

MMO restarting coastal operations to further support the fishing industry through Covid-19.

In preparation for the easing of lockdown, MMO locally-based teams have been returning to their usual duties on shore and at sea, following rigorous training in 'Covid-19 secure' operational practices over the past three weeks.

Much of the English fishing fleet is now back in operation, and in response to this increased activity, MMO's presence and activity in ports, fish quays and markets in coastal areas, and inspections at sea, will provide further reassurance of a level playing field for the industry.

As the marine manager and independent regulator for the English seas, part of MMO's role is to support and assure the sustainable harvesting of fish and the protection of the marine environment through compliance with national and international regulations.

During lockdown, MMO continued its surveillance and intelligence activities to identify potential illegal, unreported or unrecorded fishing and took action where appropriate. Coastal teams also continued to provide support and advice to the industry, guiding fishers to the available practical, financial and welfare support. In addition, MMO, with Defra, (the government's Department for Environment, Food and Rural Affairs) secured and rapidly administered a £10m fund to provide financial assistance to fishers and other seafood businesses to help with their fixed costs.

Fishing industry representatives have welcomed the return of MMO's coastal teams onshore and at sea. Barrie Deas, CEO of the National Federation of Fishermen's Organisations said:

The MMO has provided very effective support for the fishing industry during lockdown, not least in the prompt distribution of financial support. As the coastal teams return to providing a physical presence in the ports, we have a shared goal of working together to deliver a sustainable and profitable future for the whole industry.

Phil Haslam, Operations Director, MMO, said:

As we support the fishing industry in its recovery, we will ensure that the vast majority who are fishing legally are not disadvantaged by anyone who is not complying with the regulations that are aimed at securing the sustainability of fishing for the future.

The safety of our colleagues, customers and stakeholders is our first priority. We are following Covid-19 secure procedures and, after testing and learning over recent weeks, we are confident we can deliver our support and assurance services on shore and on board our patrol boats, safely for ourselves and those we work with.

We have had a very positive response from the industry so far and we would like to thank vessel owners and crews, harbour and market officers who have welcomed our measured and safe return to a physically distanced presence in the industry.

Whilst MMO offices remain closed, all other services continue to be provided working remotely. For more information, visit our [website](#) or email us on info@marinemanagement.org.uk or call our helpline 0300 123 1032.

[New package of support for T Level industry placements](#)

A new package of support to help employers and FE providers deliver high-quality industry placements which are at the heart of pioneering new T Level qualifications have been announced today (Friday 3 July) by Gillian Keegan, Minister for Skills and Apprenticeships.

T Levels – high-quality technical alternatives equivalent to three A Levels – have been created in collaboration with industry experts so students gain the skills they need to succeed in the workplace and so businesses can access the workforce they need to thrive.

A unique part of a T Level will be the completion of a high-quality industry placement – of at least 315 hours, or approximately 45 days – where students will build the knowledge and skills and develop the confidence they need in a workplace environment.

Two new [reports](#) published today highlight that providers have found that the government's Capacity and Delivery Fund (CDF) has made a really positive impact, giving them the opportunity to recruit staff to start preparing for the delivery of T Level industry placements, establish the right infrastructure and procedures within their organisations and to build strong relationships with local employers. Employers also reported that they appreciated the flexibility of the different placement models published last year which made it easier for them to host learners on placements.

The package of support announced today will build on this, helping to make sure employers and FE providers can offer really high quality placements when they start delivering T Levels. It includes:

- New [guidance](#) setting out the key roles and responsibilities for providers and employers, and a new [guide](#) for students to help them prepare for their placement, with hands on support and advice so everyone can get the best experience possible.
- Additional delivery models for employers and providers including new models for the way industry placements can be delivered in the Construction and Engineering & Manufacturing routes, to reflect modern practices, and allowing Capacity and Delivery Fund placements to be delivered over two academic years, to bring them in line with T Levels, with a reduced delivery target of 25% for the 2020/21 academic year, to reflect the impact of the coronavirus on employers.
- In recognition of the impact of coronavirus on employers, the government will extend the Employer Support Fund pilot, launched in September 2019, to offer financial support to employers in selected regions where funding is a barrier to them hosting high-quality industry placements. The Employer Support Package, a suite of online guidance, case studies and workshops to help employers to host high-quality industry placements, will also continue: and
- The government will also procure an organisation with the appropriate expertise to support 2020, 2021 and 2022 providers to help them deliver high-quality placements in line with the delivery guidance.

Gillian Keegan, Minister for Apprenticeships and Skills said:

Industry placements will give young people invaluable first-hand experience of the workplace that they wouldn't be able to get elsewhere, that is what makes T Levels unique and why they are at the centre of our ambitious plans to transform technical education.

These placements will not only boost student's confidence and knowledge but will also provide employers with a pipeline of skilled workers for the future, something that will be more important than ever as we recover from coronavirus.

With this new package we are supporting businesses and providers so they are able to give students access to the best possible experiences and ensure all placements are high-quality from the start, so we can set up the next generation for success.

The first three T Levels in Design, Surveying and Planning for Construction, Digital Production, Design and Development and Education and Childcare will be taught from September 2020 with more rolled out gradually between 2021 and 2023. The new qualifications will play a key part in rebuilding the economy after the coronavirus outbreak, boosting access to high-quality technical education for thousands of young people so they can progress to the next level, whether that is getting a job, going on to further study or an apprenticeship.

The government is investing significantly in technical education and training including T Levels. Last year the Chancellor announced an additional £400 million boost for 16 to 19 education in 2020-21, including funding to support the first T Level providers to deliver high-quality courses. A further £133 million will also be invested to ensure students have access to industry standard equipment and high-quality facilities.

Bruce Boughton, People Development Manager, Lovell Partnerships said:

With the ongoing skills shortages in both the construction trades and professions, industry placements give us a chance to see and work with young people as a shortcut in the recruitment process. Having spent nearly three months working with us, they are already part of the team and understand the company and how we work.

Cian Short, Group Apprentice Manager, Bakkavor said:

T Levels have the potential to greatly improve technical education in the UK. With more focus being placed on 'on the job' experience through the industry placements, employers will be receiving students who are far better prepared, either to go straight into a role or to join a Higher or Degree Apprenticeship.

For more information on T Levels and industry placements, visit <https://www.tlevels.gov.uk/employers>

Market exploration: air platform energy management technologies

Background

This market exploration is intended to gather information in order that Team Tempest can understand the market capability to provide power and thermal

management technical capability for advanced air platforms. This is intended to inform the scope of a potential future competition or procurement activity. However, we cannot commit to a DASA competition or procurement at this stage and therefore we are not asking for costed proposals. This market exploration is unique to previous calls in that it also offers the option to engage with Team Tempest industry partners in addition to UK Government.

Introduction to Team Tempest and the Future Combat Air System Technology Initiative

Team Tempest is a UK Ministry of Defence (MOD) and UK industry co-funded technology initiative to develop a sixth-generation fighter aircraft through a partnership approach. Launched by the RAF Rapid Capabilities Office, as part of the MOD Future Combat Air System Technology Initiative (FCAS TI), it aims to deliver the UK vision to have a globally competitive combat air enterprise.

Team Tempest is delivering parts of FCAS TI and comprises a portfolio of activities which will keep the UK at the forefront of global combat air technology development. The technology initiative will help to ensure that UK industry maintains the technological competence necessary to retain military freedom of action and be able to play a lead role in future combat air system development.

It brings together the UK's world leading industry and sovereign capabilities across future combat air's four key technology areas: advanced combat air systems and integration (BAE Systems); advanced power and propulsion systems (Rolls-Royce); advanced sensors, electronics and avionics (Leonardo); and advanced weapon systems (MBDA).

The Challenge

There are technical challenges to producing more advanced air platform power and thermal management systems (PTMS). Drivers for this include:

- Increasing on-board electrical power requirements (due to the introduction of more capable sensors, weapons and increased aircraft electrification) and hence increasing thermal requirements
- The need to operate for extended periods in extreme environmental conditions (particularly challenging scenarios include ground operations on a hot day and extended duration, and high altitude operations on a cold day)
- Platform integration constraints imposed by signature requirements, such as the need to limit/reduce external inlets and exhausts

As well as developing PTMS that are more capable and efficient, future research should also aim to reduce the mass, volume and whole life cost of these systems, whilst improving reliability.

The scope of this market exploration is not restricted to the design of advanced PTMS. The platform requirements described above may also be

addressed through other means, for example, development of air vehicle systems such as actuation systems that place a demand on PTMS.

What We Want

This market exploration aims to address the challenges presented by the design of PTMS for advanced air platforms by inviting industry and academia to propose emerging/innovative technology research that may be included in future platform-level assessments. PTMS technology themes of interest including:

- **Efficient vehicle utility systems:** Replacing certain conventional vehicle systems/components with more advanced technologies may yield a power, thermal or mass benefit at a platform level. An example of this would be to replace conventional mechanically driven systems with electrically driven systems.
- **Technologies that reduce the amount of heat generated:** Reducing the amount of heat generated on-board an aircraft means that less heat needs to be rejected by the thermal management system, which would ultimately result in a smaller, lighter and potentially simpler system. Examples of these technologies include air and magnetic bearings, which have been shown to reduce the amount of heat transferred into the oil system by the engine.
- **Energy storage technologies:** On-board energy storage devices may be required for short duration, high electrical and thermal power demands. Examples of these devices include structural batteries, super-capacitors, fuel cells and phase-change devices, which will need to be lightweight and suitably sized for any air application.
- **Technologies that directly convert energy into other forms:** On-board waste heat can potentially be converted into useful electrical power by using thermo-electric devices. Conversely, these devices can also provide cooling capacity by passing an electrical current through them (e.g. Peltier coolers).
- **Novel power distribution technologies:** These technologies may be able to offer reduced electrical power loss and reduced platform mass compared to conventional electrical cables. Examples of these include fibre optics (photonic power) and super-conducting materials.
- **Novel heat transfer technologies:** Examples of these technologies include advanced lightweight and compact heat exchanger designs, heat pipes, cold plates and novel heat transfer materials/fluids aimed at achieving a mass saving at platform level. Also of value is technology that prevents heat transfer, i.e. low volume, lightweight insulation.
- **Technologies that increase on-board heat sink capacity:** Additional cooling capacity can be achieved (for particularly demanding scenarios) by increasing the amount of heat that is rejected into the fuel system. This can be provided by fuel de-oxygenation technologies for example, where oxygen is removed from the fuel, enabling significantly higher fuel temperatures before fuel instability and coking occur.
- **Systems Integration:** This theme aims to bring together existing or advanced technologies within novel architectures with the overall goal of improving air platform level energy efficiency and capacity.

Note that this list is not exhaustive but gives a flavour of the types of technologies that are of interest.

The scope of this market exploration is not limited to emerging technologies – innovative solutions incorporating existing technologies are also of interest. Since PTMS are prevalent outside of the Defence aerospace industry, it is anticipated that technologies and solutions developed for other industries/sectors (e.g. automotive, marine and space) may be applicable to this problem space. Submissions are therefore welcomed from all sectors, at any level of maturity, including from outside of Defence industry.

What We Don't Want

Supplied concepts should be targeted with the intent to achieve development to at least [Technology Readiness Level 6](#) in line with planned future air system acquisitions; submissions that detail only basic research without considering their future development potential are unlikely to be of interest.

A focus on potential for exploitation and commercialisation

It is normal for DASA market explorations to have a focus on examining the potential to exploit technology for military capability. This market exploration does that but uniquely also provides the opportunity for those with innovative technology applicable to advanced air platform PTMS that may have value to Tempest and other future air platforms to voluntarily choose to not only enter into a dialogue with MOD but also with the industry members of the team.

As UK competitiveness is a key focus for Team Tempest, we are keen to consider the potential for commercial application of the technologies at an early stage and to examine with industry partners how component innovation could be integrated into future and current systems and, ultimately, into Tempest and other platforms. Through the MOD Team Tempest partnership with industry, this market exploration provides the opportunity for organisations to choose to engage with the Team Tempest industry partners to discuss potential routes for commercialisation of their technologies.

The choice of whether to engage solely with the MOD element of Team Tempest or also with the industry partners is entirely the decision of the organisations responding to this call.

A dashboard of organisational business readiness levels As part of this market exploration DASA will use the data provided by you and publicly sourced data to put together a dashboard of the business readiness level of your organisation to display a simple profile comprising four elements. The profile will not be a ranking or grading of the organisations that respond to this market exploration. The four elements on the dashboard will be: two showing historical performance and two which demonstrate recent trends. We will use the [Beauhurst platform](#) that gathers data from public sources on the

UK's fastest growing companies for the historical data. Recent trends will be derived from the data submitted when applying for this call. No raw data, will be displayed on the dashboard.

How to submit

Responses to this market exploration must be submitted via the DASA submission service, for which you will need to register.

You will be asked for a title and short summary of your innovation, followed by questions related to your capability. We are seeking to understand what and how much further development is required for a complete solution to all requirements, or whether a combination of separate solutions is required. The information you provide may assist in developing a statement of requirements for potential future activities.

You have the choice to provide information to the Tempest Industry partners to support the potential for commercialisation of the technologies. Alternatively you can choose to limit your engagement to UK government only. Restricting access of the information you provide to solely MOD will limit the consideration of the commercial potential of your technology.

If you would like to enter into a dialogue with the Team Tempest industry partners, then you have the opportunity to provide an anonymised paragraph that can be released to them.

To enter into a dialogue with the Team Tempest industry partners, the submitting organisation must explicitly indicate their preference in Part 4 of the capability submission form and provide an introductory paragraph describing an organisation's technology. The submission form also provides the opportunity for organisations to select which of the Team Tempest industry partners they wish to have their introductory paragraph shared with. Only an anonymised version of the paragraph you provide and an anonymised business readiness level Dashboard will be provided to the industry partners.

If your technology is of interest to one or more industry partners then this information will be passed on to you along with partner contact details so that you can initiate contact to arrange a discussion exercising good business practices, such as use of non-disclosure agreements. MOD / DASA will not be party to these NDAs and commercial discussions.

Submissions must be submitted by midday on Friday 7 August 2020.

Please only provide details of one product/capability per submission. If you have a number of potential solutions, then please make multiple submissions.

If you have any questions then please email accelerator@dstl.gov.uk with "air platform energy management technologies" in the subject line.

How we will use your information

Information you provide to us, that is not already available to us from other sources, will be handled in-confidence. By submitting, you are giving us permission to keep and use the information internally within DASA, and to provide the information onwards, in-confidence, within UK Government. The Defence and Security Accelerator will not use or disclose the information for any other purpose, without first requesting permission to do so.

Where an organisation gives their consent for engagement with the Team Tempest industry partners, DASA will provide in-confidence to the nominated industry partners an anonymised version of the introductory paragraph at Part 4 of the relevant capability submission form, alongside an anonymised business readiness assessment Dashboard in order that they can identify those organisations that most closely match their engagement profiles.

If an industry partner or partners express an interest in your technical capability DASA will provide you with the requisite contact details in order that you can arrange a discussion. It is advised that any discussions follow good business practice by taking place under a non-disclosure agreement (NDA). MOD will not be party to the NDAs or the commercial discussions.

Organisations that do choose to engage in dialogue with the Team Tempest industry partners should prepare their introductory paragraph with care so as not to inadvertently release valuable intellectual property.

Following initial exposure of information to the Team Tempest industry partners, if an industry partner indicates a desire to engage with the anonymised organisation then that request will be passed by DASA to the relevant organisation to respond. Note that MOD / DASA will not participate in or manage these organisation/Industry engagements beyond the initial introductions.

The Defence and Security Accelerator will not use or disclose the information for any other purpose than that stated above, without first requesting permission to do so.

By endurance we conquer – what Shackleton can teach us today

We have all had to find sources of inspiration to help us in the last few months. Mine came on one of many local lockdown walks in Dublin, when I passed a house with a plaque to “the Antarctic Explorer and Leader of Men”, Sir Ernest Shackleton, whose childhood home it had been. I have been inspired by Shackleton for a long time, since I was 17 and went on an expedition which

re-traced his journey to the Antarctic island of South Georgia. But it felt particularly appropriate to find him again now – to be reminded of his story of grit and determination at a time when we have all been searching for these too, and to recall his family motto: “by endurance we conquer”.

Because if I had to sum up 2020 so far in one word it would be endurance. For me, as I imagine for most of us, this has been a period we have just had to get through, separated from family and friends and unable to do so many of the things we enjoy. As many restrictions were relaxed this week, you could almost feel the national sigh of relief. We can make plans again, see people who for the past four months have only apparently existed on Zoom, begin to have fun. But even in this new normal, for as long as we continue to live with coronavirus, I suspect we’ll need endurance – and on that there is much we can learn from Shackleton.

Shackleton’s childhood home in Donnybrook, Dublin

Shackleton’s challenges may not on the surface look much like our own. When the man from Kildare, by then a veteran of two previous British Antarctic expeditions, set off from London in 1914 on his ship *Endurance*, it was in the hope of being the first to cross the Antarctic continent. It was a task he knew would be “most dangerous, difficult, and strenuous work, that has nearly always involved a certain percentage of loss of life.”

Famously, he failed. The ship was crushed in the ice, had to be abandoned, and he set himself a new task: “to reach land with all members of the expedition”. Between October 1916 and April 1917 Shackleton and his men drifted with the ice flow. They then struck out on three small life boats, eventually making it to the rocky outcrop of Elephant Island. With much of the crew suffering from frostbite and exhaustion, and with limited provisions, Shackleton decided that he and 5 others would have to mount a rescue mission by sailing 800 miles across treacherous seas in an open boat to the whaling stations on South Georgia. They took only enough food for a month. They left 22 men on Elephant Island not knowing if rescue would come.

Improbably, after 15 days at sea and hurricane-force winds, Shackleton did reach South Georgia, but landed on the wrong side of the island and had to cross the previously unclimbed mountains on foot. When they finally arrived at the whaling station, the manager did not recognise them. It took a further four 4 months to get back to Elephant Island, where incredibly, he found all members of the crew still alive.

I have always felt a very personal connection to Shackleton. I had a small taste of some of what he faced when I was one of a group of young people who travelled to South Georgia to carry out scientific surveys and search for the stove he abandoned in the mountains, when he heard the whistle from the whaling station and knew he was safe. The month we spent there, in tents and on boil-in-the-bag rations, was certainly the biggest test of physical endurance of my life. As for mental endurance, the isolation and uncertainty felt by so many during coronavirus have been tougher. Not knowing whether he

would make it back to Elephant Island, or what he would find if he did, Shackleton surely had to overcome his share of mental struggles too, and perhaps these were not so dissimilar to ours.

South Georgia's mountainous interior with glaciers and crevasses

Another Antarctic explorer, Sir Raymond Priestley said of his three best known contemporaries: "For scientific discovery give me Scott; for speed and efficiency of travel give me Amundsen; but when disaster strikes and all hope is gone, get down on your knees and pray for Shackleton." Shackleton himself identified four qualities as essential for overcoming adversity: optimism, patience, idealism, courage. DCU and the Shackleton committee in Athy have produced a great set of podcasts looking at the relevance of each of these during the current pandemic, which you can find here – and they have rightly suggested a fifth, kindness. Above all for me, Shackleton's ability to keep himself and those around him going when faced with yet another obstacle, is what set him apart and why he should be celebrated.

Photographs from Shackleton's Endurance expedition in British Embassy Dublin

At the British Embassy in Dublin we are privileged to have on our walls a number of photographs from the Endurance expedition. They were hung for the 100th anniversary to honour Shackleton as a great figure in the history of British and Irish Antarctic exploration. Like many workplaces, we have been operating the Embassy virtually since March. But when we do get back to the office, I look forward to seeing them again, as a reminder not only of an incredible UK-Ireland connection but of the amazing power of human endurance.

[Self-isolation lifted for lower risk countries in time for holidays this summer](#)

- passengers returning to or visiting England from certain destinations including Germany, France, Spain and Italy, will no longer need to self-isolate on arrival from 10 July 2020
- FCO will set out exemptions for a number of destinations from its global advisory against 'all but essential' international travel, with changes coming into effect on 4 July 2020
- all passengers, except those on a small list of exemptions, will still be required to provide contact information on arrival in the UK

Passengers returning or visiting from certain destinations which pose a reduced risk to the public health of UK citizens, including Spain and Italy, will no longer need to self-isolate when arriving in England, Transport Secretary Grant Shapps will set out today (3 July 2020).

The new measures will come into force from 10 July 2020, meaning that people arriving from selected destinations will be able to enter England without needing to self-isolate, unless they have been in or transited through non-exempt countries in the preceding 14 days.

A risk assessment has been conducted by the Joint Biosecurity Centre, in close consultation with Public Health England and the Chief Medical Officer. The assessment draws on a range of factors including the prevalence of coronavirus, the numbers of new cases and potential trajectory of the disease in that destination.

The list of countries will be published later today. A number of countries will be exempted from the requirement for passengers arriving into England to self-isolate for 14 days. All passengers, except those on a [small list of exemptions](#), will still be required to [provide contact information on arrival in the UK](#).

The government's expectation is that a number of the exempted countries will also not require arrivals from the UK to self-isolate. This will mean that holidaymakers travelling to and from certain destinations will not need to self-isolate on either leg of their journey.

The exempted countries and territories will be kept under constant review, so that if the health risks increase self-isolation measures can be re-introduced to help stop the spread of the disease into England.

The Foreign and Commonwealth Office (FCO) has also updated its global advisory against 'all but essential' international travel to exempt certain destinations that no longer pose an unacceptably high risk of COVID-19.

When planning holidays or overseas travel, people should therefore check the latest [FCO travel advice](#) on GOV.UK, including whether there are any self-isolation measures in place for their outbound or return journey.

If the country or territory they are visiting is exempt, they will not have to self-isolate on their return to England. Passengers should also stay alert to any changes to local public health measures while they are travelling, including by subscribing to [FCO travel advice updates](#).

The government continues to work closely with international partners around the world to discuss arrangements for travellers arriving from the UK and will continue this engagement ahead of the changes coming into force.

Transport Secretary Grant Shapps said:

Today marks the next step in carefully reopening our great nation.

Whether you are a holidaymaker ready to travel abroad or a business eager to open your doors again, this is good news for British people and great news for British businesses.

The entire nation has worked tirelessly to get to this stage, therefore safety must remain our watch word and we will not hesitate to move quickly to protect ourselves if infection rates rise in countries we are reconnecting with.

The FCO's travel advice is based on an assessment of a range of factors that could present risks to British nationals when abroad, using different criteria to the list of countries exempted from self-isolation measures. It is based on a range of factors including epidemiological risks, capacity of local healthcare systems, transport options and law and order. These FCO travel advice exemptions will come into effect on 4 July 2020 and will be kept under review.

All passengers, except those on a [small list of exemptions](#), will still be required to [provide contact information on arrival in the UK](#), including details of countries or territories they have been in or through during the previous 14 days. Existing [public health advice on hand hygiene, face coverings, and social distancing](#) must also be followed.

The exemptions from self-isolation apply to all modes of international transport, including sea and international rail routes as well as flights.

The Devolved Administrations will set out their own approach to exemptions, and so passengers returning to Scotland, Wales and Northern Ireland should ensure they follow the laws and guidance which applies there.