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**Citation:** Carter, A. and Tobias Mortlock, J. M. (2019). Mindfulness in the military: Improving mental fitness in the UK Armed Forces using next generation team mindfulness training. Brighton, UK: Institute of Employment Studies.

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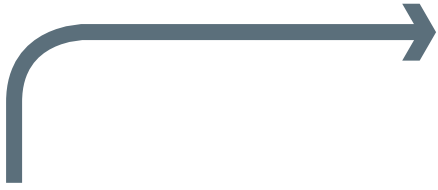
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# Mindfulness in the military:

improving mental fitness in the UK Armed Forces  
using next generation team mindfulness training

Alison Carter, Jutta Tobias Mortlock





## Acknowledgements

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The authors are indebted to all the military personnel and civilian staff across UK Defence who helped us at every stage of the research upon which this practitioner report is based. Particular thanks are due to the leaders and personnel at the sites who contributed to the study: Naval Command HQ and Innovation Cell; Royal Military Academy Sandhurst Slim's Company; Britannia Royal Naval College Dartmouth Phase 1 Officer Training; Royal School of Signals; Flag Officer Sea Training on HMS Duncan.

Particular thanks go to all the researchers, associates and support colleagues at IES and Cranfield who helped us over the three years of our study: Amanda Callen; Dr Kate Spiegelhalter; Prof Stephen Bevan; Dr Sally Wilson; Megan Edwards; Dr Dina Gray; Mark Davies; Ross McIntosh; Chris Tamdjidi; Mary Wayne Bush; Liz Hall; Dr Stella Capuano; James Cockett; Karen Patient; Mark Jack; Matilda Sjoberg; Steve O'Rourke; and Prof Emma Parry. We also thank the late Dr Penny Tamkin, a much loved friend and IES colleague who helped us set-up and scope the study.

Finally, we thank Carol Cooper Chapman, our Technical Partner from Defence Science and Technology Laboratory who provided us with numerous helpful insights, morale boosts when needed, and help with securing our access to the relevant people and permissions.



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# Executive summary

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This practitioner report is aimed at military and civilian Defence readers; it is aimed at multiple readers – individuals, senior leaders, and commissioners – and no special prior knowledge about mindfulness or research is expected. It is based on research undertaken by the Institute for Employment Studies (IES) and Cranfield University in partnership with the Defence Science and Technology Laboratory (Dstl). It uses material collected while introducing and evaluating through next generation Team Mindfulness Training (TMT) in the UK Armed Forces. The technical approach and research findings have been previously reported for a technical readership. The purpose of this document is to ensure that the findings and lessons learnt through the research are accessible to a wider non-technical readership. Please note therefore that the report is deliberately written in an informal, personal style.

The research team acknowledge significant help received from: Navy Command Headquarters (NCHQ) and Innovation Cell; Royal Military Academy (RMA) Sandhurst Slim's Company; Britannia Royal Naval College (BRNC) Dartmouth Phase 1 Officer Training; Royal School of Signals; and Flag Officer Sea Training on Her Majesty's Ship (HMS) Duncan.

## 1.1 Background to the research

As part of the Defence Science and Technology Laboratory's (Dstl) Strategic Edge Through People 2040 project, a research team from the Institute for Employment Studies (IES) and Cranfield was commissioned to investigate if, and how, mindfulness could be leveraged for strategic benefits. The team examined and compared different types of mindfulness-based mental fitness training to determine effectiveness in generating improved resilience, cognitive capacity and team work.

This investigation came about because the Defence sector has recognised that the world of work, workers, and warfare will have undergone a transformative change by 2040. The rate of change is likely to increase before then, and individuals and teams working in Defence will need to be resilient, agile, have a learning orientation and be 'change-ready' on a continuous basis.

## 1.2 Summary of research

Phase 1 of the project was a literature review and stakeholder interviews, aimed at understanding links between mindfulness and strategic change-readiness. The Phase 1 report of exploratory research recommended that mindfulness should be applied simultaneously at different levels and in different ways to generate mental fitness and change-readiness. Mindfulness training should focus not only on generating individual mindfulness meditation skills but also on developing mindful teams, making possible individual and collective readiness for change.

In Phase 2, the research team designed a new programme combining individual-level mindfulness with collective mindfulness principles. This multi-level mindfulness programme consisted of individual-focused mindfulness meditation skills as well as team-level skills development derived from the hallmarks of collective mindfulness, such as effective communication and interpersonal conflict resolution in anticipation of and in response to stressful challenges to a team. We called this programme 'Team Mindfulness Training' (TMT) and tested this new mental fitness programme type with 23 Potential Officer Cadets at

the Royal Military Academy Sandhurst (RMAS) to largely positive feedback. We conducted a second research pilot with 105 Officer Cadets in Phase 1 training at Britannia Royal Naval College (BRNC) Dartmouth. The new multi-level TMT programme was compared to a more traditional mindfulness programme of Individual Mindfulness Meditation (IMM) based on the well-established Mindfulness-Based Stress Reduction (MBSR) curriculum.

Full results from the Phase 2 research can be found in the Technical Report and supporting Annex. Our analysis of the BRNC pilot in the technical report showed that both types of mindfulness training increased individual resilience, and the new TMT programme significantly improved perceptions of mindful team work, especially in the longer-term. Participants interviewed revealed a contrast in perceptions. IMM training participants reported only basic wellbeing improvements, and none recommended this for Armed Forces training. The overwhelming majority of TMT training participants described individual and collective benefits relating to managing stressful challenges effectively. Most interviewees in this group recommended this type of mental fitness training for future training cohorts.

The findings in the technical report suggest that the intended culture change towards a 'mindful team or unit' may be feasible through a multi-level TMT mental fitness programme, but not through more conventional individual mindfulness-based training programmes.

### **1.3 Purpose of this practitioner report**

Following publication of our technical report, exploitation discussions with military stakeholders and the SETP2040 Programme Board determined that the implications for practice were considerable. The research team were therefore asked to conduct a series of presentations and offer advice about mindfulness in the military in a range of defence and government forums, including presenting to the Mindfulness All-Party Parliamentary Group hearing on Defence, Policing and Emergency Services. To inform wider dissemination the aim of a report for practitioners is to summarise the key messages arising for practice within military settings and ensure that the findings and lessons learnt through the research are accessible to a wider non-technical readership.

Please note that this report is deliberately written in an informal, personal style with minimal referencing. All statements made are fully evidenced and referenced in previous technical reports. Readers requiring technical details and references are urged instead to read the Phase 2 technical report, annex and/or summaries dated September 2018.

### **1.4 Key messages in this report**

Individual mindfulness meditation is only one of several means to enhance mindfulness throughout the Armed Forces. Due to its self-help connotations, meditation by itself may be perceived as less universally appealing in the military, where dedication, service, and self-sacrifice are important values.

Therefore, we recommend that the military should consider mindfulness as a 'team activity', training teams to systematically anticipate and respond unitedly to stressful situations by learning to be 'mindful as a team'. This means fostering a team culture in which every team member is encouraged to consistently notice the needs and reactions of others especially in the face of stress, and creating collaborative solutions to all aspects of demanding challenges, intellectual as well as emotional. This helps teams to become collectively responsible for consistent performance under pressure, leave no individual alone in their battle with their own thoughts and feelings when stressed, and thus benefit from every team members' full capacity to face complex threats collectively.

In addition, we recommend that only formally trained psychotherapeutic counsellors should deliver individual-focused mindfulness meditation initiatives. Prolonged periods of quiet contemplation (eg. sitting in silence for 20 minutes or longer), common in 'traditional', individual-focused mindfulness meditation programmes such as Mindfulness Based Stress Reduction (MBSR) may unearth latent trauma in unexpected ways, and military populations could be particularly vulnerable in this regard.





## Introduction

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Major change often fails because of the people dimension. This is being addressed in UK Defence sector by the Strategic Edge Through People (SETP) 2040 Programme for the Ministry of Defence (MOD) and Defence Science and Technology Laboratory (Dstl). There is a need to prepare not just for a specific planned change but to create a culture in which the whole Defence system achieves strategic change readiness i.e. operates reliably and with resilience and adaptability in the face of increasingly frequent uncertain, stressful and unknowable situations. As one of the SETP2040 research studies, our research study explored whether mindfulness-based interventions (MBIs) may be leveraged for generating transformative change, specifically relating to people and the culture that drives their behaviour in the face of stressful challenges.

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*'I'm disappointed in your team work today. There's a way we should deal with each other, even when under pressure. We should try to engage with people, even when the chips are down. When we're under pressure, we focus on what we need, what we want – we think only of ourselves. But who are we fighting? Ginger! Who are we not fighting? Each other.'*

**Commander Debrief after training simulation, Royal Naval (RN) vessel**

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### 2.1 Why mindfulness is useful in defence

The Defence sector is looking ahead to 2040, recognising that the world will have changed a great deal by then, and that the rate of change in every aspect of life is likely to increase. Individuals, teams, units and all three Armed Forces services will need to be ready so that they can handle not just today's changes, but also the as-yet-unknown changes in future.

#### ATTRIBUTES OF CHANGE-READINESS

- Resilience
- Agility
- Orientation towards learning

To improve these attributes, service personnel will be required to increase and focus ever more on their mental fitness. The Armed Forces will need to blend the priority that they currently give physical fitness with mental fitness. But what is mental fitness? Just as physical exercise produces muscular, respiratory and cardiovascular body changes, mental exercises allow the mind to become 'fit' and better able to deal with complex challenges.

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*'It's like doing push-ups for the brain.'*

**Officer Cadet, Britannia Royal Naval College (BRNC) Dartmouth**

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*‘There is room for improvement in terms of decision-making in the context of uncertainty. Techniques about how your mind works would be beneficial. Lots of little differences would be good if they are all contributing to more informed decisions and more appropriate decisions. Just think of the Team Sky philosophy [in cycling] in pursuing all the little improvements you can get. Enough small percentage gains before long give you 10 per cent gains.’* Major, Army

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*‘After a career spent at 100mph, the opportunity to take charge of my mind dealing with the stressors and strains of daily life whilst increasing my performance was a real opportunity for me.’*  
Commander, Royal Navy

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## 2.2 What is mindfulness?

Mental fitness training, based on mindfulness principles, helps people process information better because it enables them to notice and process a broader range of relevant data: facts, attitudes, opinions, emotions, impulses and stories. This data may exist inside an individual or between individuals or teams. All of it shapes the decisions that individuals and teams make, consciously or unconsciously. Mindfulness-based training helps generate awareness of this data, and in turn improves context-relevant interpretation and decision-making. Mental fitness results from positive actions and habits created through specific mental exercises: it can be taught through the use of mindfulness techniques.

**Mindfulness is a state of being alert, awake and fully present. Those who become mindful are shown to be more:**

- Self- and situationally aware;
- Resilient and flexible under pressure.
- Able to focus on the task at hand.

In the military, there is a need to match the mindfulness type to specific desired outcomes. Mindfulness training is a growing industry. There are now many ‘flavours’ and techniques and many multimedia apps, although they all focus on meditation and breathing techniques to help individuals feel and perform better. Mindfulness has also received negative press recently and been critiqued as ‘pink and fluffy’, a ‘soft way’ to combat stress with too much sitting still, and being a form of psychotherapy. However, eminent neuroscientists have demonstrated that regular mindfulness practice produces actual changes to the neural pathways in the brain and that this is beneficial for human functioning. Just as physical fitness regimes improve muscle tone and endurance, neuroscience now demonstrates that mental fitness regimes improve brain tone and mental endurance.

## 2.3 Individual mindfulness for resilient, focused personnel

Mindfulness training is interesting to consider for many workplaces including the military because of its link with stress reduction and improved individual well-being. Clinical research studies suggest individuals can benefit from mindfulness meditation practice and therefore handle stress better, especially after highly challenging or traumatic events.

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*‘Mindfulness enables us to address retention of personnel plus better mental health and well-being plus better resilience plus moral discipline. All in one go. Plus enable more diverse teams to operate effectively.’* Flight Lieutenant, Royal Air Force

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*‘There are long periods of boredom followed by intense activity. As we become more technology focused we will need to allow time for the brain to come down from that kind of interface. A practical tool like this could help.’*

**Squadron Leader, Royal Air Force**

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However, recent research reviews of traditional, individual-focused mindfulness programmes in workplaces indicate that their statistical effectiveness may be overstated, presumably because of the general public’s great interest in mindfulness. There are few longer-term impact evaluations of workplace mindfulness meditation training (none exist in Defence), and the evidence from such examinations suggest little return on investment, probably because clinical and mental health settings are considerably different from workplace environments. The positive research results with clinical or mental health patients may not be all that applicable to most military personnel.

Much of the general knowledge on mindfulness is about individual wellbeing and stress reduction using predominately meditation-based methods. One of the most well-researched and popular training programmes is the MBSR programme for people with chronic physical or mental health problems. Another individual-focused mindfulness training programme, designed for a military context, was the American Mindfulness-based Mind Fitness training (MMFT) programme (no longer in operation).

The UK Armed Forces have introduced several mindfulness-based programmes. The Army’s School of Infantry developed a Mental Resilience Training programme that includes mindfulness, Acceptance and Commitment Therapy (ACT) and positive psychology ideas for new Army recruits, the Royal Navy have run a small study into how mindfulness can help a ship’s crew become operationally ready and Defence Science and Technology Laboratory is conducting an evaluation study of Mental Resilience Training. There are undoubtedly more initiatives being developed across the Armed Forces.

Each of these programmes and studies has emphasised individual well-being and increasing personal resilience. As further interventions are developed within the Armed Forces, it becomes imperative to understand the positives and negatives of these types of mental training.

## **2.4 Collective mindfulness for combat-ready, change-ready services**

A solid body of scientific evidence suggests that when teams and organisations prepare for and systematically respond to challenge and stress as a group, their collective mindfulness outcomes improve. They can spot each other’s ‘mindlessness’ whenever this risks reducing an individual’s or team’s wellbeing or performance.

Groups like this are called ‘High Reliability Organisations (HROs)’; and they typically operate in Volatile, Uncertain, Complex, Ambiguous (VUCA) environments such as nuclear power stations, submarines, aircraft carriers, air traffic control centres and hospital Intensive Care Units (ICUs).

High Reliability Organisations invest in cultivating collective mindfulness principles because they have ‘skin in the game’. This means that if and when someone makes a mistake, it could cost lives and the organisation’s reputation. Essentially, they are highly motivated to collectively reduce stress that impacts entire teams at work by planning for it continuously.

This is similar to the goal of the highly popular Mindfulness Based Stress Reduction (MBSR) programme except the focus of High Reliability Organisations is on

collective level stress-related outcomes, such as reliable team performance under uncertainty, not on individual stress management.

This is why we included collective mindfulness principles in the Team Mindfulness Training (TMT) we created. Defence Science Technology Laboratory (Dstl) then sponsored IES and Cranfield to research strategic change-readiness through comparing individual mindfulness practices with our team mindfulness training.

There are two main reasons why we proposed researching TMT.

1. Firstly, spotting others' need for mindfulness or more awareness in the moment is easier than spotting one's own need for mindfulness, particularly when we are getting stressed. Practicing mindfulness individually, i.e. on your own, requires self-awareness in the first place. This self-awareness often goes out of the window when we feel under pressure, as our data indicates (more on this below). Hence shifting the responsibility from the individual to the entire team to take on the task of being and staying present in any situation not only makes sense, but also promotes the culture change towards strategic change-readiness that is at the core of this research project.
2. Secondly, people's behaviour generally becomes more self-centred and less team-focused during times of uncertainty and pressure, when team work is needed most. A commitment to collective mindfulness in a team works against this human tendency, and enables teams to organise as HROs. Concretely, such a commitment is expressed in two important ways. First, teams committed to mindfully organising collectively plan for problems both intellectually and emotionally as a team, for example by understanding how different team members respond to stress. Second, such teams respond to stressful situations unitedly, and importantly do not shy away from openly addressing those aspects that risk derailing team members further, such as defensiveness or interpersonal aggression. Anticipating and proactively responding to stress helps team members feel more that they 'have each other's back', which can reduce the complexity involved in processing data in a VUCA situation, and enable teams to respond side by side to the challenge or threat at hand.

As a result, mindfulness as a team activity is very helpful in Defence.

## 2.5 Structure of this report

A summary of the specific research we conducted and our findings is presented in Section 3. Some issues to be considered in spreading mindfulness further in military settings are discussed in Section 4 and some enablers and barriers presented. Section 5 provides some suggested guidelines for practice based on the literature and our experience of introducing mindfulness into a military training environment as part of our research. Finally further sources of information and author information is provided in Section 6.



## Mindfulness for change-readiness study

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The research goal was to improve strategic change-readiness. From Phase 1 stakeholder interviews, it was clear that mindfulness could be most useful for improved individual wellbeing and performance, along with improvements to team processes. These improvements drive readiness for a world where change is constant, dynamic and often transformative. Part of the task was to help UK Defence personnel better understand how Mindfulness Based Interventions (MBIs) can leverage a mindful culture, and how mindfulness may benefit their teams' culture at multiple levels:

- Personal;
- Between individuals; and
- Across teams/units.

### 3.1 Mindfulness as a team activity

Like the military, HROs operate in extraordinarily challenging environments, where ruptures in resilience and performance pose unacceptable risks. In other words, when an HRO fails to meet its objectives, the consequences are dire and often involve fatalities. HROs apply collective mindfulness principles to team work in order to safeguard reliable performance.

**A mindful team** systematically anticipates and responds in unison to any unexpected challenge that may present itself to the team. This involves not only the intellectual task of routinely paying attention to the team's dynamic operating environment, taking no success for granted, and proactively preparing for failure and disaster; but it also means consistently noticing the needs and reactions of individuals within the team, especially before, during and after taxing situations. Mindfulness as a team activity maximises its payoff in terms of stress management and resilient performance. Collective mindfulness looks and feels like effective team work, however its focus is specifically on anticipating and managing unexpected challenges collectively.

- The hallmarks of **a mindful team** are:
- They routinely pay attention to any day-to-day changes on the ground;
- They proactively discuss problems, conflicts and mistakes;
- They are reluctant to simplify taxing situations, either at intellectual or emotional level;
- They are collectively responsible for performance and thus everyone is committed to helping everyone else in any way possible; and
- They defer to the real-time expert to make the final call in any given situation.

### 3.2 The research study

The research study had two phases. The first phase during 2015-16 consisted of:

- A literature review;
- Case studies exploring how mindfulness was being used in other sectors; and
- Interviews with UK Defence sector stakeholders to understand potential links between mindfulness and strategic change-readiness.

The literature review showed that mindfulness techniques, applied to both individuals and entire teams, are linked with organisations performing more reliably in volatile and uncertain environments.

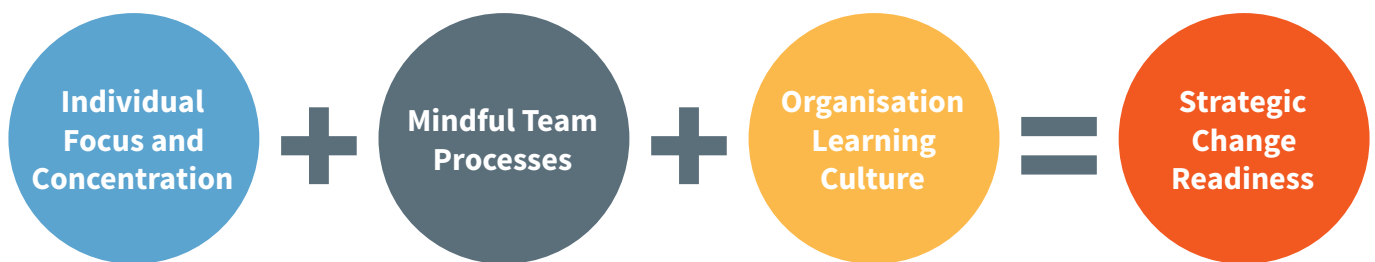
Although most mindfulness research and training concentrates on stress reduction, the literature also connected mindfulness with strategic change at multiple levels. The review highlighted that mindfulness as a change-readiness catalyst is maximised when used at different levels and in different ways. This generates high reliability and readiness for dynamic and transformative change. The research therefore, investigated applying mindfulness to individuals, and within/between teams to create a mindful organisation.

The second phase during 2016 – 18 consisted of:

- The design of a new TMT programme that combined mindfulness at individual and collective levels;
- An initial test of the new programme at the Royal Military Academy, Sandhurst (RMAS); and
- A formal trial of the programme at the BRNC, Dartmouth.

The TMT content focused, in sequence, on achieving higher individual-level focus and concentration, followed by mindful team processes and, subsequently, developing an organisational learning culture. The combination of these practices was intended to result in strategic change-readiness, as demonstrated in Figure 1.

**Figure 1: Programme design for multi-level TMT**



Source: IES/Cranfield University, 2016

The TMT programme included collective mindfulness exercises to help individuals understand why team members behaved in certain ways when stressed, and to realise that more stress means less focus on tasks in hand. During times of uncertainty and pressure, teams need certainty about 'having each other's back'. By collectively planning for problems both intellectually and emotionally as a team and by responding to all aspects of stressful situations unitedly, including defensiveness and aggression that may risk derailing the team from its task focus, a team can reduce the cognitive complexity involved in dealing with VUCA situations because the team work itself remains psychologically 'safe', independent of the threat the team is faced with.

The TMT programme specifically encouraged participants to:

- Pay attention to what is changing around them by checking these from day to day to counteract the collective assumption that things do not change;
- Discuss and tackle problems and conflicts before they become disasters;
- Value real-time expertise by looking for the expert of the moment in any given situation; this can shift and in different situations a different person could be relied on;

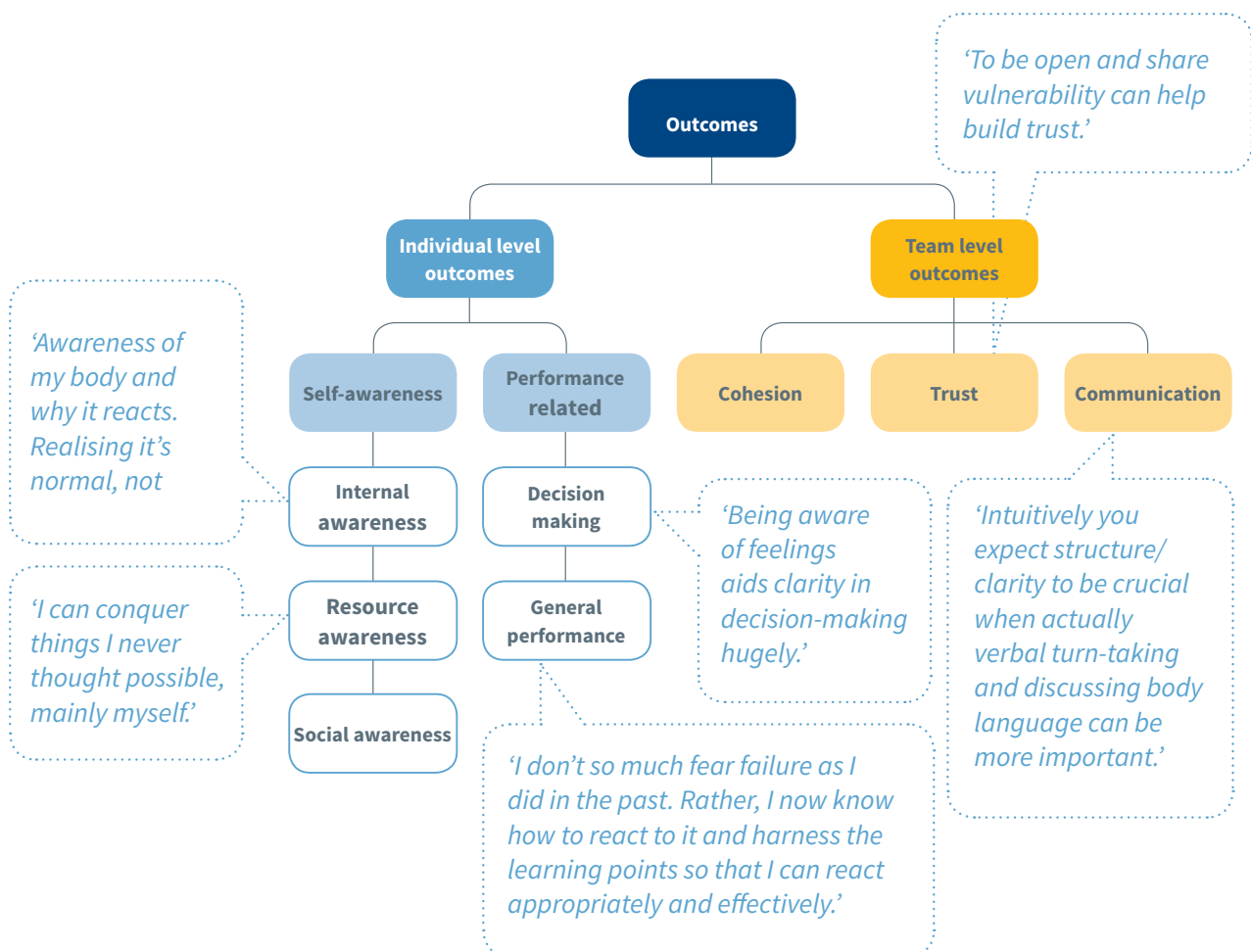
- Proactively watch out for each other so that others can step in if someone starts to struggle, to increase organisational resilience;
- Not rushing to simplify: appropriately question and refuse to rest on your laurels and not accept collective assumptions, in order to improve on current achievements; and
- Talk about how teams work together, their underlying beliefs and values which drive actions, and especially what drives actions under pressure during VUCA events.

The Team Mindfulness Training initial test was conducted at RMAS with 23 potential officers and produced largely positive feedback. Informal feedback by potential officers and training staff suggested that the programme was considered highly effective. In particular, it generated perceived individual and especially collective benefits for resilience, mental agility and learning orientation.

Figure 2 and Figure 3 show the themes that emerged from the qualitative feedback at RMAS. Figure 2 depicts perceived outcomes; Figure 3 shows course feedback from participants.

In Figure 2, the reported outcomes are split into individual and team-level outcomes. The quotations from a selection of programme participants are included to aid understanding.

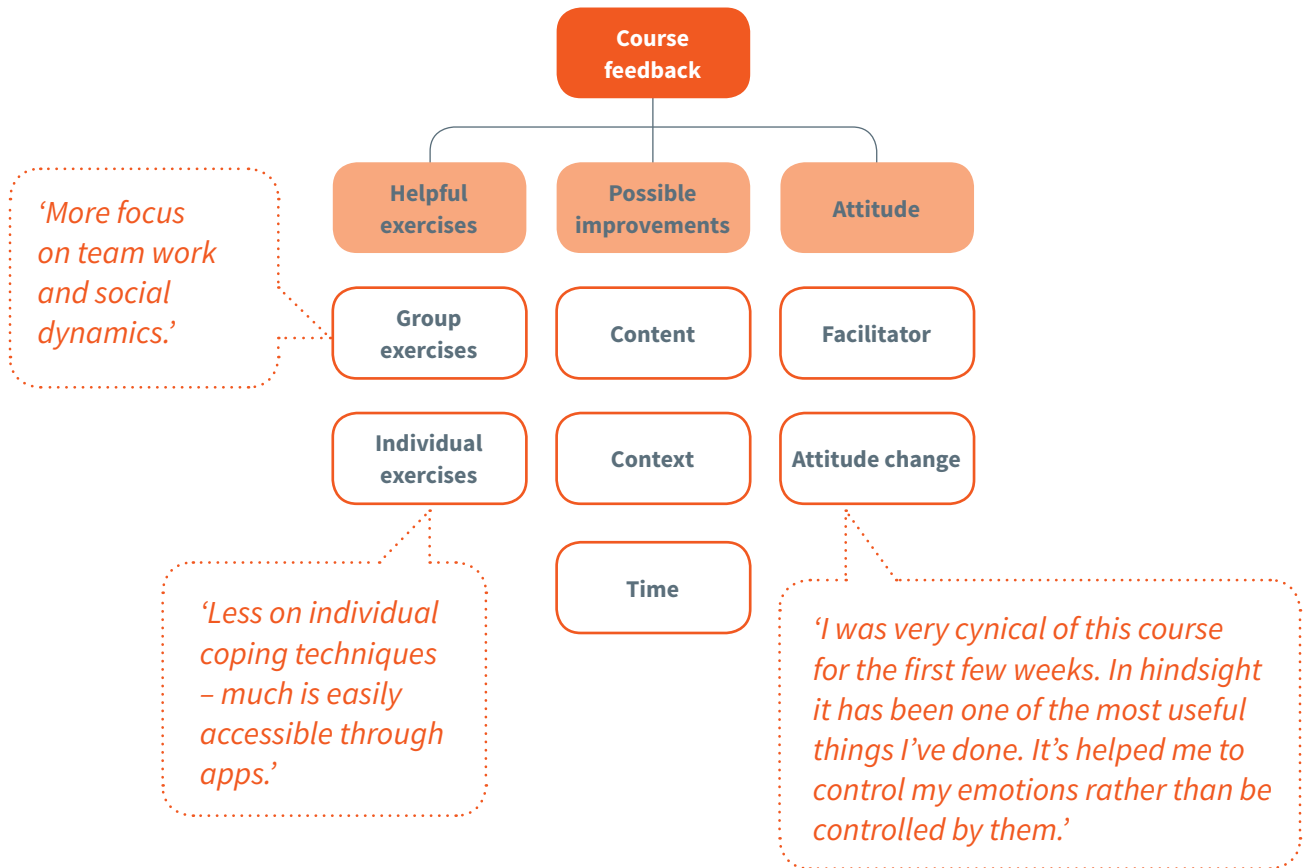
**Figure 2: Qualitative feedback on outcomes from participants on the ‘test’ TMT programme at RMA**



Source: Cranfield/IES, 2017

The potential officers made a number of specific comments about the newly designed course, bearing in mind that this was a pilot (initial test) to be adapted for the larger research trial that followed. Figure 3 shows this course feedback. Most strikingly, the newly-designed team elements seemed to be particularly innovative and interesting to participants, and effective too. Representative quotations are included.

**Figure 3: Course feedback on the ‘test’ TMT programme, from participants at RMAS**



Source: Cranfield/IES, 2017

Based on the RMAS feedback, the training programme and content were adapted, and a more formal trial was then conducted at the BRNC. This second trial compared the new training programme with a more traditional programme that focused on Individual Mindfulness Meditation (IMM).

At the BRNC, these two types of Mental Fitness programmes were delivered to 105 Officer Cadets during their Phase 1 training: The first, IMM, drew on standard MBSR meditation techniques to target individual-level outcomes. The second was the newly designed TMT mental fitness Programme.

The study used the same individual-level outcome variable to assess cognitive performance (working memory) as in a study of mindfulness training impact on US Marines, and a measure of resilience that is often used to scientifically assess individual-level resilience. Mindful team work was measured using a standard variable used in the science literature to assess the collective mindfulness characterising a high reliability team. A team-level behavioural observational measure, developed specifically for use in UK Defence, was used to assess team working processes and collaborative behaviours.

These assessments were taken three times; immediately before the start of the formal trial at the BRNC (Time 1); immediately after (Time 2); and two months subsequently (Time 3). In addition to this 19 of the participating Officer Cadets were interviewed.

### 3.3 Findings

#### 3.3.1 Statistical analyses

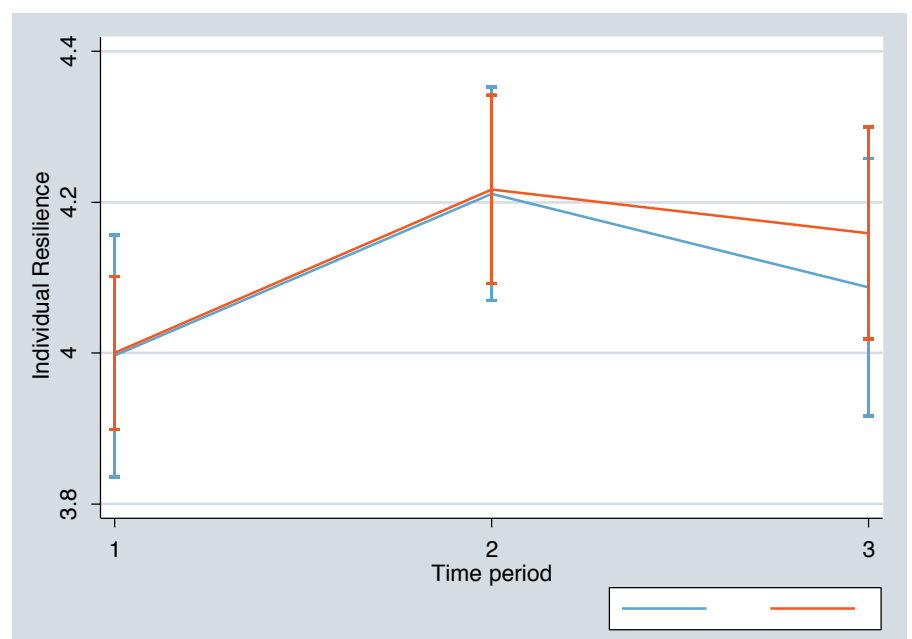
Full results can be found in the Technical Report and supporting Annex. In summary:

1. Both types of mental fitness training led to a statistically significant increase of resilience in individuals;
2. The new TMT mental fitness programme led to a statistically significant increase in perceptions of mindful team work, especially over the longer-term. This was not seen with the standard IMM programme;
3. None of the other individual or team measures generated any statistically significant differences between the two groups (although this is not unusual with the sample size involved).

Figure 4 and Figure 5 illustrate the results from the resilience and mindful team work self-assessments, respectively, as they were taken during the three assessment times.

Figure 4 shows that there was an average increase of 5.5 per cent in perceived resilience among participants in both groups immediately following the training. This was noteworthy because baseline resilience was higher than is usual in other settings, as might be expected for successful military recruits. The sample seemed to have highly resilient individuals when their training and this study started, so this increase would have probably been even higher among more generally representative training course participants.

**Figure 4: Perceived resilience of individuals before and after the BRNC trial**

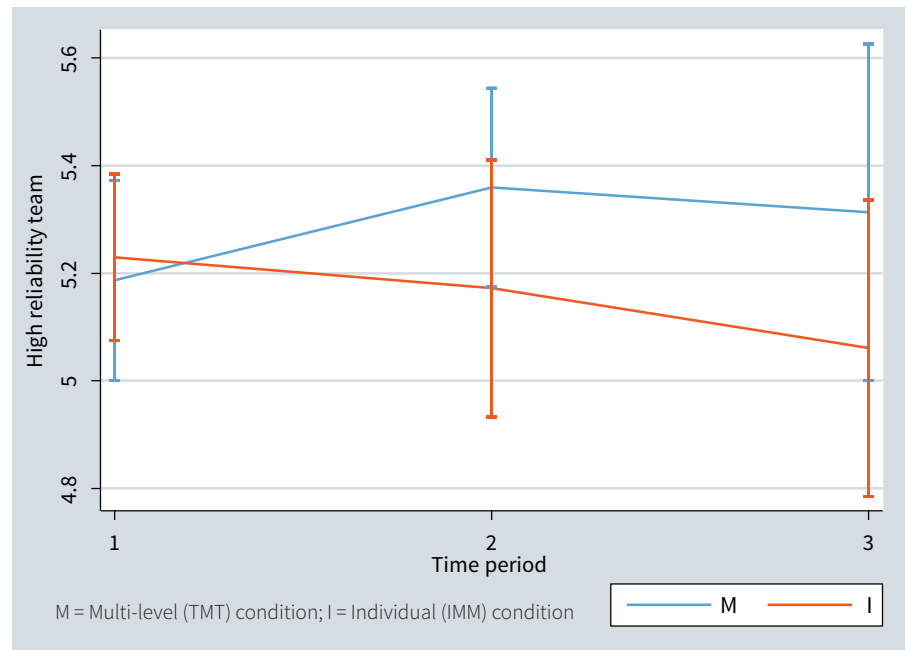


Source: IES/Cranfield, 2018



In Figure 5, the High Reliability team measure gauged how mindfully team members worked together collectively. As per the research team's expectations, only the designed TMT Mental Fitness programme achieved a statistically significant increase. This was different to the individual condition, as seen below:

**Figure 5: Perceived mindful team work before and after the BRNC trial**



Source: IES/Cranfield, 2018

It was difficult to spot statistically significant differences in team-relevant behavioural change between the two groups. One reason was that operationally-relevant teams were not formed until halfway through the programme, and so the focus on promoting team mindfulness became important much later than had been trialled at RMAS and anticipated at BRNC. Informal feedback from the Captain, BRNC during the study debrief indicated that the training staff did not observe any significant performance differences between the teams who took part in the study. Unfortunately the study could not include a control group (participants doing no mental fitness training), so it is impossible to determine if participants did better (or worse) than a group receiving no such training would have done.

### 3.3.2 Perceptions of Participants Interviewed

- Qualitative feedback from interviews indicated that:
- Neither type of mindfulness-based training was perceived as harmful;
- The team-focused mental fitness programme was significantly more popular and well-received;
- Only those on the new team-focused TMT programme seemed able to apply mindfulness skills in stressful performance tests. They also seemed able to act mindfully as a team;
- In contrast, the individual-focused IMM programme was perceived to be like therapy: participants did not like this aspect. Participants advised against mandating the IMM programme for high achieving groups in Defence; none of the participants interviewed recommended it for future cohorts; and

- The team-focused programme was almost universally recommended to be mandated in Phase 1 Officer training with 13 out of 14 participants interviewed recommending it for future cohorts.

Figure 6 below illustrates contrasting perceptions on programme outcomes, using representative quotations from the BRNC participant interviews for a richer understanding.

**Figure 6: Feedback on outcomes from BRNC participants, by programme type**

### Individual-level condition

*‘The main benefit to me was getting more sleep by doing the breathing exercises. And this has been very good. Nothing has been harmful but I might have got more benefits if we had had time to practice more of the other techniques’*

### Multi-level condition

*‘The team building element was the main benefit out of all this... I would have liked even more of it. It means that as a division we were ready for what was thrown at us. We didn’t have lots of hassle, we could trust in each other, take a collective deep breath, and get on’*

*‘It did make us think more about how we communicated with each other. This effect was fairly short-term and we’ve drifted away from that since but it helped in the groups for ABLE’*

*‘Our group... had some issues and we used one of the techniques from the class to sit down and discuss in an open forum, giving constructive criticism.’*

*‘When we were on ABLE the group was lost, which resulted in us getting stressed about the situation. One member of the group identified that we were becoming argumentative and brash with each other, so we decided to collectively do some breathing exercises together. This resulted in us all being a lot more calm, so we could be more productive and begin to work out what to do’*

Source: IES/Cranfield, 2018

*‘The main benefit to me was getting more sleep by doing the breathing exercises. And this has been very good.’* **Officer Cadet, BRNC Dartmouth (IMM programme)**

*‘The main benefit of the training was learning to be calm in stressful situations, using the breathing techniques – the nature of our job is we have to remain calm and can’t get stressed.’* **Officer Cadet, BRNC Dartmouth (TMT programme)**

The qualitative evidence strongly suggested that the mental fitness training was perceived to have a number of personal benefits, which were considered particularly valuable for those within the Armed Forces. The ability to switch off was identified by all as extremely important during the intensive and demanding Phase 1 training period and people from both training programme mentioned help with getting to sleep as a personal benefit. People felt significantly more resilient after both training programmes. The new team-focused programme was just as good as the individual-focused programme in terms of individual well-being.

It was striking, and in line with expectations, that TMT participants were more likely to identify a range of benefits, including:

- Remaining calm and focused when stressed; and
- Working effectively when facing challenges.

The TMT programme feedback indicated that mindfulness-based techniques improved interpersonal awareness, team relationship quality and were thought effective in helping wellbeing and performance. Comments also showed that individuals only identified in engaging in basic mindfulness practice during times of stress if they had attended the TMT programme.

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*‘The team building element was the main benefit out of all this...I would have liked even more of it. It means that as a division we were ready for what was thrown at us. We didn’t have lots of hassle, we could trust in each other, take a collective deep breath, and get on.’*

**Officer Cadet, BRNC Dartmouth (TMT programme)**

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*‘Our group... had some issues and we used one of the techniques from the class to sit down and discuss in an open forum, giving constructive criticism.’*

**Officer Cadet, BRNC Dartmouth (TMT programme)**

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*‘Time is a commodity during this time [Phase 1 training] and even 15 minutes is viewed as highly precious. Consequently, nobody had time to practise mindfulness.’*

**Officer Cadet, BRNC Dartmouth (IMM programme)**

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Only Team Mindfulness Training programme recipients were able to identify any collective benefits, which included:

- Improved team communication
- Improved team-working skills
- Dealing with conflict constructively

Only TMT programme participants identified several occasions during challenging team situations when one team member would suggest applying any (individual or team-focused) mindfulness techniques learned in training. The rest of the team would follow their instruction and the team functioned more effectively afterwards:

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*‘When we were on ABLE [Assessed Basic Leadership Exercise] the group was lost, which resulted in us getting stressed about the situation. One member of the group identified that we were becoming argumentative and brash with each other, so we decided to collectively do some breathing exercises together. This resulted in us all being a lot more calm, so we could be more productive and begin to work out what to do.’*

**Officer Cadet, BRNC Dartmouth (TMT programme)**

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This feedback suggests that the intended culture change towards mindful team or unit organisation may be feasible through a TMT mental fitness programme, but not through IMM programmes. This is pertinently shown in the comment below from an IMM training participant, indicating that shared perceptions of what is valued or not valuable tend to be key drivers for action in high-pressure contexts such as officer cadet training.

The main complaint from TMT participants was that training was scheduled for weekends, their narrow window of free time. The comment below from a TMT participant highlights this as a drawback:

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*‘The only disadvantage is a result of the timing of the training, it being at weekends for two hours may have resulted in some people becoming even more stressed as a result of the training.’*

**Officer Cadet, BRNC Dartmouth (TMT programme)**

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### 3.4 Benefits

Figure 7 summarises the different perceptions of participants in both programme types.

**Figure 7: Opinions of BRNC participants, by programme type**

Programme	Resilience	Mindful team work	Would recommend	Would mandate
Individual focus – IMM	✓	✗	✗	✗
Team focus –TMT	✓	✓	✓	✓

Source: IES/Cranfield, 2018

From both interviews and surveys of participants a number of benefits became apparent:

- People felt significantly more resilient immediately after both training programmes (and this was statistically significant); so the new team-focused mental fitness programme was just as good as the individual-focused programme in terms of individual wellbeing.
- An ability to engage in mindful team work only increased for those on the newly-designed TMT programme; and since mindful team work enables change-readiness, this may provide a strategic edge over opponents for UK Defence.

We realised that culture change towards organising mindfully may be feasible through the new TMT programme, but not through ‘traditional’ individually-focused mindfulness courses.

The key message from this research is that mindfulness in the military should be a team activity. Embarking on individual mindfulness meditation programmes could be useful, but may not be the most effective way to maximise the benefits mindfulness may bring to the military. It may not generate sustainable and strategic benefits in the Armed Forces.

The forces operate in an increasingly volatile, uncertain, complex and ambiguous (VUCA) world’, so they need to embrace new techniques and science-based interventions to change the way personnel think and operate. The 2040 environment is going to be significantly different from today, and the rate of change is unlikely to slow. Therefore, it is imperative that the forces become more resilient, more agile, and more emotionally aware, in the way they operate.

The study demonstrated that by employing mindfulness at multiple levels in a team environment there is an opportunity to improve skills and understanding in each of these areas.

# 4

## The exploitation challenge

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In this report we have argued that team mindfulness-based mental fitness training programmes are an innovation: they are ‘next generation’ in mindfulness terms. Teams in organisations which ‘organise mindfully’ perform more reliably in uncertain environments, such as the military: this provides an opportunity to gain a strategic edge over opponents. The opportunity exists for increased collective resilience, adaptability and situational awareness to be applied to a broad range of contexts.

How to exploit or spread new ideas and innovative practices is a challenge in any sector. Next generation mindfulness needs the chance to grow. As an innovation, mindfulness may not have the same status and established implementation pathways or funding streams to support scalability as a technological innovation does. So where next is a key question for the sector which has supported and nurtured the early development of the innovation.

### 4.1 Exploiting next generation team mindfulness training

The success of an innovative approach is likely to depend heavily on its context: the underlying systems, culture and circumstances of the environment in which it is implemented. This means that making team mindfulness training (TMT) work in other military settings (outside Phase 1 Officer Training) is not a straightforward matter.

Successful implementation may require adaptations to the training content and highlights the important role new adopters play in translating new training content and format to new settings. This poses a challenge for traditional approaches to spreading innovation, which tend to assume that once an innovator has developed an idea and successfully piloted it, it can then be ‘diffused’ and taken up by others in a straightforward way. By contrast, we argue that reproducing a context-sensitive intervention at scale is a much more distributed effort with support for adopters needed. Ideally it will require mechanisms such as peer networks to capture and share the learning that early adopters generate as they tackle implementation challenges. Above all, support for early adopters requires building their capability for implementation and providing them with the resources, time and space needed to do the hard work of landing the original successful idea to their own setting.

### 4.2 Barriers, issues and enablers

The barriers and enablers to successful exploitation of next generation mindfulness were discussed with a wide range of military and civilian stakeholders during conferences, workshops and other events over the three-year life of the research project. A summary of all we heard, together with our interpretation of the central issues, is presented in Figure 8 below.

**Figure 8: Barriers, Issues and Enablers to the spread of next generation mindfulness**

<b>BARRIERS</b>	<b>ISSUES</b>	<b>ENABLERS</b>
<p><b>Challenges to the status quo</b></p> <p>Some leaders fear that a culture which values expertise as well as hierarchy will challenge their authority.</p> <p>Some personnel like remaining on autopilot.</p>	<p><b>Share understanding</b></p> <p>Incorporate evidence into success stories of collective mindfulness to be spread among military stakeholders to increase understanding.</p>	<p><b>Evidence and stories</b></p> <p>Tracking and measuring outcomes. Availability of real life stories of success and best practice.</p>
<p><b>Not given the chance to grow</b></p> <p>As a psychology based innovation, mindfulness has not got the same status and established implementation pathway as other types of innovation may – for example technology innovations.</p>	<p><b>Build ‘big picture’ evidence</b></p> <p>Continue to disseminate benefits found. Generate more evidence of collective performance outcomes with continued support and funding. Provide a simple business case and template.</p>	<p><b>Bottom line</b></p> <p>Improved performance.</p> <p>Reduced emotional burden on personnel.</p> <p>Reduced cost from medical and psychological difficulties.</p>
<p><b>Short term-ism</b></p> <p>Inertia, fear of doing things differently. Seeing mental fitness as an extra, rather than as essential. Not perceived as a priority.</p>	<p><b>Leverage the case for change</b></p> <p>Exploit the opportunity for increased collective resilience, adaptability and situational awareness to a broad range of contexts.</p> <p>Continue to promote in a variety of setting to raise general awareness.</p>	<p><b>Contextualising</b></p> <p>Translating the case for mindfulness-based mental fitness into a range of forms and channels to encourage adoption in operational environments.</p>
<p><b>Limited resources</b></p> <p>Lack of funding, time or availability of training in mental fitness, as budgets are allocated or cut.</p>	<p><b>Promote team training</b></p> <p>Provide clear expectations and communicate performance and change readiness benefits, and justify releasing resources for training and embedding. Build team mindfulness-based mental fitness into existing training and preparation schedules.</p>	<p><b>Training supply</b></p> <p>Increasing availability and scalability of accessible training for operational teams.</p>

Source: IES/Cranfield 2019

## Suggested guidelines

What does this all mean in practice? The literature and our research outcomes give rise to the following recommendations:

- **Culture eats strategy for breakfast.** A mindfulness strategy is a fine thing, but a supportive culture is needed for the concept to deliver. Culture drives behaviour much more than individual character. According to our research, team sub-culture impacted uptake: leadership and team culture can impact willingness to participate;
- **Context matters.** The operational context in which any mindfulness based intervention is run, matters! If mindfulness training is not scheduled during normal work hours, then motivation is reduced and the learning is unlikely to become embedded;
- **Timing matters.** If slowing down to reprioritise work load and integrate mindfulness practices is not possible, you may not want it yet. It is better to wait for a team to be ready. If the initial training is conducted when people are already busy, or when they are under a great deal of pressure, they may not have the mental capacity to engage fully;
- **Mind the profile of training participants.** Mindfulness-based training is different from standard training. The profile of someone likely to engage with the training material and use it daily is someone eager to improve where they have experienced a need, and eager to develop resilience after they have faced at least a couple of important challenges along their career. Personnel with little experience of setbacks or challenges engage less readily. Challenges need to be identified as ‘hooks’ for mindfulness-based training and to time that training accordingly;
- **Resourcing matters.** Save money and energy until such a change initiative is being integrated with organisational processes, culture and context. Mindfulness is not a wellbeing initiative unless it is resourced and rewarded properly. For example, when training teams to become more concerned about overall team performance rather than individual accomplishment, it is helpful to assess team performance and reward individuals for demonstrating collaborative behaviours during assessments, even if it means that they personally do not cross the line first. If a performance assessment culture remains solely focused on individual achievement, then individuals will not be encouraged to shift their attention to ensuring that their team as a whole is successful. This would defeat in investment in mindfulness as a tool to systematically improve wellbeing and resilient performance.
- **Beware mandating mindfulness meditation.** Experience and feedback from elsewhere suggests that mandating individual meditation-focussed mindfulness may be problematic in high-performance contexts such as Defence;
- **Meditation can unleash latent trauma.** Recent evidence suggests that rolling out individual-level meditation-focused mindfulness programme without professionally trained therapeutic staff support is not recommended, even in non-therapeutic situations as latent trauma may unexpectedly appear. Social engagement is more likely to be universally protective, as our experience with the team-focussed training programme suggests. In addition the Team Mindfulness Training avoids longer meditations and focuses on other less introspective methods to develop mindfulness. Professionally trained therapeutic staff should only be necessary for meditation/introspection-focused mindfulness training.

- **Contexts change constantly.** Anyone examining MBI effectiveness should be aware that organisational changes that occur while an MBI is designed and delivered are likely to impact any results. In organisational contexts where decisions are made routinely about changing or improving the way people work, this may make it difficult to draw conclusions.

As this report is aimed at multiple readers, individuals, senior leaders, and commissioners the following points may be useful:

## 5.1 For individuals thinking about doing a mindfulness course

If you are thinking about doing a mindfulness course yourself, consider this:

1. Embed techniques and practices into your daily routines. Do not just use them in times set aside for mindfulness practice;
2. Practise matters. Ensure you have the time and headspace to practise; and
3. Mindfulness is more effective as a team activity, so talk to others about their interest in mental training.

## 5.2 For team leaders whose personnel may be interested in mindfulness

If, as a team leader, you are thinking about how your team could become more mindful, consider this:

1. Facilitate training in both individual and team mindfulness, as you would individual physical fitness and team tactics. Consider mindfulness as a team activity;
2. Avoid mandating that all individuals attend mindfulness meditation courses. Unintended consequences could include: poor engagement because content may be perceived as ‘pink and fluffy’ possibly leading to decreased likelihood of accepting team-based inventions subsequently, and possibly unleashing latent trauma for some individuals;
3. Bring the hallmarks of a mindful team into your team’s daily routines. These include:
  - Changing the team culture to one where stress is treated as a collective challenge, not a problem that individuals should struggle with in private.  
*How to do this:* Carefully help your team learn and understand that every team member ultimately suffers if one team member cracks under pressure, and it is every team member’s responsibility to watch out for signs of anyone else starting to crack during a complex challenge, as well as keeping overall task accomplishment in focus.
  - Encouraging team members to systematically anticipate and adapt collectively when task conflict risks escalating into relationship conflict, i.e. when teams risk infighting under pressure rather staying focused on the task at hand.

*How to do this:* Create a routine or regular process that enables people to



notice and talk about how their behaviour and needs might change when they're under pressure, and help the team practice resolving small and successively more important conflicts constructively, to reduce the risk of such interpersonal conflicts undermining the team's chances of responding resiliently in the face of difficulty.

- Creating a team culture where anyone can at an appropriate time speak truth to power.

*How to do this:* Deliberately focus on noticing and discussing team interpersonal dynamics, with the goal of strengthening the relational foundation of the team performing its duties, specifically focused on building interpersonal trust and mutual respect, independent of rank, background or experience.

### 5.3 For commissioners/buyers of mindfulness training courses

If you are thinking about commissioning some mindfulness training on behalf of personnel, we suggest you consider this:

1. Mindfulness aims to improve people's wellbeing and resilience but mindfulness cannot improve wellbeing unless it is resourced and rewarded properly. This may mean introducing team based assessment in addition to individual based assessment. If a performance assessment culture is exclusively focused on individual achievement, then individuals who shift their attention to ensuring that their team as a whole is successful are likely over time to feel adversely impacted. This would defeat any investment in mindfulness as a tool to systematically improve wellbeing and resilient performance. Teams in organisations which 'organise mindfully' perform more reliably in dynamic and uncertain environments, such as those experienced by the military. This provides UK Defence with an opportunity to also gain a strategic edge over opponents: so make mindfulness a strategic initiative; and
2. Bear in mind that achieving mindful organising is not the sum of each person's individual mindfulness. It also requires culture change towards more mindful team work. It is unrealistic to put a couple of individuals on a mindfulness course and hope that the team will get better. Consider mindfulness as a team activity targeting both individual-level outcomes and team mindfulness.
3. Pay Attention to the Team Culture and Team Context
  - For mindfulness to land well, a supportive culture and leader are necessary; and
  - Practise matters. As with other newly-learned skills, for mindfulness skills to be useful, time for practise is needed, during training, and embedded afterwards into daily routines.
4. Beware Endorsing Meditation Mindlessly
  - Meditation is one of several methods to enhance mindfulness;
  - High-achieving military personnel may be less likely to engage with meditation alone, because of its self-help connotations; and
  - Deep meditation practice could unearth latent trauma in unexpected ways, for this reason only formally-trained psychotherapeutic counsellors should deliver meditation-based initiatives.
5. Timing Matters. Save time and money by prioritising teams and organisations that have:

- Energy for change, with everyone able to give their attention to learning the new skills and practices; and
- Leaders willing to embed mindfulness as part of a change initiative, integrated with organisational processes, culture and context.





## More information

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**Dr Alison Carter** is based at the UK's Institute for Employment Studies (IES) and has over 20 years' experience of research, evaluation and consultancy. She is an expert in Human Resources (HR), leadership and change and an experienced consultant in supporting early-adopter teams and organisations in introducing and embedding large scale changes to ways of working. Alison was a founding Director of the European Mentoring and Coaching Council (EMCC), Co-Chair of 2nd Harvard International Coaching Research Forum, and an Associate at university business schools in US and Australia as well as a niche international change consultancy. She recently collaborated with 11 major employers in a IES Network/The Henley Forum project to write a practical guide to developing change-ready, change-capable teams.

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**Jutta Tobias Mortlock, PhD**, is a social psychologist with over 20 years of work experience in organisational development and capacity-building in six countries on three continents. Formerly at Cranfield School of Management, she now serves on the faculty at City, University of London, and her research, teaching and public outreach work is focused on behaviour change initiatives in workplaces geared at generating sustainable wellbeing and performance. Jutta is a popular keynote speaker on the link between mindfulness, wellbeing and performance and her work has been published in a number of leading academic journals as well as in the popular press, including in The Sunday Times and The Financial Times.

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To read the full technical report, annex and/ or summaries please make a written request to DHCSTC by email: [dhcstc@baesystems.com](mailto:dhcstc@baesystems.com)

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