
- What are the opportunities associated with diversity in relation to the strategic priority?
- What are the potential enablers, challenges and barriers that may affect how the opportunities are leveraged by the UK Armed Forces?

Figure 2.1 Overview of selected opportunities for the UK Armed Forces

VIGNETTE 1

Achieving and maintaining information advantage

Information advantage is defined as 'the credible advantage gained through the continuous, adaptive, decisive and resilient employment of information and information systems'. In achieving and maintaining it, the Armed Forces can leverage unique skills of neurodiverse individuals.

VIGNETTE 2

Enabling permanent and persistent global engagement

Global engagement is key to the UK's ability to pre-empt strategic threats, identify hostile state actors, project influence and respond to strategic opportunities. Ethnic and cultural diversity can enhance the Armed Forces' ability to engage through enhanced cultural understanding, foster trust, and form lasting relationships.

VIGNETTE 3

Developing effective, ethical and trustworthy AI-based systems

AI-based systems are critical in the UK's endeavour to ensure a strategic advantage through S&T. Diversity of thought may be a key enabler for developing ethical and trustworthy AI-based solutions through allowing teams to better test assumptions, develop un-biased predictions and risk assessments.

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2.1. The UK Armed Forces have an opportunity to leverage diversity of thought for achieving and maintaining information advantage

What is the strategic priority?

While information advantage is a nebulous concept and there is no uniform definition, it encompasses two broad strands of military thought and activity. One focuses on influencing – in line with the UK's strategic objectives – a wide range of audiences (which can encompass a broad swathe of civilians, rather than traditional notions of the 'enemy') and prevailing in an environment of competing narratives. This encompasses activities such as countering disinformation and delivering information operations, psychological operations and strategic communication.[47] The other, related, strand of information advantage focuses more directly on possessing superior intelligence than the opposing side, or, as Air Vice Marshall Jonny Stringer phrased it 'the ability to understand better, quicker, deeper than [the] opponent, and then make better decisions'.[48]

Over the last several years, various strategic and technological trends have increased the imperative for the UK Armed Forces to achieve and maintain information advantage. The UK's Integrated Operating Concept (IoPC) has, for example, placed information advantage at the core of the military's operating concept, reiterating the UK MOD's characterisation of

47 UK MOD (2018b), Gordon J (2020).

48 Shephard Media (2021, n.p.).

information advantage as the foundation of Defence effort across all five domains and three levels of war.[49] The 2021 Digital Strategy for Defence identified data as a strategic asset – with digital capabilities driving military advantage and a system-of-systems approach – and announced the ambition for both the UK MOD and the Armed Forces to be *information-led*.[50] Though the need to take advantage of new and emerging technologies and interact with vast amounts of data are both important paradigms of information advantage, the current vignette is more concerned with the second, intelligence-focused aspect.

Delivering information advantage requires access to personnel with relevant skills and expertise in sufficient numbers. It also places an emphasis on intelligence capabilities if information and information systems are to be deployed in a strategic context. Specifically, personnel are needed to gather, analyse and interpret data for use in a specific operational context – and to design the tools for doing so. This requirement for personnel with ability to make sense of complex data and multiple sources of information is essential to a wide range of military tasks including cybersecurity, but also more 'traditional' functions such as piloting combat aircraft or commanding a submarine.[51]

Given the need to interpret, analyse and exploit the large sets of data that are associated with pursuing information advantage, the Armed Forces need individuals who are able to interact with data fluently, and who can design effective tools to make better sense of it. This includes individuals in roles such as data scientists, security specialists, software engineers, programmers or even hackers.[52] However, due to various challenges – including strong competition with the commercial sector – over these skillsets, the Digital Strategy for Defence recently highlighted concerns that the UK was falling behind its adversaries in attracting such skills.[53]

What are the opportunities associated with diversity in relation to the strategic priority?

In addressing current and potential future gaps in skills that are needed to achieve and maintain information advantage, the Armed Forces have various opportunities to leverage diversity. Drawing on insights collected through the literature review and the study interviews, this vignette explores the particular opportunities associated with neurodiversity for information advantage.

Neurodiversity is understood as neurological differences in the context of wide, and genetically influenced, variation in human neurocognitive functioning.[54] In practice, it covers a wide variety of conditions or neurological variations, including but not limited to dyspraxia, dyslexia, Attention-Deficit Hyperactivity Disorder (ADHD), autistic spectrum disorder, dyscalculia and various learning disabilities.[55] It is important to note that neurodiversity has been described as a 'movement' because this approach deliberately

49 UK MOD (2018b), UK MOD (2020a).

50 UK MOD (2021a).

51 Swann (2020), Brown (2021).

52 UK MOD (2018).

53 UK MOD (2021a).

54 Autistic UK CIC (2021).

55 Wiginton (2021).

moves away from regarding these conditions as pathological, but rather as an essential form of human diversity.[56]

Recent practice from militaries around the world (captured in Box 3) has already demonstrated recognition of the importance of neurodiversity (and diversity of thought and background more broadly) for information advantage.[57] This growing interest in neurodiversity reflects emerging evidence that neurodiversity correlates with a range of intuitive abilities and attributes that could help personnel excel in navigating the information environment, including pattern recognition, ability to hyper-focus for extended periods of time, data interpretation, memory, spatial perception, and ability to process large quantities of data rapidly and into minute detail.[58]

Box 3 Existing examples of military efforts to leverage neurodiversity

- In 2012, the Israel Defence Forces (IDF) launched the Roim Rachok[59] programme to recruit autistic youth and integrate them into its Unit 9900, which was tasked with gathering, interpreting and disseminating visual intelligence – including from geospatial, satellite and high-altitude imagery.[60] The recruits were then tasked with visual analysis of the material, which entails examining multiple satellite images for the smallest indicator of a threat, for at least nine hours a day, maintaining continuous focus. One interviewee in the Royal Navy who identifies as neurodiverse cited a similar example of a neurodiverse Naval Warfare Officer classifying targets through extended periods of radar monitoring.[61]
- The Australian Defence Organisation (comprised of both military personnel and civilian Department of Defence employees) has been seeking potential recruits on the autism spectrum to join its ranks of in-demand cyberdefence analysts, where the ability to sift through large sets of data, identifying patterns (indicating potential intrusions and attacks) not visible to neurotypical individuals, is essential.[62]
- The UK's signals intelligence agency, Government Communications Headquarters (GCHQ), has 'had a specialised neurodiversity support service' for 20 years, which includes 100 dyslexic or dyspraxic 'neurodiverse spies'.[63] These staff not only sift through a wealth of data in search of patterns and the 'bigger picture', but are also routinely deployed in support functions to active personnel, where they are essential to innovation, invention and thinking differently to the norm to generate novel solutions to technical, analytical and conceptual problems.[64]

56 Autistic UK CIC (2021).
57 UK MOD (2018a), UK MOD (2017).
58 Austin & Pisano (2017), Castellon (2019), Gordon J (2020), National Autistic Society (2021).
59 Hebrew for 'seeing into the future'.
60 Rubin (2016).
61 Research interview, 12 May 2021.
62 Wadsih (2020).
63 GCHQ (2019, np), Castellon (2016).
64 GCHQ (2019).

An increasing number of employers in cybersecurity and the commercial sector are starting to recognise and welcome the unique abilities of neurodiverse individuals, as well as the preponderance of creative and 'outside the box' thinking and problem-solving that neurodiverse individuals, for instance with ADHD, often display.[65] In fact, existing research has already highlighted a correlation between 'hyper-systemiser' brain types (those with advanced pattern-recognition abilities and tendency towards 'relentless experimentation' and a systematising mechanism that drives human invention and ingenuity) and individuals on the autistic spectrum.[66] This extends the advantages that neurodiverse personnel can bring to operational tasks beyond interaction with data to rapid mastering of multiple or difficult languages, speed-reading and designing creative and appealing outreach and communications campaigns.[67]

What are the potential enablers, challenges and barriers?

Neurodiversity is a broad umbrella of neurocognitive variation – correspondingly, neurodiverse individuals may have unique needs for employers to recognise, accommodate and manage. Many neurodiverse individuals employ a wide range of routines, practices and behaviours to manage anxiety and function in a neurotypical environment. These practices, such as the need for solitude and personal space, may be difficult to accommodate in the military operational context.[68] Neurodiverse individuals may also have communication styles that sit outside the 'norm' of professional etiquette,[69] and may thus be regarded as unduly direct or even offensive. In other cases, commonplace objects or events may induce anxiety and discomfort in neurodiverse individuals.[70] The sum of these factors has historically made steady professional employment of any kind difficult for many neurodiverse individuals. Only 16 per cent of adults with autism are in full-time paid employment in the UK, in large part due to the lack of accommodation – and the hostility of the modern workplace culture – to those with neurodiverse conditions.[71]

A related barrier may be the fact that many neurodiverse individuals are not formally diagnosed with a neurocognitive condition, in part due to long waiting times associated with diagnosis.[72] Neurodiverse personnel in the military may also perceive additional challenges to identifying as neurodiverse, given that personnel with certain conditions (e.g. autism) are still generally excluded from joining certain services.[73] This presents challenges to assessing levels of neurodiversity in an organisation, particularly the Armed Forces, and brings associated needs for revising workforce management practices.

65 Froelich (2019), Contillo (2021), Rovnick (2019).

66 Thornhill (2020).

67 Research interview, 14 July 2021.

68 Research interview, 12 May 2021.

69 For instance, one in four autistic people are estimated to speak few or no words.

70 Research interview, 14 July 2021.

71 Autistica (2021), research interview, 14 July 2021.

72 Research interview, 12 May 2021.

73 For example, candidates applying to join the Royal Air Force who have an existing autism diagnosis are generally graded as unfit for service. Source: Air Command Secretariat (2020).

Noting these potential challenges, leveraging the individual skillsets, abilities and attributes associated with neurodiversity is likely to require careful thought and tailoring of the current workforce management processes and practices of the UK Armed Forces. The Armed Forces may, for example, need to consider the implications that different interpersonal dynamics and communication within a diverse team could have on teamwork ethos and the hierarchical structure of the military. In this regard, it should be recognised that not all tasks and needs of the Armed Forces can and should be met with neurodiversity – in certain cases, uniformity of thought (and action) may be what is required.

As the UK Armed Forces consider how to leverage neurodiversity, practice from other sectors may provide various lessons learned regarding different enablers of effective management of neurodiversity in the workplace. Such enablers may include, for example, increasing awareness among workforce management staff of behaviours that could be associated with neurodiversity, such as unconventional body language.[74] Additionally, a one-to-one management approach and providing clear instructions for workplace processes and standards that may be considered conventional for neurotypical personnel (e.g. dress code) can be beneficial to mitigate potential stress and anxiety that neurodiverse individuals may experience.[75] Lastly, the study interviews indicated that there may be opportunities for leveraging the lived experiences of neurodiverse leaders to manage other neurodiverse personnel.[76] It is worth noting that the costs associated with adjustments to workplaces and work processes to facilitate the inclusion of neurodiverse individuals are also considered relatively low – indeed, cross-sectoral evidence from the United States suggests that many adjustments come at no cost for employers.[77]

74 CIPD (2018).

75 CIPD (2018), research interview, 14 July 2021.

76 Research interview, 14 July 2021.

77 CIPD (2018).

Image shared by Defence Imagery via Flickr (CC BY-NC 2.0)

2.2. Cultural and ethnic diversity provides opportunities for enabling permanent and persistent UK global engagement

What is the strategic priority?

UK military and strategic guidance has, in recent years, increasingly reflected on the need for the Armed Forces to be globally engaged by building stronger relationships with allies and partners through military exchanges, defence diplomacy and capacity-building and assistance. For example, the IOpC described the increasing need for Defence to be internationally engaged and 'allied by design' to be able to counter adversaries and project influence globally.[78] The Integrated Review continued this theme by highlighting power projection and interoperability with allies as part of strengthening diplomatic and economic links with partners.[79] Finally, the Defence Command Paper underlined the Armed Forces' focus on international defence engagement,[80] including through expanding the current Defence Attaché Network and British Defence Staffs by a third, reinforcing forward presence and basing, and ramping up partners' capacity-building as part of wider government conflict and instability mitigation efforts.[81]

78 UK MOD (2020a, 11).

79 HM Government (2021).

80 Defence engagement is broadly defined by the UK Defence Engagement strategy as 'the use of [people] and assets to prevent conflict, build stability and gain influence'. Source: UK MOD & FCO (2017, 1).

81 UK MOD (2021c).

Given the strong emphasis on interacting with partners, allies or host nations, defence engagement presents a requirement for the Armed Forces to understand and be able to navigate different national, ethnic or cultural environments. This requirement elevates the importance of cultural understanding among the UK Armed Forces, which may be based on lived experience or shared background between UK military personnel and their local counterparts and wider population, as well as ethnic and cultural diversity amongst the UK contingent.[82]

What are the opportunities associated with diversity in relation to the strategic priority?

In addressing evolving defence engagement priorities, the Armed Forces have various opportunities to embrace ethnic and cultural diversity – not only in terms of individuals' personal characteristics, but also in their relevant associated knowledge, regional experience and understanding. As defence engagement requires a high degree of interaction with local stakeholders (spanning military, civilian and community leaders, as well as the civilian population) military and civilian personnel are likely to benefit from skills such as linguistics and understanding of local customs, traditions and religions.[83] Cultural awareness and culturally sensitive interaction and communication between the military with local stakeholders is also key to avoid potential risks of tensions and mistrust, which can lead to conflict escalation.[84]

Existing research has explored links between ethnic or cultural diversity and the linguistic, cultural and other skills that help maximise effectiveness of international military and civilian missions (e.g. peacekeeping, stabilisation and overseas counterterrorism or counterinsurgency). This research suggests that units with greater levels of gender, religious or ethnic diversity often demonstrate better skills, such as cross-cultural competence and ability to develop effective ties with local stakeholders.[85] For example, diverse units are more likely to have an increased awareness of cultural differences, as well as be more adaptive to ambiguity, and are thus likely to be better equipped to cope in a culturally heterogeneous and complex environment.[86] An innate understanding of the relevant languages and cultures can also bring strategic and human intelligence benefits, such as through providing access to decision makers, key players, and community members, which translates into a unique advantage for the UK.[87]

The contributions of ethnic and cultural diversity to operational effectiveness in overseas contexts may also be linked to how diverse military forces are *perceived*. For example, the presence of a culturally and ethnically diverse force can help build trust and diffuse perceptions of power imbalances in contexts characterised by legacies of colonial or military interventions. Trust and understanding from the local community are also important in humanitarian aspects of military overseas operations, such as humanitarian assistance and disaster relief, where uniformed officers

82 Mehta (2018).

83 Leuprecht (2009), Resteigne and Manigart (2021), Bove et al. (2020).

84 Bosman et al. (2008).

85 Bosman et al. (2008), Miller & Moskos (1995), Heinecken & Soeters (2018).

86 Resteigne & Manigart (2021), Miller & Moskos (1995), Bosman (2008), Soeters & Van der Meulen (2007), Richardson et al. (2014), Heinecken & Soeters (2018).

87 Research interview, 13 April 2021.

speaking the local language or sharing cultural heritage may be able to better engender trust and elicit cooperation from the local population.[88] Qualitative insights from joint Dutch-Turkish peacekeeping operations in Kosovo and Afghanistan showed, for example, that Turkish personnel were able to form closer links with the local population and were perceived with greater trust than Dutch personnel due to shared cultural background, and historical and religious knowledge.[89] Similarly, research on the experiences of Dutch Muslim personnel indicated that across different operational deployments, personnel frequently perceived their Muslim identity to be advantageous in encounters with local Muslim communities, as it allowed them to more easily establish trust and an 'instant bond' with the local population.[90]

What are the potential enablers, challenges and barriers?

Several factors require consideration in relation to how the UK Armed Forces may leverage ethnic and cultural diversity in defence engagement. The first is the degree to which such diversity currently exists in the Armed Forces, as well as what potential barriers may exist to fostering inclusion of ethnically and culturally diverse personnel.

Recent years have seen significant efforts to enhance diversity – in this case, ethnic – within the UK Armed Forces. In 2018, the Armed Forces increased their targets for recruitment of ethnic minority personnel, particularly personnel from the British Commonwealth.[91] In 2020, a target for ethnic minority personnel recruitment was set at 10 per cent, which was met and surpassed by early 2021, when 11.7 per cent of total recruits into the Regular Forces (regulars) and Future Reserves (futures) identified as ethnic minority.[92] At the same time, it is important to note that both the overall share of non-White/non-White British regulars as a whole, and share of ethnic minority personnel amongst the officer ranks, remained static for years, according to the UK Armed Forces Biannual Diversity Statistics.[93] Specifically, in 2011 the proportion of ethnic minority regulars across all forces was approximately 7 per cent, and remained at this level until 2018.[94] As of October 2020, only 2.6 per cent of officers were non-White, a figure that has vacillated between 2.3 per cent and 2.6 per cent since 2012. The percentage of all ethnic minority regular forces who are officers was 5.6 per cent, and has actually decreased steadily over the past five years, whereas the percentage White regular forces who are officers was 20.5 per cent and increased steadily since 2012.[95]

There are various challenges for advancing the inclusion of culturally and ethnically diverse individuals across the Armed Forces which help explain these trends.[96] For example,

88 Research interview, 7 April 2021.

89 Soeters et al. (2004).

90 Bosman et al. (2008, 699).

91 UK MOD (2018c).

92 UK Parliament (2020).

93 UK MOD (2020b).

94 UK MOD (2020b).

95 UK MOD (2020b).

96 In the last five years, both the Army and RAF have launched BAME support networks, while the First Sea Lord issued a Diversity and Inclusion Directive.

despite efforts from the Armed Forces to bolster the representation of ethnic minority personnel, personnel from ethnic minority backgrounds continue to perceive challenges with serving in the military.[97] These stem in part from wider UK domestic policy, such as the 'hostile environment' immigration policy[98] and the UK's colonial legacy, as well as perceptions of unequal treatment of ethnic minority personnel in relation to career progression and other aspects of military service.[99] A lack of role models with whom to identify and aspire to can similarly impact the decision of individuals to join the Armed Forces, in addition to a lack of awareness amongst ethnic minority populations regarding career paths in the Armed Forces.[100]

Noting these challenges, existing links with key regions of interest could help improve recruitment and retention of culturally and ethnically diverse personnel in the UK Armed Forces in the future. In relation to the Indo-Pacific region, for example, the UK has deep and long-standing military links to both Pakistan and India, as well as other countries.[101] This includes, for example, historical and regimental links between the Indian and UK Armed Forces, maintained through regular successful joint rotation training and participation of Indian and UK officers in each other's prestigious training courses.[102] The UK has pursued a similar strengthening of the defence relationship with Pakistan, channelled through exercises, training and personnel exchanges.[103]

It should be noted that despite the positive links between ethnic and cultural diversity and military effectiveness, existing literature on diversity in multi-national peacekeeping also points to potential risks associated with high levels of cultural and ethnic diversity in military operations.[104] Qualitative evidence from peacekeeping research has, for example, suggested that peacekeeping units with high degrees of national, cultural and religious diversity can encounter challenges to operating cohesively, with cultural and normative differences potentially exacerbating coordination problems.[105] Increasing cultural and ethnic diversity in military operations may therefore require careful consideration as to how diversity is managed to mitigate potential communication and coordination problems.

97 Greene (2016), Pearson & Caddick (2018), King (2021).

98 For example, the terms for employment of non-UK service personnel continue to attract criticism from the public and UK legislators. This includes, for example, provisions that require non-UK personnel to pay significant fees to apply for visas to remain in the UK following their service. Source: Beale (2021).

99 Greene (2016), Pearson & Caddick (2018).

100 Research interview, 13 April 2021.

101 Greene (2016).

102 Sandhurst began accepting Pakistani cadets in the 1950s, and continues to do so today; and since 2015, there have been three Pakistani Army officer instructors at Sandhurst. Source: Roy-Chaudhury (2020), Canton (2019).

103 UK MOD (2021c).

104 Bove et al. (2020).

105 Bove et al. (2020).

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2.3. Diversity may serve as a key enabler for developing and exploiting effective, ethical and trustworthy AI-based systems in UK Defence

What is the strategic priority?

Embracing emerging technologies has been emphasised as a priority for UK Defence in a changing strategic context.[106] The UK Integrated Review has, for example, highlighted rapid technological change as one of the main factors defining the UK's future operating context, with sustaining strategic advantage through S&T identified as one of the four objectives of the Strategic Framework outlined in the Integrated Review.[107] Among all new and emerging technologies considered for development and adoption in UK Defence, AI-based systems are singled out as a critical area in the UK's endeavour to ensure a strategic advantage through S&T. Correspondingly, the technology area has been identified as one of the key priorities for investment of the £6.6bn ($8.2bn) pledged for defence research and development in emerging technologies by 2025.[108]

Increased investment in AI-based systems in UK Defence has been linked to ensuring the UK's operational and strategic advantage in various ways. AI-based systems, including autonomous systems, are considered essential to defence modernisation, including

106 Mills (2021), Cabinet Office (2021).

107 HM Government (2021).

108 UK MOD (2021b).

through accelerating decision-making and operational tempo; extending the range, persistence and mass of capabilities; reducing risk for personnel and thus enhancing force protection; and delivering efficiency and affordability gains.[109] The development of AI-based systems is also intended to support the development of a 'Digital Backbone' for UK Defence, which is envisaged to provide data-driven, interconnected digital systems that facilitate integration across domains, partners, allies and suppliers, and that allow, among others, the powering of automated processes and the control of autonomous platforms.[110] A transition in the Defence force structure towards a 'mix of crewed, uncrewed and autonomous platforms', enabled by advances in AI, has also been stipulated as a key part of Defence's integration of 'sunrise' capabilities.[111]

What are the opportunities associated with diversity in relation to the strategic priority?

In the above-described context, it is important for Defence to consider how it can guide technological development towards effective, ethical and trustworthy AI-based systems.[112]

There are two key elements of this effort for which diversity presents opportunities:

- Firstly, in order to effectively harness emerging technologies such as AI-based systems, the Armed Forces will need to maximise their ability to foster innovation (including by promoting a culture of innovation) and adapt to a rapidly changing technological environment.[113] Due to the many implications of emerging technologies such as AI (Artificial Intelligence) on policy, doctrine and personnel functions, developing new structures and adapting existing ways of working are likely to be key parts of the Armed Forces' ability to absorb and foster technological innovation.[114]
- Secondly, the Armed Forces also need to be able to address potential risks associated with poorly designed AI algorithms.[115] The entrenchment of amplification of biases in AI algorithms[116] has been a key concern in relation to the development of effective and trustworthy AI-based systems that align with relevant ethical principles.[117] In the national security and defence contexts, algorithmic biases

109 UK MOD (2021c).

110 UK MOD (2021a).

111 UK MOD (2020a). 'Sunrise' capabilities are understood as modernised capabilities that will be required to support the Armed Forces in 2030 and beyond. They stand in contrast to 'sunset' capabilities, understood as capabilities that will be considered increasingly vulnerable or obsolete in the 2030+ timeframe.

112 Ethical and trustworthy AI-based systems are understood as AI-based systems that adhere to defined ethical standards, guidelines and principles such as human-centricity, equitability, responsibility, reliability and harm mitigation. UK Defence principles for ethical AI are outlined in the forthcoming AI Defence Strategy. The US DoD's ethical principles for AI are available at US DoD (2020b).

113 Winkler et al. (2019).

114 Research interview, 17 May 2021.

115 Carnegie Mellon University (2019), Winkler et al. (2020).

116 For the purposes of this study, an AI-based system is 'understood as biased if 1) it consistently produces disproportional outcomes for different groups of people and 2) the disparate impacts are not commensurate with what might be expected for people in the affected groups given their relative proportion in the population'. Algorithmic biases can be introduced into systems during various stages of software acquisition, including planning, solicitation and selection, delivery and deployment, as well as software development itself. Source: Yeung et al. (2021, 5).

117 CDEI (2020), Carnegie Mellon University (2019).

can for example limit the performance of AI-based object recognition and detection methods, as well as increase the risk of unintended consequences.[118]

In relation to the first element, existing literature indicates there are various links between diversity and enhanced organisational innovation capacity.[119] These include the potential for diversity to provide increased information-sharing opportunities,[120] increased capacity or knowledge creation driven by cognitive heterogeneity[121] and enhanced creativity stemming from varying communication styles and problem-solving approaches.[122] Existing research also indicates that teams with diverse perspectives, backgrounds and experiences encourage more out-of-the-box thinking, particularly when organisations are able to create an inclusive organisational environment in which differences in thinking are valued.[123] This is particularly true in contexts characterised by uncertainty – such as projects implementing immature technologies – indicating that similar benefits could be anticipated in the context of AI development.[124] As Defence works to develop and integrate effective, ethical and trustworthy AI-based systems in its operations, the positive links between diversity and organisational outputs will also be key to providing a suitable enabling environment for AI innovation.[125]

In relation to the second element, existing insights from the AI R&D (research and development) community have highlighted how important a diverse AI workforce may be to the development of ethical and trustworthy AI-based systems. For example, including individuals with 'a wide set of life experiences, disability status, social status, and experience being "the other" [in AI development processes]' has been posited as an important enabler for the ability of organisations to mitigate bias in AI-based systems.[126] Stemming from the lack of diversity in AI engineering and research teams, some researchers and AI developers have expressed concern about potential increased risk of biases being propagated throughout the acquisition cycle.[127] This is due to the perception that flawed AI systems that perpetuate gender and racial biases may not be identified and mitigated effectively if AI development teams lack diverse perspectives.[128]

Though empirical assessments of the direct causal links between diversity and reduced risk of bias in AI-based systems are limited,

118 For example, AI systems used in law enforcement for predictive risk assessment – i.e. assessing whether individuals may be at risk of committing another crime following release from custody – have been shown to systematically mischaracterise black individuals in contrast to white individuals. Source: Yeung et al. (2021).

119 Tshetshema and Chan (2019), Mitchell (2008), Bouncken and Winkler (2008), Miller and Triana (2009), Winkler and Bouncken (2011), Tadmor et al. (2012), Pieterse et al. (2013), Calonge and Safiullin (2015), Pesch et al. (2015), Bouncken et al. (2016), Salazar et al. (2017), Li et al. (2017).

120 Li et al. (2017).

121 Mitchell (2008).

122 Pesch et al. (2015), Post et al. (2009).

123 Hewlett et al. (2013), Horwitz & Horwitz (2007).

124 Lee et al. (2017).

125 Research interview, 17 May 2021.

126 Smith (2020, np).

127 Chou and Ibars (2018), Myers West et al. (2019), Smith (2020), Klawe (2020), Venture Beat (2020), Nouri (2021).

128 Stathoupoulos et al. (2019), Klawe (2020), Venture Beat (2020), Smith (2019), Nouri (2021).

emerging research and expert opinion indicates that engineering teams with the same education and experience may not be aware of potential biases embedded in algorithms they create. It has, for example, been suggested that 'people with similar concepts of the world and a similar education are more likely to miss the same issues due to their shared bias'.[129] A lack of diversity of thought may also reduce an organisation's or a team's ability to test assumptions, develop unbiased predictions and thus anticipate potential unintended consequences stemming from the use of any particular AI-based system.[130] This reflects emerging evidence that members with different perspectives and problem-solving approaches may help teams 'maintain multiple sets of assumptions as the team considers a problem', thus increasing the number of alternative solutions the team considers.[131] Individuals with similar mindsets may also 'often construe a team mindset as correct' without sufficiently testing the underlying assumptions, thus potentially increasing risks of flawed organisational decision-making.[132]

What are the potential enablers, challenges and barriers?

In order to leverage diversity for developing and exploiting AI-based systems, the Armed Forces will require access to a diverse pool of talent among AI developers, programmers, coders and other roles. However, current data indicates that the AI sector as a whole struggles with diversity, which may pose a significant challenge to diversifying the Armed Forces' own AI specialist cohort. For example, women are estimated to only represent between 14 per cent and 18 per cent of the AI research workforce.[133] Similarly, while no exact data exists on ethnic diversity in the global AI workforce, among the key players in the AI sector – such as Google, Facebook and Microsoft – only between 2.5 per cent and 4 per cent of employees are black.[134] Despite efforts to address a lack of diversity in the AI industry 'pipeline' in recent decades, existing data also indicates that diversity in the industry has not improved significantly.[135] Researchers suggest this is in part due to ongoing challenges of exclusionary hiring practices, lack of inclusiveness and experiences with harassment and discrimination by under-represented individuals within the sector.[136]

Another challenge for the Armed Forces could stem from the high demand for technical specialists (including AI specialists) across different sectors (including, for example, manufacturing, healthcare, cybersecurity and finance). The Armed Forces conventionally struggle to compete with the private sector on financial incentives for potential recruits, making it more difficult to meet its skills needs in a more competitive recruitment landscape.[137] Beyond the Armed Forces, the AI sector is characterised by competition among

129 Smith (2020, np).
130 Post et al. (2009), Carnegie Mellon University (2019).
131 Post et al. (2009).
132 Post et al. (2009, 22).
133 Stathoulopoulos et al. (2019), Myers West et al. (2019).
134 Myers West et al. (2019).
135 Myers West et al. (2019).
136 Myers West et al. (2019), Zhang et al. (2021).
137 Cox et al. (2019).

private sector providers, resulting in high turnover and low retention rates across the global cyber and AI workforce. For example, 49 per cent of cybersecurity professionals across countries (including data and AI specialists) are actively solicited by new companies to consider new cybersecurity jobs at least once per week.[138] This sectoral context may require the Armed Forces to consider new approaches to attract and retain a diverse workforce, which is already recognised in Defence today. As the UK MOD's 2019 Defence Innovation Priorities paper notes, for example, the recruitment of 'a more diverse pool of talent to Defence' to effectively exploit innovation will require 'exploiting novel contracts and employment models, including portfolio careers and flexible working practices'.[139]

Further to these factors, though the majority of literature reviewed in this study spoke to positive impacts of diversity, some existing research also points to inconclusive empirical evidence on the links between diversity and team performance.[140] For example, while task-related diversity – i.e. diversity relating to acquired individual attributes, such as education and experience – has been found to improve organisational outcomes, the research conducted showed no significant relationship between demographic diversity – i.e. diversity relating to innate personal characteristics – and an improvement in team performance.[141] Other literature has also indicated that diverse teams may exhibit lower cohesion and high turnover, and high levels of diversity may reduce individual satisfaction with a team – though these impacts are shaped by factors such as pre-existing personal attitudes.[142] These findings indicate that more in-depth exploration of the impacts of diversity in specific organisational and task contexts, as well as the role of potential mediating factors, may be required to maximise the associated opportunities in AI development and exploitation.

138 Oltsik (2017). Findings from this research are based on a survey of 343 cybersecurity professionals, predominantly located in North America (85 per cent).

139 UK MOD (2019b).

140 Horwitz & Horwitz (2007).

141 Horwitz & Horwitz (2007).

142 Milliken & Martins (1996).

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3 Opportunities for the US Armed Forces

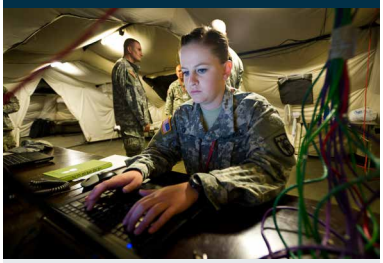
To provide an illustration of diversity-related opportunities from the US context, this chapter presents three additional vignettes of the military diversity framework. These examples are summarised in Figure 3.1.

Similarly to examples from the UK context, each example presented in this chapter is structured around the following questions:

- What is the strategic priority?
- What are the opportunities associated with diversity in relation to the strategic priority?
- What are the potential enablers, challenges and barriers that may affect how the opportunities are leveraged by the US Armed Forces?

Figure 3.1 Overview of selected opportunities for the US Armed Forces

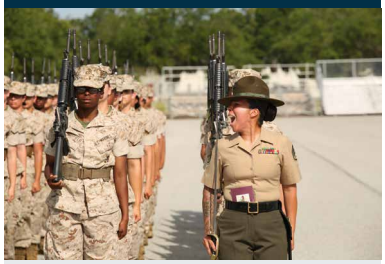
VIGNETTE 4



Recruitment of cyber warriors

Diversity can help the US Armed Forces recruit cyber warriors to enhance US capabilities in cyberspace. It can do so through expanding the pool of potential talent via the use of waivers for people with in-demand cyber skills who may otherwise not be eligible to join the military.

VIGNETTE 5



Recruiter diversity

In an increasingly competitive recruiting landscape for the US military, the diversity of military recruiters could help each military Service improve their outreach in markets that have been historically challenging for the military to reach or perform well in.

VIGNETTE 6

INDO-PACOM

The DoD necessitates personnel to be equipped with the cultural and linguistical capabilities necessary to effectively operate in the Indo-Pacific theatre – a key region of focus for the US. Recruitment and effective management of culturally diverse personnel can help the DoD build these capabilities, including culture-general knowledge and cross-cultural competence.

Images: Shared by the U.S. Department of Defense via Flickr (U.S. government work).

Image shared by U.S. Department of Defense via Flickr (U.S. government work)

3.1. There is an opportunity to diversify recruitment of cyber warriors to strengthen US capabilities, readiness and resilience in cyberspace

What is the strategic priority?

In recent years, foreign adversaries have increasingly utilised cyberspace to target the United States and undermine its national security and strategic interests. For example, both Iran and Russia launched online disinformation efforts during the 2020 US presidential election to influence and undermine public confidence in the electoral process.[143] In May 2021, a Russian hacking group was also suspected of targeting Colonial Pipeline infrastructure with ransomware, highlighting increasing cybersecurity threats to national security through critical infrastructure protection.[144] Mitigating and countering these and other emerging threats in cyberspace has not only been a challenge for the United States but also its allies and partners.[145]

In this context, the latest interim US National Security Strategic Guidance (NSSG) has explicitly positioned cybersecurity as a top priority for the US government.[146] To support this priority, the NSSG seeks to prioritise the

143 National Intelligence Council (2021).

144 Dilanian & O'Donnell (2021).

145 For example in March 2021, China launched cyber attacks against the Norwegian parliament's e-mail system. Source: Buli (2021).

146 Biden (2021b).

entire government's capabilities, readiness and overall resilience within cyberspace – including by leveraging the government's cyber workforce.[147]

What are the opportunities associated with diversity in relation to the strategic priority?

The US military has generally relied on two strategies to support the NSSG's goals to strengthen cybersecurity capabilities and build its own cybersecurity expertise:

- Direct recruitment of cyber warriors, for which the Armed Forces needs to recruit civilians who possess relevant cyber skills via direct commissions.
- Development of cyber skills through internal up-skilling and training schemes, for which the Armed Forces need to recruit and retain capable personnel and invest in their training for cyber-related occupations.

The military currently employs both strategies. For example, the US Air Force has pipelines for newly recruited enlisted personnel (1B4XX Cyberspace Defense Operations) and officers (e.g. 17XX-Cyberspace Warfare Operations and Utilization Field).[148] The US Army has pipelines for enlisted personnel (e.g. 17C-Cyber Operations Specialist), officers (e.g. 17A-Cyber Operations Officer) and warrant officers (e.g 170A-Cyber Warfare Technician, 170B-Electronic Warfare Technician).[149]

Further, the US Army similarly uses direct commissioning for qualified civilians with cyber-related skills to become officers.[150]

While the Armed Forces have had both strategies to their disposal to build cybersecurity expertise, they have struggled to recruit and retain qualified cybersecurity personnel in recent years.[151] This challenge has had various drivers. For example, the military has to compete within the civilian labour market to recruit and retain personnel with in-demand technical cyber skills, using direct recruitment of enlisted personnel and direct commissioning of officers. This competition for cyber skills is currently driving a rapid growth in cybersecurity-related occupations across the US labour market. For example, between 2020 and 2030, the US Bureau of Labor Statistics (BLS) estimated a 33 per cent increase in computer and information research employment,[152] a 22 per cent increase in software development, quality assurance and testing employment,[153] and a 33 per cent increase in information security analysis employment.[154] In contrast, the projected percentage change in employment for all occupations in this timeframe is 8 per cent.[155]

Given these projected dynamics in the US labour market, the US military is likely to face stiff competition in the recruitment of personnel with – or capable of learning – technical cyber skills, as well as increasing challenges in retaining them once they enter service.

147 Biden (2021b).
148 US Air Force (2015), US Air Force (2012).
149 US Army (2021).
150 US Army Cyber Command (2018).
151 Hardison et al. (2019), Wenger et al. (2017a).
152 US Bureau of Labor Statistics (2021a).
153 US Bureau of Labor Statistics (2021b).
154 US Bureau of Labor Statistics (2021a).
155 US Bureau of Labor Statistics (2021a).

To meet the military's growing demands for personnel with cyber skills in this context, the Armed Forces have an opportunity to expand their pool of qualified applicants for cyber-specific positions that may not otherwise be eligible for other positions, such as combat-arms occupations. For example, a number of technology firms have recruitment programmes for neurodiverse employees to fill in-demand cyber-related positions.[156] Adjusting accession standards for in-demand cyber occupations (e.g. by accepting more recruits with in-demands skills who also have neurodiverse characteristics) could facilitate this.

While reviewing accession standards (e.g. enlistment waivers) may not be desirable for all potential recruits who fall within these disability categories due to the Armed Forces' culture of maintaining high accession standards, there could be opportunities to consider an expanded use of waivers for those individuals with existing or potential ability to develop in-demand skills. As described in the first example presented in Chapter 2, this could include individuals diagnosed with autism who are however typically excluded from military service.[157] It should be noted that there is a need for evaluations to specify the conditions under which these waivers should be used and to confirm people who may receive these waivers have the necessary skills and aptitude required for military service.

Similarly, the US military may not necessarily want to disqualify recruits with in-demand technical skills who fail to meet DoD weight standards, have vision defects joint defects, or certain psychological and emotional health-related issues. While these limitations could preclude potential recruits from other military occupations, they are unlikely to do so in cyber-related fields. As such, more individualised assessment of potential recruits including pre-screening for technical cyber skills could allow the US military to attract diverse personnel who may otherwise would not be eligible to join the Armed Forces and help them address rapidly evolving cybersecurity challenges.

What are the potential enablers, challenges and barriers?

There are various opportunities and challenges for leveraging diversity for cyber-related missions stemming from increasing competition over in-demand, technical skills across a wide variety of sectors, including Defence:

- On the one hand, the competition for people with cyber-related skills creates unmet demand for such specialists in the military, opening up opportunities for a more diverse cohort of military recruits. The integration of women in the military is a related example. When the US military transitioned to the All-Volunteer Force (AVF) in 1973, there was a shortage of qualified men that led to the opening of occupations that previously excluded women.[158] Similarly, the current shortage of qualified personnel with cyber-related skills may suggest a need to expand the use of waivers as the US military confronts an increase in cyber threats in the future.
- On the other hand, however, as already briefly discussed in previous chapters, cross-sectoral competition over in-demand skills produces several challenges for recruitment and retention of specialist personnel. Many potential recruits with

156 Combs (2021).

157 US DoD (2018).

158 Segal (1995).

in-demand cyber skills will have attractive offers from civilian employers available to them.[159] The military may struggle to match those offers, particularly as public sector organisations conventionally cannot compete with the financial incentives offered by the private sector.[160] According to existing research, cross-sectoral competition may also challenge the military's ability to retain cyber skills, as specialist personnel may be more incentivised to leave the military to pursue opportunities in the civilian market.[161]

Further to the challenge of cross-sectoral competition which could hamper recruitment efforts, there are at least two barriers to leveraging diversity by expanding the use of waivers for people with certain disabilities. First, the blanket use of waivers, or adjusting of accession standards, for a particular career field may unintentionally stigmatise the career field or those with disabilities within these careers. The military should therefore use waivers on a case-by-case basis based on the demands of skilled personnel needed to address specific threats. Additionally, military leadership should take care in communicating these efforts to ensure there is no perception that diversity will result in a degrading of effectiveness. Second, each of the Services have a strong culture of maintaining high standards for physical and mental health of their personnel. This could make it seem as if attempts at using waivers could reduce these high accession standards. In no way should military leaders sacrifice these standards for the sake of diversity in and of itself. However, military leaders may want to weight the necessity of these standards relative to needs for skills based on specific threats that require a military response.

159 Asch (2019).

160 Cox et al. (2019).

161 Wenger et al. (2017a).

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3.2. Leveraging recruiter diversity may strengthen US military recruitment efforts in an increasingly competitive recruiting landscape

What is the strategic priority?

The US military competes with various civilian employers and government programmes to recruit and retain qualified personnel. The extent of this competition often varies by branch of service or military occupation. To maximise its ability to compete with other employers, the military has various incentives at its disposal to enhance the quality of its offer to potential recruits.[162] For example, the military offers tuition benefits for qualified enlistees to help them finance their post-secondary education.

Since the US military transitioned to the AVF (All-Volunteer Force) in 1973, there have been concerns of a civil-military divide within US society whereby fewer people have served, or know someone who has served, in the military. For example, the US Census Bureau estimates that by 2040 only 1 per cent of women and 7 per cent of men, 18 years of age or older, would have served in the military.[163] Further, the geographic diversity of enlisted accessions into the Active Duty force has overwhelmingly skewed towards people from the Southern region of the United States since at least 1985.[164]

162 Helmus et al. (2018), Wenger et al. (2017b).

163 Vespa (2020).

164 Goldberg et al. (2018).

While each of the Services met their recruiting goals in 2020, concerns remain that the recruiting landscape could become more competitive in the near future.[165] In this context, the Armed Forces may be required to adapt their existing recruitment strategies to be able to navigate the recruiting landscape and ensure they are able to attract personnel with key skills in sufficient numbers. Though this report has identified other examples of opportunities associated with diversity that relate more directly to operational effectiveness, this example explores the importance of diversity in military recruitment to highlight its role in military effectiveness more widely.

What are the opportunities associated with diversity in relation to the strategic priority?

Should the recruiting landscape for the US military become more competitive in the future, the diversity of those who implement recruitment could help each Service improve their outreach in labour markets that have been historically challenging for military recruiters. Existing research on homophily has consistently found that individuals tend to prefer to associate with others who are similar to themselves (e.g. race, gender, ethnicity).[166] Recruiters who represent the age, gender, race and ethnic compositions of particular markets may therefore be better placed to build relationships with potential recruits who are similar to them. Additionally, the motivation for why individuals decide to enlist has been found to vary by age and the geographic region where they live (e.g. pay, patriotism, meaningfulness of work).[167] Recruiters who have a personal experience with and historical ties to specific local or regional recruiting markets (e.g. prior residence), and who reflect the demographic characteristics of prospective recruits, may have increased ability to understand the motivations of potential recruits and thus help the Armed Forces maintain their competitive advantage for talent in a wide range of labour markets.

There are at least three examples of diversity that could help the military maintain a competitive advantage in recruitment efforts[168]:

- Geographic diversity (i.e. diversity in 'inherent or socially defined characteristics that individuals possess'[169] – in this case local area or region of prior residence) may lead the Armed Forces to be able to better understand the local culture of a particular recruitment market and therefore better tailor recruitment strategies to a local audience. As noted above, there is evidence that motivating factors for military enlistment may vary depending on local cultures. This includes evidence that recruits from the Southern region of the United States tend to be motivated by intangible benefits (e.g. patriotism) versus tangible benefits (e.g. salary), which tend to be motivators for recruits from New England.[170]
- Other demographic characteristics of recruiters beyond prior residence (e.g. age, race, gender, ethnicity) may give, or help sustain, competitive advantages

165 Asch (2019).

166 McPherson et al. (2001).

167 Asch (2019).

168 Note that these are examples and not conclusions about the current state of diversity across US military recruiters.

169 Lim (2015).

170 Asch (2019), citing Joint Advertising and Marketing Research Studies (2017).

in recruiting markets where particular subgroups are overrepresented (e.g. communities with large numbers of historically under-represented groups).

- Diversity in experiences and occupations may also help recruiters tailor strategies for recruiting particular occupations. For example, recruiters' experience of key industries within a particular recruiter market may help them forge ties with potential recruits. This could include recruitment for direct commissions in areas with a particularly high representation of specific skills, such as the technology market in the San Francisco and Seattle metropolitan areas. Recruiters with experiences of the technology sector or of working with others in technical-related occupations may be able to better understand the motivations of potential recruits within the sector.

What are the potential enablers, challenges and barriers?

To facilitate tailored and targeted military recruitment and enhance recruitment productivity, the Armed Forces could benefit from a comprehensive approach to leveraging diversity in recruiter background characteristics in recruitment processes. Enablers for this approach may include research examining which diversity characteristics could best support recruitment in different environments. For example, recruiters' demographic backgrounds and prior ties to the community may be most effective for some recruiting markets, while diversity in military occupational experiences may be more effective for others.

In contrast, a key barrier to consider in this context could be a tendency for the nexus of diversity and recruitment management to be perceived as tokenistic. The individual characteristics of personnel in and of themselves should not be the driving force behind the decision to send individual recruiters to a particular market. Further, the military should not merely transform recruiting positions into ones that require people from a particular demographic background. This point is particularly important because the promotion potentials may vary by occupation, leading to a potential source of inequality should the military disproportionately assign people with a particular background characteristic into a specific set of occupations. Instead, the military should take care to use these characteristics as one factor in deciding how best to maximise their Service's recruitment goals.

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3.3. Similar to the UK, there are opportunities to leverage diversity to strengthen US global engagement, particularly in the Indo-Pacific

What is the strategic priority?

The US Interim National Security Strategic Guidance published in March of 2021 stated that the Indo-Pacific would be a key region of focus for the United States under the new administration.[171] As China continues to expand its diplomatic, economic and security footprints with various countries in the Indo-Pacific, the guidance recognises the need for continued focus on maintaining strategic competition with China. With over 30 countries and 3,000 different languages in the Indo-Pacific theatre, the DoD is therefore likely to see a more pressing need to develop a sophisticated understanding of the region's diverse cultures and languages to build strong relationships with existing and potential future regional partners and allies.[172] This may require DoD personnel to be equipped with the relevant cultural and linguistic capabilities to effectively operate in the Indo-Pacific theatre.

What are the opportunities associated with diversity in relation to the strategic priority?

Cross-cultural competence – drawing on relevant cultural and linguistic elements – has been evidenced as a key element of developing effective military policies and operational plans, and in navigating relationships with

171 Biden (2021).

172 US Indo-Pacific Command (2021).

foreign partners.[173] In this context, cross-cultural competence has been defined as the 'knowledge, attitudes, and behavioral repertoire and skillsets that military members require to accomplish all given tasks and missions involving cultural diversity'.[174] This competence is further categorised into culture-general knowledge and cross-cultural competence, both of which are key to performing effectively in an overseas setting that involves working with local (or other regional and international) partners.

Cultural competence plays a critical role in understanding the adversary's culture – an important concept related to military performance.[175] Despite military principles such as 'know thy enemy' and 'winning the hearts and minds', US military operations have sometimes fallen short in practising these concepts on the battlefield. Both historical and contemporary evidence illustrate how this gap can have noticeable consequences for the military at all levels – strategic, operational and tactical.[176] For example, the failures of the Vietnam War were heavily attributed to the lack of Vietnamese cultural understanding by US service members and policymakers.[177] Contemporary examples from the battlefield also continue to illustrate the operational criticality of having culturally competent service members serve overseas. This includes anecdotal stories from Iraq and Afghanistan evidencing instances where US service members made and took culturally inappropriate remarks and actions, which may have undermined the US military's reputation and mission effectiveness in the region.[178]

The relatively diverse makeup of the US military compared to overseas competitors, and the diversity of the US population that provides an abundant pool to recruit from, give the DoD strategic advantages in recruiting personnel with rich cross-cultural competencies. Having a culturally competent force is likely to be increasingly important as the US military expands its presence overseas (particularly in the Indo-Pacific Command) through various joint combined exercises such as Defender Pacific, Rim of the Pacific Exercise, Northern Edge and Pacific Pathways.[179] Additionally, although Joint US Military Advisory Groups and Foreign Area Officers have been traditionally relied upon as designated regional experts, their cultural competency skills should also reside within regular units that operate overseas. The increase of cultural skills – which may be derived from lived experiences and are not necessarily tied to a particular race or ethnicity (e.g. studying abroad in a foreign country or living in a diverse US neighbourhood) – across different military units, ranks, forces and domains could allow the DoD to fully leverage its strategic advantage of having a diverse military.

What are the potential enablers, challenges and barriers?

Noting the opportunities described above, the US DoD has various options to recruit

173 Hajjar (2009).

174 Hajjar (2009, 247).

175 Hardison et al. (2009).

176 McFate (2005).

177 Shivakumar (1995).

178 Hajjar (2009), Inskeep (2006).

179 US Army Pacific (2020), US Indo-Pacific Command (2020), US Indo-Pacific Command (2021), Jenkins (2020).

for and manage talent with cross-cultural competencies:

- Individuals with cross-cultural competencies could be actively sought and recruited. Expanded recruitment efforts could involve sending recruiters who have relevant cultural and linguistic skillsets to traditionally underserved communities. It could also involve rebranding recruitment efforts to value cultural diversity as a core skill competency, similar to the manner in which the military currently screens for various aptitudes through physical fitness tests and the Armed Services Vocational Aptitude Battery.
- The Armed Forces could work to continually manage and upskill culturally competent and diverse personnel, building on ongoing efforts in this area.[180] Effective management of cultural and linguistic skills could for example entail periodic training for individuals to maintain their language capabilities and understand evolving local and regional cultural trends.[181] Furthermore, DoD may consider developing systems to track in-demand talents that are based on cross-cultural factors to ensure that their skillsets are fully leveraged for appropriate operations. Given that cultural competency affects mission effectiveness at all echelons, service members with this skill should be embedded at all levels (strategic, operational and tactical). This could serve to ensure that service members who possess cross-cultural competencies can maintain their skills and that these capabilities are well-utilised for Indo-Pacific operations.

Similarly to the previous vignettes, it should be noted that tokenism could present a potential challenge for these strategies, whereby leadership assigns personnel to missions or units solely to give the appearance of diversity. To mitigate this, leadership should take care to ensure that any process that leverages diversity as an enabler clearly links this consideration to a specific mission objective. Decisions that leverage diversity as a factor should also clearly communicate the underpinning rationale across the rank structure, to avoid additional challenges presented by perceptions of tokenism.

180 It is beyond the scope of this report to review or evaluate these efforts in detail.

181 Headquarters Department of the Army (2015).

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4 Implications for the UK and US Armed Forces

This chapter briefly reflects on the key findings of the study and outlines a set of corresponding options the UK and US Armed Forces may consider as they pursue the various operational and strategic advantages provided by diversity. The options presented in this chapter were developed by RAND experts on the basis of evidence gathered throughout the study.

4.1. There are opportunities for the UK and US Armed Forces to further elevate diversity as a strategic enabler for military effectiveness

As discussed throughout this report, various efforts have been made in recent years to foster diversity, inclusion and belonging in the UK and US Armed Forces. These efforts reaffirm that recruiting and managing a diverse workforce is a key priority for the UK and US militaries in the evolving strategic and operating environment. The objectives of the present study were to contribute to these efforts by examining key opportunities for leveraging diversity in the UK and US Armed Forces, thus maximising strategic and operational effectiveness. These opportunities were identified particularly in relation to three elements:

- Enhancing the Armed Forces' capacity for innovation, adaptation and quality of decision-making.
- Fostering external legitimacy, ability to project influence, and engage with partners, allies and other (domestic and international) audiences.
- Improving the Armed Forces' ability to attract, retain and foster the skills needed to address current and evolving national security imperatives.

As illustrated through the study vignettes in Chapters 2 and 3, these links between diversity and military effectiveness may manifest differently in specific areas of strategic and operational activity, ranging from defence engagement to the development of cyber capabilities. In sum, the variety of diversity-related opportunities supports **a strategic and ambitious effort across all services and parts of the Armed Forces** to further elevate diversity as an enabler for strategic and operational advantage. While the UK and US Armed Forces already benefit from diversity in their workforces, it is key that the Armed Forces identify and continuously evaluate the full spectrum of skills and competencies associated with this diversity (e.g. through comprehensive skills audits). Conducting a more comprehensive evaluation of current levels of diversity across different ranks and military occupations will also likely be needed

to identify specific gaps and priorities for recruitment and diversity management.

4.2. Leveraging diversity-related opportunities will require an alignment of ambition with addressing any barriers to inclusion

The focus of the present study has been on highlighting opportunities rather than challenges for fostering diversity, inclusion and belonging in the Armed Forces. However, it should be recognised that leveraging the opportunities outlined in this study will require continued efforts to **address persistent barriers to inclusion and the attraction and recruitment of a diverse talent pool into the Armed Forces**. Realising the above-described ambition for leveraging military diversity will, in other words, require corresponding efforts to allow all personnel to effectively contribute to the operational and strategic success of the UK and US militaries.

Recent reviews of UK and US Armed Forces diversity-related initiatives highlight various factors that hinder the ability of personnel from under-represented groups to achieve their full potential in the Armed Forces, and these factors are discussed in further detail in Annex B. In the UK, for example, women and ethnic minority personnel continue to be over-represented as victims in the service complaints system for bullying, harassment and discrimination. Women and ethnic minority personnel also often perceive the Armed Forces as an organisation that is not suitable for their employment due to structural or perceived barriers to progression and promotion, among other factors.[182] Furthermore, recent RAND research highlighted that some under-represented personnel in the US Armed Forces (including military women and sexual-minority personnel) continue to be more likely to experience health-related challenges, such as mental health conditions.[183] Concerns also continue to be voiced regarding the under-representation of women and ethnic minority personnel in both senior leadership positions and the officer corps that is linked to previously mentioned barriers to progression.[184]

Addressing these and other potential barriers to inclusion to match the US and UK militaries' ambition with an enabling organisational environment will necessarily cut across all parts of military organisations. For example, RAND SMEs consulted in the study highlighted opportunities for empowering mid-level military leaders to recruit or draw in reservists on the basis of identified operational needs to allow for greater flexibility and agility in the recruitment process.[185] Effective management of diversity[186] similarly spans different parts of military workforce management, from recruitment to career management and reward and incentivisation policy. The next section elaborates on specific options the UK and US Armed Forces may consider in this regard.

182 For example, a recent UK parliamentary inquiry noted that many women perceive the military as a 'male-dominated organisation where they may find it more difficult to thrive'. Source: House of Commons Defence Committee (2021, 11).

183 Wong et al. (2021).

184 Kamarck (2019).

185 RAND workshop discussions.

186 Diversity management is understood as a collection of processes, practices and interventions that seek to create a positive and inclusive work environment that facilitates inclusion and belonging.

4.3. Several options should be considered to effectively foster, reward and leverage diversity in the UK and US Armed Forces

In line with the discussion in previous sections, the military diversity framework presented in this report outlines several options for the UK and US Armed Forces in their efforts to leverage diversity for military effectiveness. These options – summarised in Table 4.1 and discussed further in the following sections – are broadly categorised into three areas:

- Improving the ability of the Armed Forces to recruit personnel with diverse characteristics and experiences.
- Effectively rewarding and valuing a diverse workforce (i.e. facilitating retention and effective diversity management).
- Developing wider organisational capacity to effectively leverage diversity for military effectiveness.

As a comprehensive review of existing diversity-related policies was beyond the scope of the study, these options are necessarily high-level and seek to guide further action, rather than outline exact steps for recruiting, retaining and managing a diverse military workforce.

Table 4.1 Summary of options for the UK and US Armed Forces

Category	Corresponding options
Enabling diversity through recruitment	• Consider enhancing the flexibility of military accession policies, including through expanded use of recruitment waivers. • Identify opportunities to mitigate barriers stemming from the wider employment market, including through leveraging diversity of recruiters, enhancing military pathway schemes and fostering partnerships with civilian employers. • Consider how to improve communication and messaging to enhance understanding and suitability of military employment incentives to personnel with diverse backgrounds and characteristics.
Effectively managing and rewarding a diverse workforce	• Identify and work to address specific needs of diverse personnel, including through elevating the role of diversity in personnel management. • Build an understanding of how to effectively reward and recognise diverse personnel, including through identifying potential shortcomings of existing reward strategies. • Align resource to requirement, including through providing suitable support for diversity-related efforts and initiatives across the Armed Forces.
Building organisational capacity	• Build capacity across the Armed Forces, including through identifying how to effectively operationalise and support different diversity networks. • Develop clear and formalised processes for identifying good diversity management practices from beyond Defence, and identify how they could apply in the Armed Forces.

Source: RAND analysis of study evidence base.

4.3.1. Flexible and tailored approaches to outreach and recruitment may, under the right conditions, enhance the ability of the Armed Forces to leverage diversity

Noting the various ways in which diversity may contribute to military effectiveness, it is key for military leaders to continuously work to identify what types of diversity are available to them within their organisation, where there may be potential skills gaps and how these gaps could be addressed. This research points to several options that the UK and US Armed Forces could consider in this regard.

This study does not provide a full review of the Armed Forces' accession standards and how effective or prohibitive these may be for effectively leveraging diversity. However, experts and stakeholders consulted for this study highlighted the benefits of **introducing flexibility into military accession policies** to allow individuals with unique skills, who may otherwise not be able to enlist (e.g. due to age or disability restrictions), to join the Armed Forces. As the example on cyber specialists in the United States outlined, the Armed Forces could therefore consider an expanded use of recruitment waivers to enable the organisation to harness diversity, particularly for specialist roles and functions in which the US military are likely to face stiff competition from other employers (including the private sector) for skills. There is a need for additional research to identify the conditions under which this approach could enhance military effectiveness.

For certain roles and functions, the Armed Forces are likely to face barriers to recruitment, such as stiff competition with civilian employers over key skills (e.g. STEM – Science, Technology, Engineering and Mathematics – skills) and a lack of diversity in the wider pool of potential candidates (e.g. among cyber specialists). To mitigate these barriers, military organisations can reconsider how to engage with potential recruits more effectively and how to leverage instruments – such as targeted community outreach, lateral recruitment[187] and external partnerships – to enhance recruitment strategies. To that end, the Armed Forces could identify opportunities for engaging with the future workforce early on to foster a diverse pool of potential future recruits, e.g. through STEM graduate programmes and other military pathway schemes. As discussed in Chapter 3 of this report, **leveraging diversity to recruit** by engaging personnel with diverse backgrounds and experiences in outreach to potential new recruits may also help address the challenges of an increasingly competitive labour market. Lastly, leveraging secondments and other lateral recruitment instruments through partnerships with civilian employers or international partners and allies could help address recruitment-related challenges in areas in which the Armed Forces may struggle to compete with others.

Throughout the study, communication was emphasised as a key aspect of managing military diversity. To effectively attract personnel from diverse backgrounds and demographics, effective communication with – and for – diverse audiences is therefore key. This in turn requires a nuanced view of those audiences' experiences in the Armed Forces, including perceptions of the financial and non-financial rewards associated with military employment. As such, the Armed Forces could benefit from **further embedding diversity and what value it brings to the Armed Forces at the core of outreach strategies**, as well as tailoring messages to specific audiences. For recruitment purposes, this should reflect an

187 Lateral recruitment refers to the recruitment of personnel, particularly in specialist roles, directly from outside the Armed Forces.

understanding of how important and attractive different elements of military employment may be to different groups of potential recruits.

4.3.2. Effectively recognising, rewarding and valuing diverse personnel may enable military organisations to better manage a diverse workforce

While attracting diverse personnel is a critical first step in realising the advantages of military diversity, ensuring personnel can be retained and that their unique skills and abilities are effectively leveraged is equally critical for military organisations.[188] Effective diversity management is therefore a key element of leveraging diversity to enhance military effectiveness.[189] In this regard, the Armed Forces need to recognise the unique strengths, abilities and competencies that diverse personnel bring to military organisations, as well as any potential unique needs that ought to be recognised and addressed to enable personnel to perform their roles effectively. In this regard, **identifying and addressing the unique needs of diverse military personnel, as well as recognising their unique strengths**, is key for effective diversity management.[190] Leveraging the knowledge and experiences of diverse personnel may help in this endeavour – for example, neurotypical leaders may struggle with effectively managing neurodiverse personnel.[191] In contrast, anecdotal evidence suggests that neurodiverse leaders can excel at managing the strengths and needs of other neurodiverse employees, including those with different conditions.[192]

The previous section highlighted that tailoring and effectively communicating the financial and non-financial benefits of military employment represents an important opportunity for improving diversity-oriented recruitment strategies. The nature of these benefits is however equally critical for retention of diverse employees. Recognising the unique needs of diverse personnel, military organisations could therefore benefit from improving their understanding of **how diverse groups can be effectively rewarded and recognised**, so as to enhance retention and enable diverse personnel to use their skills effectively. This includes understanding how specific employment benefits, including non-financial elements – such as mentoring and recognition – may be more or less effective for specific groups, and identifying assumptions underpinning traditional reward strategies that may not apply to diverse groups (e.g. neurodiverse individuals).

Lastly, while a systematic assessment of the financing of diversity-related initiatives in the UK and US Armed Forces was outside the scope of this study, interviews with experts and stakeholders indicated there is a **need to align resource to requirement** when it comes to leveraging diversity for military effectiveness.[193] As the need for diversity is increasingly communicated by military organisations, the degree to which concrete action actually results may often be less clear, and insights from the study interviews suggested that diversity-related initiatives are frequently underfunded and rely on the work of

188 Research interview, 13 April 2021; research interview, 21 May 2021.

189 Research interview, 3 December 2020; research interview, 12 January 2021; research interview, 1 September 2021.

190 Scoppio (2012), Research interview, 14 July 2021.

191 Research interview, 1 September 2021.

192 Research interview, 1 September 2021.

193 Research interview, 17 May 2021; research interview, 28 July 2021.

volunteers.[194] As such, an assessment of how diversity-related commitments are matched with appropriate resources is likely to be a key enabler for effective diversity management.

4.3.3. Improving diversity management may benefit from increased support for diversity networks and exchanging good practice with other employers

There are various organisational elements that could ensure that the Armed Forces are well positioned to attract and retain a diverse pool of talent. To realise the various operational and strategic advantages associated with diversity, the Armed Forces may therefore benefit from continuously strengthening their capacity to enable effective recruitment and management of diverse personnel across the organisation. One avenue for strengthening this capacity may be through improving support for informal diversity networks. Diversity-related initiatives in military (and other) organisations are often delivered or spearheaded by voluntary diversity networks.[195] These networks provide a critical backbone to bottom-up efforts aimed at enhancing how diversity is managed and leveraged across the Armed Forces.[196] Going forward, military organisations may benefit from **identifying how to further effectively operationalise and support different diversity networks**, including through formalising mechanisms for exchange of ideas and practices among different networks, and enabling networks from a resource perspective.

Looking beyond the immediate military context, the Armed Forces may also benefit from **continuously monitoring and assessing emerging best practice** on diversity management from other sectors. The Armed Forces are only one of many employer organisations seeking to leverage diversity – this study alone consulted with experts from other government departments, non-governmental organisations, academic institutions and private-sector organisations – many of which can contribute insights on lessons learned from their particular sectors. With growing evidence as to what works to manage diversity and leverage it for enhancing organisational effectiveness, the UK and US militaries may therefore benefit from clear and formalised processes for identifying good management practice from beyond the military, as well as identifying how these could apply in the Armed Forces. This could work to support continuous improvement in diversity-related policies and facilitate adoption of evidence-based practice across the organisation.

194 Research interview, 17 May 2021; research interview, 28 July 2021.

195 In the UK Armed Forces, diversity networks are voluntary associations that support under-represented or disadvantaged groups and contribute to the formulation and implementation of diversity- and inclusion-related efforts across the UK MOD (e.g. through learning and development). Similarly, there are various networks that support under-represented or disadvantaged groups in the US military, such as the Service Women's Action Network. Source: MOD (2021d), Service Women's Action Network (n.d.).

196 Research interview, 27 July 2021.

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Annex A. Methodology

Building on the short summary of the study approach in Chapter 1, this annex provides a more detailed description of the study's research design and methodology.

To address the study RQs, recapped in Box 4 below, the study team applied a qualitative research approach structured in several work packages (WPs). These are summarised in Figure A.1.

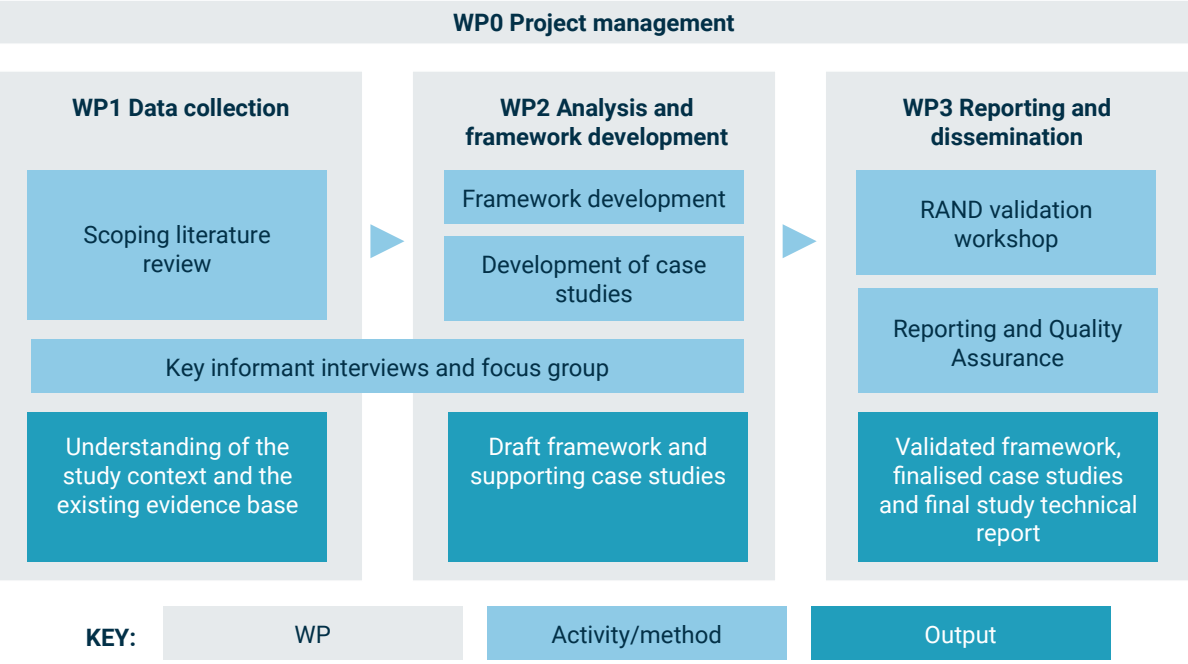
Box 4 Study RQs

RQ1. What type of operational advantage can a diverse workforce create for UK and US Armed Forces?

RQ2. What are the opportunities to enhance military effectiveness associated with different diversity characteristics (e.g. gender, age, neurodiversity)?

RQ3. What recommendations can be developed to help the UK and US Armed Forces assess and operationalise the operational and strategic benefits of diversity?

Figure A.1 Overview of study research design



As outlined in the figure above, the study involved a range of data collection and analysis tasks that were carried out by the study team in the UK and the United States between October 2020 and September 2021. In the initial data collection WP, these tasks included a literature review and initial interviews to scope the field of inquiry, characterise the existing evidence base and gather initial data to inform the development of the central study framework and the selection of examples. The following activities supported this:

- **Scoping literature review**: To provide a contextual grounding for the study, the study team conducted a scoping literature review to review existing academic and grey literature, as well as previous RAND research, on issues related to military diversity. This included existing as well as past US and UK policy on diversity among the UK and US Armed Forces, and literature discussing the operational or strategic benefits of diversity in the Armed Forces and in related contexts (e.g. law enforcement and peacekeeping). The literature review was conducted as a structured but non-systematic review of relevant literature, with relevant sources identified through existing RAND research, searches on Google Scholar using search terms structured around the study RQs, and 'snowballing'[197] through the reference lists of already identified sources. Data extracted from the sources identified:
    - Contextual source information (author, title of source, date of publication, etc.);
    - Context of the research presented in the report (e.g. military operations);
    - Types of diversity discussed in the source (e.g. gender, ethnic, age, other);
    - Types of operational and strategic advantages associated with diversity identified in the source;
    - Relevant examples or examples discussed in the source; and
    - Stakeholders discussed/mentioned in the source.
- **Interviews**: Together with the scoping literature review, the study team conducted consultations with SMEs and stakeholders through key informant interviews. In sum, the study team interviewed 23 SMEs, stakeholders and subject-matter experts, with 15 interviews conducted by the RAND Europe team and eight interviews conducted by the RAND US team. Interviews were conducted with academic experts as well as current and former UK and US Armed Forces personnel, and experts and stakeholders from other sectors with relevant expertise related to each of the examples.

  SME and stakeholder consultations spanned WP1 and WP2 and were conducted as semi-structured interviews to allow for a structured yet flexible approach, as interviews were adapted to support and validate other data collection and analysis activities. In WP1, interviews were chiefly oriented towards enhancing the study team's understanding of the research landscape and characterising existing perspectives among the UK and US Armed Forces on the operational and strategic benefits associated with diversity. In WP2, the focus of interviews subsequently shifted towards validating emerging themes in the framework design and supporting the development of the examples from UK and US settings.

197 I.e. identifying further sources through references of materials previously reviewed.

Table A.2 List of subject-matter experts and stakeholders consulted through key informant interviews

Category		Name	Organisation
RAND Europe	Academic	Dr Lindy Heinecken	Department of Sociology and Social Anthropology, Stellenbosch University
	Academia	Anonymous	Belgian Royal Military Academy
	Academia	Dr Karen Davis	Defence Research and Development Canada
	Armed Forces	Wg Cdr Mark Abrahams OBE	Royal Air Force LGBT+ Freedom Network (former)
	Government	Anonymous	Anonymous
	Government	Anonymous	Anonymous
	Armed Forces	Anonymous	Royal Navy Neurodiversity Network
	Armed Forces	Anonymous	Anonymous
	Non-government or international organisation	Jesus Ignacio Gil Ruiz	NATO Office of the Gender Advisor
	Armed Forces	Anonymous	Anonymous
	Non-government or international organisation	Dr Emma Philpott MBE	IASME Consortium
	Non-government or international organisation	Anonymous	Anonymous
	Academia	Anonymous	Anonymous
	Armed Forces	Anonymous	Anonymous
	Academia	Anonymous	Anonymous
RAND Corporation	Armed Forces	Anonymous	Department of the Air Force
	Armed Forces	Anonymous	Department of the Air Force
	Armed Forces	Anonymous	Department of the Air Force
	Armed Forces	Anonymous	Department of the Army
	Armed Forces	Anonymous	Department of the Army
	Non-government Organisation (Former Armed Forces)	Anonymous	RAND Corporation/Department of the Navy
	Non-government Organisation (Former Armed Forces)	Anonymous	RAND Corporation/Department of the Navy
	Non-government Organisation (Former Armed Forces)	Anonymous	RAND Corporation/Department of the Air Force

Building on the scoping literature review and initial interviews, WP2 entailed analysis and supporting additional data-collection activities, structured chiefly around the following two tasks:

- **Framework development**: Building on the initial data collected in WP1, the study team iteratively developed the central study framework for understanding the benefits of military diversity for military effectiveness (presented in Chapter 2 of this report). The framework development entailed thematic analysis of insights collected from the literature review and interviews conducted in WP1, as well as internal workshops with the study teams and desk-based research to fill identifying data gaps and expand on the scoping literature review through targeted reviews of relevant literature. This included, in particular:
    - A targeted literature review of US and UK government reports, policy and strategy to identify the relevant strategic trends and key priorities identified by the UK and US Armed Forces discussed in Chapter 1.
    - A targeted review of academic and non-academic sources to identify key elements, principles and lessons learned in diversity management, which informed the development of the study recommendations.
- **Vignette development**: On the basis of the literature review and interviews, the research team selected a number of vignettes to illustrate how operational and strategic advantages associated with diversity can be identified and operationalised following the central study framework. Six examples were selected to provide this illustration in the UK and US military context, addressing some of the key strategic priorities identified by the UK and US Armed Forces. When selecting the examples, the study team considered particularly the following criteria: relevance of the example to the UK and US Armed Forces in light of their identified strategic priorities, spread of the examples across various types of diversity (e.g. demographic, neurodiversity, etc.), and relevance of the examples for different opportunities identified in the central study framework. Data availability was also considered to a lesser degree.

  To develop the examples, the study team conducted targeted desk-based research and interviews with subject-matter experts and stakeholders with relevant expertise. The experts and stakeholders consulted are included in Table A.2. As outlined in Chapters 3 and 4, data-collection and analysis activities supporting the examples were structured around a set of key questions:
    - What is the strategic priority?
    - What are the opportunities associated with diversity in relation to the strategic priority?
    - What are the potential enablers, challenges and barriers that may affect how the opportunities are leveraged by the UK and US Armed Forces?

Building on these tasks, the final study WP focused on consolidating insights from all data-collection and analysis activities and identifying cross-cutting conclusions and recommendations for the UK and US Armed Forces. To inform this process, the study team hosted an internal workshop gathering selected RAND Europe and RAND Corporation experts with relevant expertise. The workshop focused on:

- Validating and adding additional granularity to emerging study findings, particularly

the central study framework presented in Chapter 2.

- Validating the example selection and gathering insights in relation to the UK- and US-focused examples.
- Identifying additional insights that may help inform the development of the study recommendations.

The internal workshop was completed by cross-cutting analysis and desk-based research to address any data gaps, as well as reporting and Quality Assurance activities.

Several caveats and limitations should be noted in relation to the study's research design and methodology:

- **Access to experts and stakeholders**: This study has been internally funded by RAND's RIR programme. While this allowed the study team to independently formulate the study requirements and approach, it also posed challenges with gaining access to relevant experts and stakeholders due to the internally commissioned nature of the study, as well as the sensitivity of the issue area. As a result, the study has been constrained in the extent to which it is able to interrogate perspectives particularly of currently serving Armed Forces personnel. To mitigate this challenge, the study team leveraged the expertise of experts and stakeholders from academia, as well as related fields outside of the immediate remit of the Armed Forces, and expertise provided by RAND experts with a military background.
- **Scope of existing literature**: This study builds on a vast amount of existing literature on issues including diversity in the Armed Forces, the links between diversity and organisational effectiveness, and the impact of related concepts – such as equality and representation – on organisational performance. Though the study team sought to holistically examine and reflect on findings from various strands of existing literature, time- and resource-related constraints limited the study team's ability to interrogate the full scope of the existing evidence base. As such, a focus has been maintained on issues directly related to the links between diversity and military effectiveness, while related issues – such as historical perspectives on diversity and inclusion in the UK and US Armed Forces – have been explored to a more limited degree. Additionally, it should be noted that where a lack of academic literature has been identified, a wider range of sources (including non-peer-reviewed literature) was consulted in the research. In these cases, the research team sought to triangulate insights from multiple sources or triangulate the desk research with interview data.
- **Level of analysis**: Diversity, equality and inclusion are sensitive issue areas that directly speak to the personal experiences of Armed Forces personnel. Examining the role of diversity in enhancing military effectiveness is therefore a necessarily sensitive issue area that requires the interrogation of a complex set of imperatives, enablers, barriers and other factors that shape the experiences of Armed Forces personnel and the performance of military organisations at the group, unit or organisational levels. In light of this complexity, this study has aimed to provide an initial (though holistic) exploration of the military diversity 'business case', as well as a high-level framework for military leaders for identifying and operationalising this business case. As noted throughout this report, it is not aimed to provide direct guidelines for how military diversity should be leveraged or how existing policy, strategy or doctrine should be revised.

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Annex B. Overview of diversity, inclusion and belonging in the UK and US Armed Forces

To provide a more in-depth understanding of the context of this study, this annex provides a more detailed discussion of the historical and current contexts for efforts to foster diversity, inclusion and belonging in the UK and US Armed Forces.

B.1. Since the late 1990s and early 2000s, the UK Armed Forces have introduced various measures to foster workforce diversity

In the late 1990s and early 2000s, issues surrounding diversity were propelled to the top of political agendas in the UK as well as internationally.[198] Driven by various demographic, social and economic factors, a wave of new legislation was introduced to advance diversity in different fields by instituting or enhancing compliance with provisions for previously unprotected characteristics, such as age, sexual orientation and religious belief. Examples of such legislation include the UK Race Relations Act 2000, the UK Equality Act 2006 and the UK Equality Act 2010. In the same timeframe, the European Union introduced several directives related to equality and diversity that placed both responsibilities and obligations on member states.[199]

These wide contextual changes came to be reflected in the Armed Forces through structural changes in Defence personnel policies. For example, the Strategic Defence Review of 1998 placed personnel issues centre-stage by introducing a personnel management improvement plan that was focused on achieving equal opportunities.[200] Specifically, the plan established the Tri-Service Equal Opportunities Training Centre, expressed a commitment to 'maximising opportunity for women in the Armed Forces', set out targets for the recruitment of minority ethnic personnel for the first time to ensure that 'the Armed Forces should better reflect the ethnic composition of the British population', and emphasised the Armed Forces' zero-tolerance policy on harassment.[201]

These early efforts to foster inclusion of previously excluded or under-represented groups in the UK Armed Forces reflected a growing commitment to enhance the

198 Ishaq and Hussain (2014), Hussain and Ishaq (2016).

199 Hussain and Ishaq (2016).

200 UK MOD (1998), Dandeker and Mason (2001).

201 UK MOD (1998, 213), Mason and Dandeker (2009).

representation of British society in terms of gender, ethnicity, religion, sexual orientation and other diversity characteristics.[202] Since then, UK MOD has worked to address barriers to diversity in the Armed Forces through various means, including by:[203]

- Ensuring the use of adequate diversity language to demonstrate commitment to a more inclusive organisational culture.
- Encouraging public pronouncements from senior political and military figures.
- Providing training in diversity to personnel across the three services to ensure that equal opportunities are integrated across all working practices.
- Implementing a wide range of measures aimed at ensuring a working environment that is positive and supportive of the needs of various minority groups, including mechanisms designed to deal with discriminatory behaviours and harassment.

These structural efforts to promote diversity have been supplemented by various MOD and single service-level measures to promote the inclusion of previously excluded or under-represented groups, including women, ethnic minorities, sexual minorities and persons with disability (summarised in Table B.1). An overarching framework for these efforts has been set out in the MOD's Defence Diversity and Inclusion Strategy 2018–2030, which set out the overarching MOD vision and future ambitions for strengthening diversity and inclusion in UK Defence. It also set out key priority activity areas for realising these ambitions, comprising: 'mainstreaming [diversity and inclusion] in the Defence Operating Model, mainstreaming D&I in Defence culture and behaviours, developing D&I policies and guidance, and [strengthening] outreach'.[204]

Table B.1 Representation in the UK Armed Forces by diversity characteristic

Diversity characteristic	Representation
Gender	Historically, women's representation in the Royal Air Force (RAF) has been higher compared to the other services due to the RAF's organisational structure, which made it easier for women to be assimilated in non-combatant roles.[205] In 2016, the UK Government decided to lift the exemption on women serving in close combat roles on the basis of equality of opportunity and maximisation of talent. In 2017, all RAF roles opened to women, and the remaining combat roles in the Army and Navy opened in late 2018. As a result, since 2019, all roles within the Armed Forces have been open to women. In 2015, the MOD set a target of increasing the intake of women personnel to a total of 15 per cent by 2020. Since then, the proportion of women joining the UK Regular Forces has increased from 9.7 per cent in 2015/2016, to 11.6 per cent in 2019/2020, thus not meeting the target. Statistics also show no significant increase in the number of women joining the Armed Forces as a result of the opening of all combat roles to women in 2017 and 2018.[206]

202 Hussain and Ishaq (2016).
203 Hussain and Ishaq (2016).
204 UK MOD (2018a, 19).
205 Ishaq and Hussein (2014).
206 UK MOD (2020b).

Diversity characteristic	Representation
Ethnicity	While the UK Armed Forces has not maintained recruitment restrictions on the basis of ethnicity, since the late 1990s and early 2000s the UK Government has sought to increase BAME representation through the creation of three specialist Diversity Action Teams (one in each service), appointment of Muslim, Hindu, Sikh, and Buddhist chaplains in the three services to reflect religious diversity, and enhanced recruitment from the Commonwealth countries.[207] In 2015, the MOD set a target of increasing the intake of BAME personnel in the Armed Forces to a total of 10 per cent by 2020. Since then, the proportion of BAME personnel joining the UK Regular Forces has increased from 5.2 per cent in 2015/2016, to 13.7 per cent in 2019/2020, thus exceeding the set target.[208] Out of the three services, the Army has the highest proportion of BAME personnel intake.
Sexual orientation	The ban on homosexual personnel openly serving in the UK Armed Forces was lifted in 2000. Since then, the MOD has implemented steps to ensure a positive working environment, including signing up to LGBT rights group Stonewall's Diversity Champions Scheme, an employers' programme that aims to ensure all LGBT staff are accepted in the workplace.[209] This has complemented more general efforts to counter discrimination and harassment against minority groups across the Armed Forces. Since the declaration of sexual orientation is not mandatory, there are no official statistics available on the percentage of personnel with different sexual orientations in the Armed Forces. As of April 2020, the percentage of personnel who had declared a sexual orientation in the UK Regular Forces was only 20.9 per cent.[210]
Age	Although age is a protected characteristic in the Employment Equality (Age) Regulations 2006, the legislation contains an exemption for the Armed Forces, given on the basis of ensuring combat readiness and effectiveness.[211]
Disability	As is the case with age, the Armed Forces are exempt from the disability discriminations provisions in the Equality Act 2010. Although the Armed Forces have signed up to the Guaranteed Interview Scheme, which guarantees an interview to all disabled applicants who meet the minimum criteria for a vacancy, this only applies to civilian posts.[212]

207 For example, in 2013 the MOD introduced a five-year UK residency requirement for Commonwealth citizens wishing to join the UK Armed Forces. The requirement was partially waived in 2016 to allow the recruitment of up to 200 Commonwealth personnel per annum, and again in 2018, to allow the recruitment of up to 1,350 Commonwealth personnel per annum, in order to fill skills shortages.

208 17.9 per cent in 2019/2020, compared to 8 per cent in the Navy and 5.9 per cent in the RAF. Source: UK MOD (2020b).

209 Hussain and Ishaq (2016).

210 UK MOD (2020b).

211 UK MOD (2016).

212 Hussain and Ishaq (2016).

In 2020, in response to reports of continued discrimination,[213] the six Chiefs of Staff across UK defence signed a joint letter emphasising their commitment to improving diversity in the UK Armed Forces. As part of this, they announced an intention to increase funding for diversity programmes, as well as to conduct an independent review of promotion boards to ensure that the promotion system maximises everyone's potential, with results to be published in 2021.[214] At the same time, the MOD's continued and increased efforts to improve diversity and reduce discrimination have also been met with some public opposition. For example, in 2020 the MOD was criticised when it was revealed that it employed 44 civil servants to foster diversity and was seeking to recruit a diversity and inclusion director on a salary higher than that of an Army colonel.[215] Diversity and inclusion in the UK Armed Forces therefore continue to be subject to considerable political, policy and public debate.

B.2. The US military has, similarly, sought to improve representation of diverse groups, leading to a growing focus on inclusiveness

The US military is not representative of the entire US population, but it does represent a microcosm of American society.[216] Similar to the UK Armed Forces, the US military has maintained specific eligibility criteria for who is able to join. For example, recruits above a certain age, people with certain physical or mental health conditions, and those convicted of serious crimes cannot enlist in the military.[217] There is typically a mission-specific justification for why these groups of people are excluded from military service, though these justifications have changed over time with a corresponding change in the scope of eligibility criteria. For example, the US military relied on segregated units of Black and White soldiers during World War II.[218] Until 2015, the military excluded women from certain occupations (e.g. combat arms).[219] Until 1992, gay and lesbian personnel could not serve in the military, until they were allowed to openly serve with the repeal of the 'Don't Ask, Don't Tell' policy in 2010.[220] The military prohibited transgender people from serving in the military until 2016, then reinstated this ban in 2017, only to end the ban again in 2021.[221]

In conjunction with increasing representation by revisiting whether one group that was previously excluded from service could in fact serve, the US Armed Forces have also increasingly focused on improving inclusiveness. The historical context of desegregation in the US military serves is an example of this. After World War II, President

213 The Service Complaints Ombudsman's 2019 annual report showed that BAME Armed Forces personnel were two times more likely than white personnel to lodge complaints about bullying, harassment or other forms of discrimination. See Service Complaints Ombudsman for the Armed Forces (2020).

214 UK MOD (2020c).

215 Hussain (2020).

216 Segal & Segal (2004).

217 See for example US Army (n.d.).

218 Segal (1989).

219 Pellerin (2015).

220 National Defense Research Institute (2010).

221 Biden (2021a), Chung & Stempel (2019), Schaefer et al. (2016).

Harry S. Truman ended segregation of the military by issuing Executive Order 9981.[222] Black and White personnel served together in combat during the Korean War. Despite these steps towards increasing representation by desegregating military units, racial tension persisted. During the Vietnam War, Black service members organised resistance against race-based inequities that they witnessed while deployed.[223] In 1971, there was a race riot on Travis Air Force Base, forcing commanders to request support from civilian police to regain control over their installation.[224] These tensions resulted in the creation of equal-opportunity programmes across the military that were designed to institutionalise these conflicts and, in turn, increase inclusiveness.

Gender is another example where initial concerns over representation led to a focus on inclusiveness. The United States ended conscription and completed its transition to the AVF in 1973. During the early days of the AVF, the US military had concerns about meeting their recruitment goals given that it was now competing with government employment, private-sector employment, and higher education for qualified men.[225] It was during this time the military began to expand opportunities for women to serve, effectively increasing women's representation.[226] In 1972, the year before the AVF began, only 43,000 women served in the US military, representing less than 2 per cent of all service members. Ten years later in 1982, the number of women in the AVF had increased to 190,000, representing 9 per cent of the total force.[227]

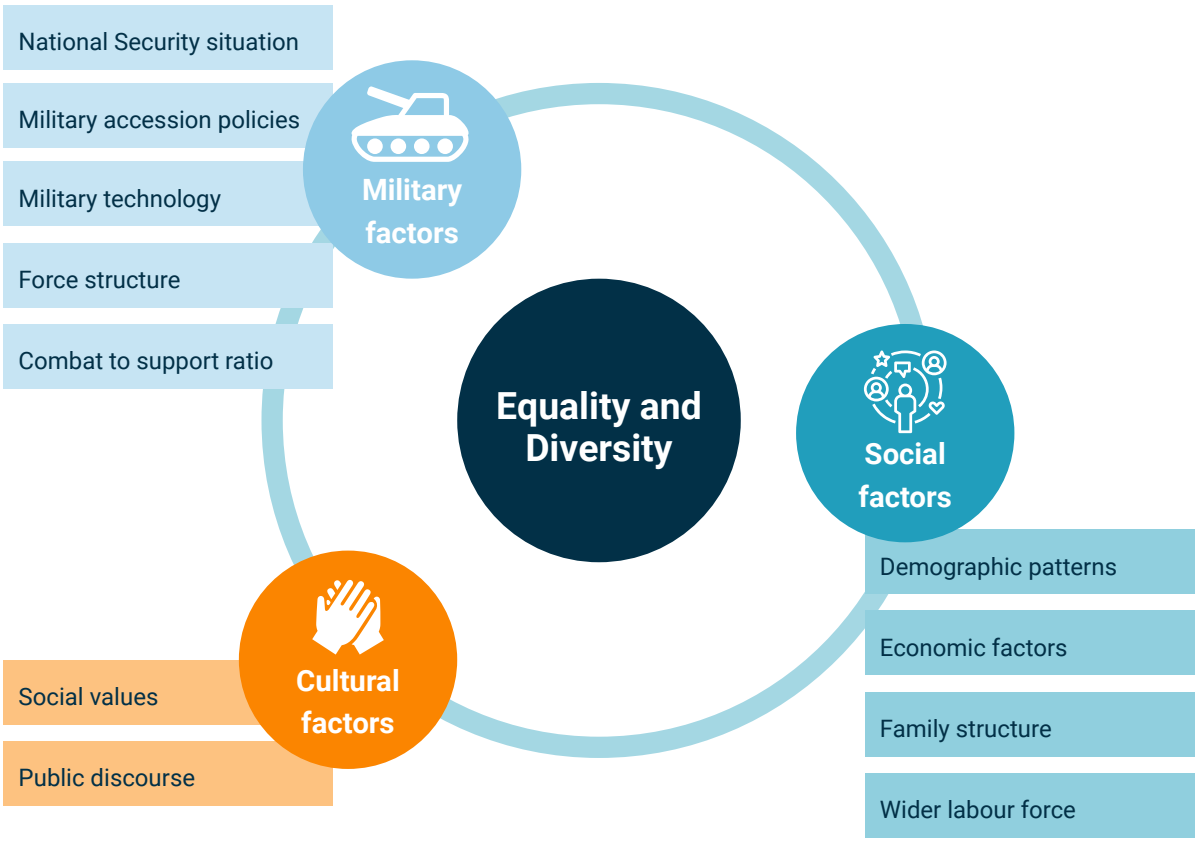
In recent decades, the military has opened all occupations to women, allowed gay and lesbian personnel to openly serve, and lifted a ban on transgender personnel from serving. Again, in these cases, the military had to decide whether to continue excluding these groups and how best to manage the representation of these groups within the force. As representation increased, the military focus has shifted to issues of inclusiveness. This focus has also permeated more recent efforts from the DoD and single services to improve diversity, equity and inclusion across the US Armed Forces, which have intensified following nationwide protests in 2020 in the wake of the killing of George Floyd.[228] This has included new DoD-wide guidance on diversity, equity and inclusion published in June 2020, following an initial roll-out of steps to address prevailing diversity-related challenges. This included a comprehensive review of all defense policies, programmes and processes 'that may negatively affect equal opportunity, diversity and inclusion for all our people'.[229]

222 Truman (1948).
223 Cortwright (2019).
224 Leidholm (2013).
225 Segal (1995).
226 Rostker (2006).
227 Sider & Cole (1994).
228 Yeung & Lim (2021).
229 US DoD (2020c, 2).

B.3. Military diversity has been historically shaped by internal as well as external factors, notably social justice and changing legislation

While national legislation and increasing emphasis on diversity in international politics provided an initial impetus for diversification of the UK and US Armed Forces, existing research has highlighted a broader range of factors that have shaped changing roles of previously excluded or under-represented groups in the Armed Forces. This includes both factors endogenous and exogenous to the Armed Forces, according to a framework developed by Segal (1995) and later expanded by Dandeker and Segal (1996) to examine changing roles of women in the Armed Forces. Figure B.1 below provides a diagrammatic overview of the model, which distinguishes between inclusion-driving factors that directly stem from the military environment ('military factors'), factors relating to wider social structures ('social factors)' and normative aspects of public discourse ('cultural factors').[230]

Figure B.1 Internal and external factors shaping diversity in the Armed Forces



Source: Adapted from Segal (1995).

230 Dandeker and Segal (1996).

As can be noted in Figure B.1:

- Among factors that directly relate to the Armed Forces, diversity roles are shaped by variables that affect the organisation from the outside, such as the national security situation (whereby the Armed Forces are more inclined to draw on diversity during times of crisis), and advances in military technology (which can act to reduce the importance of physical readiness in some contexts). Looking within the organisation itself, force structure and combat-to-support ratio can influence the types of posts available, some of which may be more conducive to including or utilising certain types of diversity. Similarly, military accession policies shape the extent to which the military is accepting and encouraging of different types of diversity to join.[231]
- The social and cultural variables contain only external variables. The social variables include demographic patterns, whereby manpower shortages may lead the Armed Forces to draw from different demographic groups; economic factors, which can influence the extent to which a stable military career is viewed as attractive; family structure, where the roles of the minority group in question may create barriers to having a military career; and composition of the wider labour force, which can influence the extent to which the military needs to compete with other employers to attract skills and talent. Cultural considerations include social values and public discourse, referring to the extent to which the wider society carries values that are supportive of equality and diversity, as well as the extent to which these values are present in public discourse, thus creating pressure for change.[232]

Reflecting these factors, efforts in the UK and the United States to enhance recruitment of previously excluded or under-represented groups has followed three broad drivers:

Social justice

Social justice reflects a societal belief that discrimination on the basis of any type of diversity in employment is unfair and has the potential to create systemic disadvantage.[233] Such a societal belief usually leads to pressure being placed on organisations, not only from public opinion, but also from policymakers and democratic representatives, whose views and actions have to reflect those of society.[234] Correspondingly, as the diversity of the population and the general labour market increases, demands on key public institutions to be more representative of the society they serve – as well as to comply with wider societal values around equality and diversity – are likely to grow.[235] Additionally, these demands have increased with the growing power of civil rights movements across democratic societies.[236]

Themes of social justice and fairness have been reflected in various UK and US Armed Forces policies on diversity and inclusion. In the UK, justice and fairness were heavily

231 Dandeker and Segal (1996).

232 Dandeker and Segal (1996).

233 Bosman (2008), Ishaq and Hussain (2014), Resteigne and Manigart (2021).

234 Bosman et al. (2007), Leuprecht (2009), Woodward and Duncanson (2016).

235 Leuprecht (2009), Ishaq and Hussain (2014).

236 Heinecken & Soeters (2018).

drawn on in the Strategic Defence Review of 1998.[237] The UK MOD's recent Diversity and Inclusion Strategy also recognised the continued importance of the 'moral case for action [on diversity and inclusion]'.[238] In the United States, DoD statements regarding the above-mentioned actions to improve diversity and inclusion in the US military similarly recognised that 'diversity and inclusion in the Department are moral imperatives – to ensure every member of the Total Force is treated with dignity and respect'.[239]

Legislation

In many national and international contexts, the increasing emphasis on diversity and inclusion has been embedded in binding commitments placed on states and organisations in the form of legislation. In the case of the UK, national legislation introduced in the early 2000s (such as the Race Relations Act 2000, the Equality Act 2006, and the Equality Act 2010), as well as legislation introduced by the European Union, have played a significant part in advancing the diversification of the UK Armed Forces.[240] International institutional frameworks, such as those of the North Atlantic Treaty Organisation (NATO), may also place duties and responsibilities upon its members in relation to eliminating discrimination and promoting equality and diversity.[241]

In the US context, legislation has also driven the integration of some under-represented groups, such as women, in the Armed Forces. For example, the 1948 Women's Armed Services Integration Act granted women the right to serve, though a 2 per cent ceiling was mandated on the proportion of women in the single services (excluding in nursing).[242] Various other legislation has followed, either expanding or limiting requirements for military service based on demographic characteristics, with recent legislative efforts following the latter trajectory.[243]

The diversity 'business case'

Further to drivers relating to issues of fairness and citizenship that are often embedded in legislation, efforts to enhance recruitment from previously excluded or under-represented groups have also reflected the military diversity 'business case'.[244] The diversity 'business case' reflects the notion that diversity is fostered within an organisation because diverse personnel present practical and tangible advantages. Historically, initial steps to remove entry restrictions for personnel from historically excluded groups followed operational needs to expand the military's recruitment pool. In the case of the UK, women's roles in the military were, for example, expanded during World War II as the UK addressed a shortage of qualified men to carry out combat and non-combat functions.[245] In the US, military mobilisation for the Korean War in 1950 similarly drove efforts to end racial segregation, given the

237 Dandeker and Mason (2001).
238 UK MOD (2018a, 5).
239 US DoD (2020e).
240 Leuprecht (2009), Dandeker and Mason (2001), Ishaq and Hussain (2014).
241 Mason and Dandeker (2009), Ishaq and Hussain (2014).
242 Moskos (2007).
243 Kamarck (2019).
244 Dandeker and Mason (2001).
245 Segal (1995).

need to mobilise personnel from ethnic minority backgrounds who had previously been prohibited from enlisting.[246]

Recent personnel strategies have also increasingly recognised the military diversity 'business case'. For example, the UK MOD's Diversity and Inclusion Strategy ties diversity directly to improving military effectiveness in various aspects, as outlined in Box 5. The US DoD's recent report on diversity and inclusion similarly recognised improving diversity and inclusion 'as strategic imperatives – to ensure that the military across all grades reflects and is inclusive of the American people it has sworn to protect and defend'.[247]

Box 5 The benefits of increased diversity according to the UK MOD's Diversity and Inclusion Strategy

According to the 2018 Diversity and Inclusion Strategy, increased diversity in the UK Armed Forces can contribute to:

- Improving decision-making by harnessing the diversity of thoughts, skills and innovation that arises from employing a more diverse workforce, as well as from enabling employees to meet their full potential.
- Creating a more engaged and motivated workforce, which should increase retention, well-being and performance.
- Enabling access to wider recruitment pools, thus facilitating the recruitment of talented individuals from across the whole of society.
- Generating greater levels of cultural awareness and sensitivity among the workforce, which should ensure the Armed Forces remain engaged with British society, as well as enhance effectiveness of units in overseas operations.
- Improving the reputation of the Armed Forces, both on a national and international level.[248]

246 Segal & Segal (2004).

247 US DoD (2020d).

248 UK MOD (2018a).

B.4. Today, various barriers and challenges remain for the military's ability to foster and leverage diversity in its workforce

Historically, the UK and US Armed Forces have faced various challenges in efforts to recruit from diverse groups as well as retain diversity within the military workforce.[249] While the in-depth exploration of these challenges is beyond the scope of this study, three key cross-cutting barriers are briefly described in the remainder of this section. It should be noted that there may be additional challenges for recruitment and retention of specific under-represented groups (e.g. women may face different barriers in comparison to ethnic minority personnel), and challenges may also vary across different organisational contexts, such as the single services.

Discrimination, bullying and harassment (DBH)

Existing data indicates that personnel from minority groups such as women, ethnic minority and sexual minority personnel are disproportionately affected by DBH in the Armed Forces. Though limits to the accuracy of DBH reporting exist (e.g. in light of reported dissatisfaction with the complaints system both in the UK and US), women and ethnic minority personnel have been found to be over-represented as DBH victims in the UK complaints system.[250] The same trend is observable in the US context, with women over-represented in estimated sexual assault and sexual harassment rates and between 21 per cent and 31 per cent of ethnic minority (comprising African American, Hispanic and Asian American) personnel[251] reporting racial discrimination or harassment.[252]

Continued concerns over DBH pose barriers to diversity and inclusion efforts, not only by demonstrating the challenges that personnel from under-represented groups may experience during service, but also by potentially discouraging new recruits from joining the Armed Forces and reducing retention rates.[253] For external audiences, reports of discrimination and harassment may highlight a potential mismatch between pledges made by the Armed Forces to diversity, and implementation of relevant policy or other organisational adjustments. Though the Armed Forces have recognised the need for top-down as well as bottom-up initiatives to address these factors, organisational change has been, to date, slow to materialise.[254]

Concerns related to DBH in the Armed Forces have also been linked to organisational culture and the need for long-term cultural change in the military to foster diversity, inclusion and belonging.[255] Recent parliamentary inquiries into the treatment of women in the UK Armed Forces for example highlighted that in many respects, the Armed Forces are 'still [considered to be] a man's world' due to the

249 Greene (2016), Greenwood (2016).

250 UK MOD (2020d).

251 Specifically, the data shows 31.2% of African American personnel, 23.3% of Asian American personnel and 21% of Hispanic personnel reporting racial discrimination, harassment or both.

252 Breslin et al. (2019), Stewart (2021).

253 Von Zugbach and Ishaq (2000), Mason and Dandeker (2009), Hussain and Ishaq (2016), Basham (2008), Segal et al. (2016).

254 Dandeker and Segal (1996), Von Zugbach and Ishaq (2000), Dandeker and Mason (2001), Hussain and Ishaq (2016).

255 See e.g. Meredith et al. (2017).

nature of military culture and the associated structures, processes and behaviours.[256]

Lack of representation

Existing research, including from the RAND Corporation, has shown that diverse groups that have been previously excluded or under-represented may face difficulties in identifying career opportunities or visualising career growth in the Armed Forces due to a lack of representation.[257] This includes, for example, an absence of role models in leadership positions that potential new recruits can look up to, which may exacerbate existing concerns over the lack of career progression opportunities among minority personnel.[258]

Career progression opportunities outside of the Armed Forces can, for some minority groups, also be clearer and more attractive. In the UK, for example, minorities of Pakistani Muslim descent have historically tended to prioritise further and higher education over enlistment. In part, this reluctance to enlist among specific minority groups may be linked to perceptions of the Armed Forces as non-representative and lacking connection to said groups, as well as historical baggage (e.g. the perceived legitimacy of the interventions in Afghanistan and Iraq).[259] The previously cited UK parliamentary inquiry into women in the UK Armed Forces also indicated that women frequently perceive a lack of progression opportunities, in part linked to impressions that diversity and inclusion commitments are 'rarely taken seriously in decisions over progression and promotion'.[260]

Similar findings have been made in the US context, with a lack of representation of under-represented groups such as ethnic minorities and women in senior ranks cited as a major concern for diversity and inclusion efforts.[261] This is due to the recognition of representation, particularly in higher ranks, as 'one of the critical indicators of success for [military] diversity initiatives to attract, recruit, develop, and retain a diverse workforce'.[262]

Linking of military effectiveness to social cohesion

Despite efforts to enhance recruitment from diverse groups and strengthen inclusion and belonging, existing literature suggests that concerns over the impacts of diversity on military effectiveness may still be present among the Armed Forces.[263] This is notably due to concerns over the potentially disruptive effects of increased workforce diversity on issues such as combat efficiency and military readiness. Women's psychology and physiology (including upper body strength and reproductive system) have been historically stated as reasons for limiting women's roles in the military due to the detrimental effect on combat effectiveness, in addition to concerns over the impact of women's integration on unit cohesion.[264] Similarly, the inclusion of lesbian,

256 House of Commons Defence Committee (2021, 18).

257 Richardson et al. (2014).

258 Greene (2016), Hussain and Ishaq (2016), RAND Europe interview, 13 April 2021.

259 Hussain and Ishaq (2016).

260 House of Commons Defence Committee (2021).

261 Lim et al. (2014).

262 Lim et al. (2014, 1).

263 Basham (2008), Belkin et al. (2012), Szayna et al. (2016), Davis et al. (2021).

264 See e.g. Miller (1997), Szayna et al. (2016).

gay and bisexual troops serving openly in the Armed Forces (e.g. through the repeal of 'Don't Ask, Don't Tell') has been critiqued due to the potential negative impacts on recruitment and retention, as well as unit cohesion and morale.[265]

Problematisation of diversity from a military readiness perspective may be grounded in the perceived link of military effectiveness to cohesion among Armed Forces personnel. While research such as the previously referenced study on the implications of Don't Ask Don't Tell repeal have shown a positive effect of increased diversity on military readiness, cohesion is frequently understood in terms of 'social cohesion', i.e. cohesion of a group based on social factors. This contrasts with related concepts such as 'task cohesion' – i.e. a 'shared commitment among members to achieving a goal that requires the collective efforts of the group' – which has been shown to have a stronger positive relationship with military readiness.[266] RAND research has also posited that the degree to which excluded groups are perceived as competent and accepted within newly integrated teams is an important mediator for the relationship between diversity and unit cohesion. For example, in research on the integration of women in US Special Forces, researchers found that 'integrating women into [Special Operations Forces] has the potential to reduce unit cohesion if female special operators are not perceived as competent and are not accepted as full members of their teams'.[267]

265 Belkin et al. (2012).

266 Basham (2008, 732).

267 Szayna et al. (2016, xi).