

Center for Strategic and International Studies

TRANSCRIPT
Online Event

**“The Future of the Royal Navy: A Conversation with First
Sea Lord Admiral Sir Ben Key”**

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FEATURING
Admiral Sir Ben Key
First Sea Lord and Chief of Naval Staff

CSIS EXPERTS
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Seth G. Jones: Thank you for attending. I have the distinct honor of welcoming Admiral Sir Ben Key, who is the – who has been serving in the Royal Navy for 38 years. He is the first sea lord. He began his role as first sea lord and chief of naval staff in November of 2021. Prior to this he served as chief of joint operations. His ship commands have included the minehunter HMS Sandown, the frigates HMS Iron Duke, and HMS Lancaster, and the aircraft carrier HMS Illustrious. So we are honored to have him here.

And I'd like to begin by getting your thoughts, Admiral, on the future of the Royal Navy, a navy that I think you have said in the past that is global, modern, and ready, and that works with key allies and partners, obviously including the U.S. So can you talk a little about your and your government's view of the future of the Royal Navy?

Admiral Sir Ben Key: Seth, thank you. And what a delight and privilege it is to join you and the CSIS community. So I come in as a first sea lord, almost uniquely amongst those in the last two to three decades, where I've been challenged by the government to grow the Navy. The integrated review in 2021 was a very positive affirmation of the role of the maritime both in the fabric of the nation but also the role that we must play in supporting British interests and the pursuit of security and prosperity around the world with our allies and partners. And so when the prime minister said to my predecessor, now the chief of defense staff, you know, I want to Royal Navy to be the foremost Navy in Europe, what he was really challenging us to do was to be really ambitious in how we thought about – how we go about our business.

He aligned that with a significant investment into a new shipbuilding pipeline, but also a determination – a recognition by the government, after probably two decades where a lot of defense thinking had been really focused on activity in and around the Middle East – pursuit of counterviolence, extremist organizations, some significant land campaigning – that there was a recognition that actually the global commons of the air, space and maritime were now increasing importance again, and that to some theorists we were returning back to kind of the established ways of Corbett and Mahan. That if we don't – if we can't trade globally, if we can't interface and meet up with our allies and partners in a global sense, then actually we're not – we're not going to be able achieve what we need to.

And so for the Royal Navy that I come back to, after two and a half years away, it's both a determination to prove that by being global, it's a commitment to being ready for whatever the government may ask of us, and there's a program to modernize ourselves and to back off on the investment that the government is making in us, so that we're ready not just to do what we need to do today, but that we can respond to the challenges of tomorrow. Because the pacing that we need to respond to is not actually just the

government's ambition, but it's also the actions and developments of others who would wish to challenge our way of life, and to constrain our freedoms. They're setting that pace. And we, along with allies and partners with whom we share similar values, similar standards, similar principles, and shared interests, we must be able to respond to that.

So that's the navy I find brimming with interest, prosperity, on the back of some recent, really considerable achievements, like the first operational deployment of our new aircraft carrier, HMS Queen Elizabeth, Prince of Wales coming into service. Really a sense of purpose, but helpfully – and unusually in the last couple of decades – a real recognition of the value of the maritime.

Dr. Jones: So I want to – we're going to hit a couple of different aspects of that. But let me just first start off, just because it's been relatively recent, with Carrier Strike Group 21. So can you talk a little bit about – first of all, tell the audience what it was. And the second, looking forward, how are you thinking about next steps? Even if we're just talking about the U.S. and the U.K., U.S. has almost a dozen aircraft carriers, the U.K. two. There's a huge body of water to cover globally across the Middle East, Europe, including the Eastern Mediterranean and the Indo-Pacific. So what are your thoughts on what's next and how to collectively work together?

Adm. Key: So the carrier strike group deployment in 2021 centered around the Queen Elizabeth, the strike group, which involved a U.S. destroyer, USS The Sullivans, the Dutch frigate the Evertsen also joined the strike group for the entire period. And perhaps most significantly the investment by the U.S. Marine Corps of VMFA-211s, so that we had two F-35 bravo squadrons on board, one U.K., one U.S. A real statement in that group, therefore, of interoperability and interchangeability in terms of our ability and confidence to operate in very close concert with allies and partners.

But it also represented, to sort of quote Churchill, the end of a beginning for us in rediscovering the Royal Navy's big deck carrier aviation capability. You know, I'm proud – very proud, as you mentioned, to have been the commanding officer of HMS Illustrious, one of the – you know, one of our last generation of aircraft carriers. But in comparison, Queen Elizabeth and her sister ship, Prince of Wales, are such a step up. The only aircraft carriers in the world designed specifically to support fifth generation combat air. And what this deployment last year was the realization of was that journey to bring them into service and to prove those capabilities.

And because of the ambition of the government, we set ourselves a really reaching, demanding deployment goal, which was to deploy to the western Pacific Ocean as far as Japan. We didn't limit ourselves to just the

Mediterranean or just the Middle East. We tested ourselves across all three of these major theaters. It was demanding also because of what COVID meant, that actually we were quite limited in some of the areas of the world that we could and couldn't access, for very understandable reasons. But it was successful in that point, that none of our operational outcomes had to be set to one side because of that. In fact, almost because of it we were really able to explore some of the new dimensions of operating.

So in one sense it was to prove that we were back in the big carrier game. You remark, though, we've got two, the U.S. have got 12. This is where we get into shared endeavor. There is a lot of space around – there is a lot of water around the globe. We do not pretend, ourselves, that we can solve all of it. NATO is at the cornerstone of the United Kingdom's defense policy and has been for some time. We are one of the carrier-operating nations within NATO. And therefore, I much prefer a lens that takes is at a sense of partnerships within a coalition of determined, willing and capable people, where each of us brings to the table what we can, we pool, and share.

And I see it in that light that we're making a significant contribution, one could call it burden sharing, one could call it, you know, interchangeability in the sense – and I know some of the American political leadership talk about that in the sense of dislocated in time and space but contributing to a consistent and persistent series of effects. I think there is definitely something in that. But also, you can come together and, as we powerfully demonstrated with both Japanese and U.S. carrier battlegroups last September and October in the western Pacific, exercising together to show common cause and common capability.

Dr. Jones: So I wonder if we could stick with the western Pacific for a moment, because when you go through the integrated review, it does call for a tilt, I think that's the world it uses, or one of the words it uses, towards the Indo-Pacific. Can you talk in a little bit more detail about what that means then for you? What does increasing involvement in the Indo-Pacific mean? And can you talk a little bit more about what that then partnership means moving forward? So, I mean, it's obviously – it's in the National Defense Strategy that will be released later this year. The Indo-Pacific is the key location for the U.S.

Adm. Key: So I think it's a question of recognizing that for U.K. national interests over the long span of history, rather than the, you know, recent past, the Indo-Pacific was an area that we knew well. You know, much of it was first charted by the likes of Captain Cook. It wasn't somewhere that we've just newly come to. And as was observed to me last year by a senior Japanese naval leader, actually we're merely bringing our history back into the modern era about reinvesting into a part of the world that has always mattered to us.

Forty percent of the world's trade maneuvers through the South China Sea. Our economic – our economic prosperity and security as the U.K., despite being an Atlantic nation, is aligned to or is drawn from Pacific sources. So we need to be absolutely clear that if we want to pursue economic and prosperity agenda and opportunities, then with that comes an obligation also to invest in diplomatic and security partnerships in that part of the world as well. And when you look at some of the challenges that are being made currently to the – I think some of the established norms and recognized ways of doing business amongst nation-states, then we're going to have to do it in partnership.

No one nation, not even the United States of America, for all its might, can determine on its own and resolve all the world's problems. That is done best through multilateral alliances and partnerships, some of which have – are well-established and have been around for many, many years. NATO would be a good example. The Five Power Defense Agreement that was established in the aftermath, some 50 years ago, would be another. And there are more recent ones, like ASEAN. And all of these deserve our support and our investment, because actually it's by bringing countries together around shared agendas that we will – we will achieve the effects we want to.

So for us the Indo-Pacific tilt in the United Kingdom is about returning to a more persistent presence, to offering where we can, listening humbly, and making – and recognizing where support is something that we can bring to the table. And also, through our experiences over recent years, providing leadership where that would also be helpful for, in my case, other navies to start developing some of the capabilities that they believe they need for their own requirements.

Dr. Jones: So you mentioned “persistent.” And it's a word that does come up as well, including “persistent engagement,” in the integrated review. So what does this mean? What does persistent engagement mean? And how is the – how are you and how is the Royal Navy thinking about building partner capabilities along with that?

Adm. Key: So “persistent” I think means being reliable and available, not episodic, not occasional. And we've recently deployed into the region two of our new patrol vessels – HMS Tamar and HMS Spey. Tamar currently operating around the Southeast Asian peninsula and HMS Spey now in the southern Pacific Ocean, able recently to go and make a contribution, alongside many others, to the – to the Tongan people after the devastation that moved through there. And for me, what they're – what they're – that commitment of a multiyear deployment into the region means is that we're able to start to build more profound relationships, and ones that you just do occasionally

because you happen to have the effort to get into the region, but then you need to go home.

Actually, we're saying: This matters so much to us that we want to be part of an ongoing dialogue. We need to learn from these people. It is, after all, their waters, not ours. But we've also got skills and background where we can help them deal with issues of transnational crime, how the environment is affecting them. You know, what is it we can do there? We can help provide skills and capability that can deal with, you know, the raiding of protein that happens in their waters. And that is very much where I think we've got a contribution to make. But we have to do that alongside America, Australia, New Zealanders, French partner, many others who've been in the region much longer than ours. I don't come in here with the arrogance that, you know, all is well, we're back. Actually, it's much more, how can we help?

Dr. Jones: So one aspect of the carrier strike group deployment in 2021 that you touched on – but I wanted to bring in the NATO comparison. So one of the upsides of NATO and operations in the European theater is the ability to have infrastructure there that allows partners and allies to communicate quickly. One of the challenges that we're finding in some areas of the Indo-Pacific is to take information off of platforms and to share it quickly with allies and partners. We don't have yet an infrastructure developed. So you've just, it sounds like, made some progress, at least with the deployment last year. But how are you thinking about how do we – how do we improve interoperability on a consistent basis without having all of the architecture that we've got with NATO?

Adm. Key: I think this is one of the – this is one of the big challenges we need to overcome. How are we able to share information and reach decisions at the speed of relevance, when you are working, as you've alluded, in a multinational context, very often against singular actors who, by their very nature, can decide quicker, but actually run the limitation of perhaps not understanding as well what is going on, because they're not – they're not garnering as many perspectives, as rich – as rich a data set as they – as they can have. And we're going to have to make investment in those things.

One of the risks for us in, you know, sort of high-end technology areas is that we can accelerate away from where others are. And we have an obligation – and I feel this very keenly and found myself in discussions about this last year – with some of those who are seeking to catch up, that we give them a means to catch up, and that we don't find ourselves deeply classifying information which actually is far more broadly available, and against which we should be prepared to take a risk about what may or may not be known by others.

This changes, I think, some of the – some of the challenges or the setup that we had in a NATO that was really founded in the Cold War, where it was all about locking stuff down within that community of the willing. I think the prevalence of the internet, the way that information can move so fast now, we need to think differently about how we secure that which we absolutely must secure? And actually, how we share as much as possible, because what matters is less the information – we need that to be prevalent – but more the ability to source from that the decisions we need to understand.

Dr. Jones: Well, when – during my deployments to Afghanistan, we found ways to make it work among a range of countries. Not always the easiest way to do it. But just to follow on this line for a moment, one of the potential upsides with AUKUS is the ability to use AUKUS to improve interoperability. There may be a way to expand that beyond just nuclear-powered submarines. So how are you thinking about the role of AUKUS along these lines as well?

Adm. Key: So AUKUS, to my mind, is a really good example of opening up rather than closing down. A lot has been talked around AUKUS, around the shift in thinking for the Royal Australian Navy's submarine force in moving from just being conventionally powered to also embracing nuclear propulsion, and the opportunities that opens up. But actually, at its heart, AUKUS is about reducing the barriers to sharing information amongst like-minded people. And I see one of the real opportunities of that is in the underwater battlespace challenge that we have at the moment.

How can we take the richness of what the Royal Australian Navy understand about their waters, their challenges, their opportunities, and share that with U.K. and U.S. navies and allies? As much as we're going to now have an obligation, and one I welcome, to support the Australian Navy as they develop their own capabilities in order to bring nuclear submarines into their – into their mix. But AUKUS is – at its heart is not about nuclear submarines around the Australian continent. At its heart that is about how do we – how do we create opportunities to better share intelligence and understanding and information in order to invest in capabilities that contribute to greater security, and therefore enable prosperity more widely in the region?

Dr. Jones: Well, and one would think then that the actual creation of the submarines, that whole process, from the nuclear component to the missiles that are used, to the motors, is an integrated process as well, and should improve interoperability.

Adm. Key: I think so. But it's also going to take an awful lot of time. So if it was only about that, we'd be waiting a long time to accrue the benefits that I think AUKUS – there are many other thing that we can entertain much more quickly, whilst also recognizing the really profound shift that the Australians

will need to make in order to – in order to bring nuclear-powered submarines into their – into their inventory.

Dr. Jones: I wonder if we could shift gears a little bit to the subject of people. And the – you know, having spent time looking at the U.S. shipbuilding industry, it's moving along quite well, certainly out of a period in the post-Cold War era where we weren't building a lot. Now we're building a lot of Virginia-class, Columbia-class, and other types of vessels. But still there are challenges with – there are challenges with a range of things – keeping individuals, we've got challenges on the supply chain. So how are you thinking about the future of people and how they are integrated into the Royal Navy? That could be how you're recruiting, the retention side of people, there's a lot of competition from industry as well, or the private sector, and lots of pay in some cases. So where do people sit and how do you keep them?

Adm. Key: So – (laughs) – you kindly observed in your opening remarks that I'm some 38 years into my naval career. And it was –

Dr. Jones: You're still here. (Laughs.)

Adm. Key: I'm still – I'm still here. I think we are going to be – in a bottom-fed organization, such as – such as ours, we are going to be complacent if we think that the people who are joining the service today or in the future are going to be – respond to motivations in the same way that I did. I'm of a generation that still, in the main, thought about a single career path. That doesn't mean to say that I couldn't have moved in and out of it, but the mobility that the generations today have – and I see this in my own sons in their 20s – that kind of career mobility where they don't feel so bound into a single path or even necessarily a single sector, is going to be hugely challenging.

And it's – despite what we may think, I don't think it's all about cash. It's actually about giving them opportunity to invest their skills, to create their own personal growth path, and to contribute to something meaningful, and to be recognized and acknowledged for that, and also that their family units and the impact upon them is also absolutely recognized and supported. And if we – if we achieve that, then we'll take the conversation away from just the sort of financial compensation piece into something where you're contributing to a values-led outcome.

But I'm not also going to advocate that just therefore by wandering around making people feel good about themselves, and saying, well done, and thank you very much, that we'll achieve it. We have to recognize a flexibility, a mobility that keeps them bound to this central spine of a naval career, in my case, but at the same time allows them to go and explore other opportunities outside, with the expectation they can come back in again. And I think we're

going to have to change some of the paradigms if we're to achieve what we need to. And that is as much for the commercial sector and the industrial sector as it is for us.

Dr. Jones: So what are the paradigms then you're thinking about that you may need to change?

Adm. Key: So it must be perfectly possible to leave Royal Navy service for three or four years, go on a crew experience doing something completely different, and then come back in again. And actually, instead of being penalized as if that was dead time to a naval career, to say, OK, you're coming back in. You, Seth, if you wanted to come and serve with us now, what's the value proposition that you are making?

Dr. Jones: I'm in. I'm in.

Adm. Key: And therefore, where and how can we insert you, not as a midshipman, but as something where your experience and your skillset is really contributing to what we do? I might expect you, if you stuck your hand up and said, well, I'd actually quite like to command an aircraft carrier, for you to demonstrate some competence on things a bit smaller first. I think that's not unreasonable to me. But to say, ah, no, you need to start as a midshipman first and all the way back, I'm not convinced that that's – that that value element will not just apply to men like ourselves, but also to women, people from very varied backgrounds. We've got to become an obvious and overt meritocracy.

Dr. Jones: Well, just let me know. I'm willing to serve. I'd love to command an aircraft carrier or two. (Laughter.) I would be remiss for at least not touching on your recent experience during Operation Pitting during evacuate civilians from Afghanistan. And wondering if you can at least briefly discuss the interagency effort to – you know, that was required to execute that extraordinary mission.

Adm. Key: So I think it was – in many ways, it was the very best of broader defense and diplomatic investment. Regardless of why we found ourselves in that position, and despite some of the very difficult outcomes that we're seeing now from an innocent Afghan population really struggling because of the nature of the government that leads them, in that period there was a genuine shared endeavor. And I said back in the U.K. that was in my mind, the very best of defense, whether in uniform or civilian or the industrial partners who supported us. We recognized that there was a compelling need to move at pace, to take risk, and to coordinate.

And I pay great tribute to all of the nations that were involved in that. Clearly the U.S. under Central Command was providing the kind of overarching security umbrella at the airfield. But actually, it was a multinational effort.

We didn't have a traditional command and control node where everyone was responding to that same set of orders. It was something that was done through cooperation, through dialogue. And I look at some of the young men and women that were dealing with some absolutely devastating and desperately difficult scenes at the time, and their ability to combine compassion and courage, almost into the same moment in time, courageous restraint and yet also personal risk to demonstrate warmth and support, was very moving – very moving, indeed.

Dr. Jones: It was. It was moving, and I think may continue to be a struggle over the next several years.

Adm. Key: I think so.

Dr. Jones: So we'll get into a few other issues, including autonomy, in a moment. But before we kind of leave the big picture, I want to at least turn to the Russians. They've got 40 combat ships in the Black Sea. But I'd like to look at this from a future-oriented perspective. And what is your sense of how you face up to a challenge, particularly on the naval side, of a resurgent Russia. I think you've talked about establishing a fleet that has, quote, "more punch," than it currently has. So how do you put this in a Russian context then?

Adm. Key: So I think there's something quite interesting to observe in what the Russian investment in their own fleet over the last 15 years has done for them. They have I think, it seems to me, done some interesting analysis on Western strengths and weaknesses. You know, classic almost Sun Tzu-type thought processes. Looked at their own strengths as to what it is that matters to them, their doctrine, their philosophy. And then sought to maximize their strengths and to capitalize on what they see as their relative advantages over us. And we need to respond to that and do our own analysis and look at how we can sustain or maintain the advantages that we want to.

The high seas are, by their very nature, you know, they're open to everybody. And so this is not about denying them freedom of maneuver, unless it's the sort of thing where they're seeking to deny us. And I look at some of the moments of cooperation through my career, and how we do understand that we need – you know, we have a – we all have a right to spend our time on the high seas going about our own lawful activity. But if people want to constrain our ability to do that, to threaten our national security, to imply in the underwater space around the United Kingdom, where, you know, some of our own critical national infrastructure is being pursued by Russia, then we need to be able to respond to that and say: Actually, we have a right to do this. We have a right to look after what is going on in our own waters. We have a – we have right to protect ourselves and to push back against it.

And I think there's been a lot of really good work in recent years to change the way that we're thinking about this, both in an asymmetric sense, but also in a symmetric sense. And to restore a balance. Your own forthcoming defense strategy I know is going to talk about integrated deterrence as one of its big ideas. Nothing – you know, for all the – for all the language around where is the cursor going to settle, I think this is going to be a big theme. Our own integrated operating concept gets at the same sort of ideas and points to get across. And deterrence by its nature is not an aggressive act. Deterrence is trying to maintain a status quo which has a degree of – and understandably – a degree of parity for national interest. And I think that's where we need to make some of the adjustments, and are doing so, and making no secret of that fact.

Dr. Jones: So part of the debate, at least in the U.S., on geographic regions to focus on – the National Defense Strategy has been drafted in a way that the focus is on the Indo-Pacific, identifying China as a pacing threat, is what the secretary has mentioned. I think the recent activity in Ukraine has certainly raised this prospect of additional concern in Europe. But how do you view kind of global competition in the maritime domain?

And the reason I ask that is because we've obviously seen the Chinese in ports in Pakistan. We've seen an increase in the construction in Djibouti. We saw last year the Chinese particularly interested in expanding a presence in UAE. We see the Russians in Sudan. We may see continuing advancements in Latin America as well. So how do you think strategically about where and how we focus maritime efforts? Because part of this – or, the Arctic, we could pull the Arctic. Part of this looks like there is a global aspect to competition, not just an Indo-Pacific or a European.

Adm. Key: We have grown up over time around the world a rules-based international system, overseen by organizations like the United Nations. And in the maritime sense, the International Maritime Organization. Where nations have subscribed to a way of doing business, where we respect each other's sovereignty, we recognize the right of nations to trade freely, and we have sought to protect those values and standards. And what matters to me in the maritime is where not so much that the Chinese are making investments around the world. You know, the British have done the same, the Americans have done the same through history.

Providing they're doing that within respect to this international rule set that we've established for ourselves. At times, that rule set is inconvenient for us. It's inconvenient for you. But we respect it because overall the opportunities it creates for prosperity, trade, and an understanding behind people outweigh any threat that that might – or, any – outweigh the occasional loss of opportunity for us. And I think we would all subscribe to that.

What I worry about is that some of the language we're hearing how coming out of China, out of this concept of lawfare, where Russia is sitting that they're saying that their – you know, their values are being – you know, their national interests are being threatened and so, you know, they declare Crimea to be theirs, and overturn, as we saw in the Black Sea last year, when what to us were waters that we could move through were seen as a direct and aggressive threat, and led to Russian aircraft dropping bombs around HMS Defender, or in the vicinity of HMS Defender.

All of that is a threat to an internationally established system about going about their business. And that is what we have to respond to. It's exactly the same in the South China Sea, where the fact that determinations in international courts around ownership or not of islands is just being ignored. That's not, I think, something that we should necessarily just be allowing to go unacknowledged. And that's where we in the Royal Navy, alongside our many allies and partners in the world, do now have an obligation upon us to respond.

Dr. Jones: So you mentioned islands. One of the interesting things in watching the Spratlys move from atolls to essentially military bases was operation in what some call the gray zone. These were – these were dredgers that turned what we were reefs now that we see signals intelligence platforms, missiles on some of them. You could land strike aircraft. So part of the question is – here is, what are your concerns with adversary operations in the gray zone? We've seen countries use fishing vessels or maritime militias or irregular forces. How much of this is a concern to you, and how are you thinking about countering those kinds of actions?

Adm. Key: So it's clearly a huge concern. And we recognize that some of these behaviors are, you know, a genuine and real threat. And we need to help those who are being threatened by it. You know, there's been some really, to my mind, quite disturbing recent examples in the last year of, you know, the sort of Chinese maritime militia challenging territorial water – you know, legitimate territorial water and economic rights of sovereign coastal states in the region, which has led to significant risk of miscalculation which could quickly escalate out of control and, you know, potentially lead to loss of life, let alone a right to a means of making a living.

And therefore, we need to respond in kind. We've done, ourselves, a lot of work recently with our own Royal Marines, after many years of, alongside a lot of others and, you know, particularly U.S. Marine colleagues, fighting in the sand and the deserts of the Middle East. Actually, to go back to their commander roots, and to get back to that sense of small groups of people operating at reach and at range, in many ways that was – you know, old command operations were gray zone operations. You sought to avoid major

– you know, major coming together. But how to navigate your way through that?

And I was lucky enough to spend some time yesterday talking to the commandant of the U.S. Marine Corps General Berger about exactly this sort of thing. Which is, what is it – what is it in the commando spirit that can be used now with agility and pace to adapt to these new threats, and to help those who are themselves being threatened by what is going on, is actually quite exciting. And the young Royal Marines in the service today are applying incredible thought processes and innovative thinking. Our challenge, actually, is to give them the space and the confidence to go and do it, rather than holding them back with sort of the likes of ideas that were born in the 20th century.

Dr. Jones: Well, it was interesting, by the way, to see that the public media about Russian ships off the coast of Ireland, potentially threatening transatlantic fiber optic cables, it was the Irish fishermen that came to the rescue of NATO, so.

Adm. Key: Great gray zone activity. (Laughter.)

Dr. Jones: I wonder if – we have a question here on autonomy. And there's been a lot of focus and attention on building unmanned aerial vehicles, and underwater vehicles as well. So this is a two-part question. Is how are – first of all, how are you thinking about integrating these in the future as part of maritime operations? And, second, what is your general view on autonomy? What are its limitations or what are its opportunities?

Adm. Key: So I'm part of a service that has, throughout history, been fascinated by technology. It's sought to embrace it. It's sought to embrace innovation. You know, we're pretty much 116 years away now from when, you know, one of my predecessors, First Sea Lord Jacky Fisher launched HMS Dreadnought, which really marked at that point the Royal Navy casting away sail and embracing steam as a means of propulsion. And that unlocked a completely different way of doing business, because you could – you could fight against the wind rather than be driven by it.

And so I think through time we have – if we move to today, we have to embrace autonomy, because it opens up a rich vein of opportunity. Why would we endanger people by putting them into a minefield when an autonomous vehicle, underwater vehicle, can go and do that search and clearance for us, and keep the humans safe? Why wouldn't we want to use autonomy to do really dull jobs like long-term persistent ISR ahead of a fleet, for which the human – the human instincts and skills are really – it's an under-investment of those for that picture gaining, that intelligence gathering?

But autonomy is not in and of itself a solution. It is merely part of the fabric of what we require. War, conflict, competition in all of its guises, is ultimately something between humans. And if we imagine some sort of Brave New World scenario, where it's all just being done by machines, humans will still go somewhere else. And they will take their – you know, their own interests with them, and still have to resolve them. So I'm really interesting what autonomy can help us do to better understand the environment and to improve the quality of our decision making, particularly for tactical commanders at the speed of relevance. I think that's really important.

And we use that to reduce risk both to the force, but also to those that we seek to protect. But if we pretend that autonomy in and of itself is an answer, and all we ever need to do is to deploy uncrewed ships against each other to have a battle, we'll still end up with the same number of human beings somewhere else, still seeking to resolve their differences. It doesn't in and of itself answer the questions, I think, that at a strategic level is what dominates our day-to-day activity.

Dr. Jones: We're almost out of time. We have – we have one last audience question before I give you one final chance to sum up what gives you most hope about the future. But let me – let me just read this: How will the joint fleets be organized in the future? Which – how are you thinking about which countries will be in the position of commanding? Is there any kind of routinely or treaty to regulate joint operations? So how are you thinking about joint operations and who leads?

Adm. Key: So I was struck through the carrier strike deployment, but more broadly as my time as the chief of joint operation, that once there are – we have kind of the traditional leaders. U.S. very often turned to, ourselves, France, Germany, Japan would be – would be examples – Australia. Actually, the best people to leave are those who understand the problem set best and can provide that cohering – that cohering force that allows those individual coalitions to come together. If we assume that you can only – it can only be a British officer, or an American officer, with all due respect to those individuals that can do these things, then we constrain the nature of the brains that we're employing into command positions.

So we actually need something that's much more agile, in that sense. Now, clearly, the amount of skin that anyone is putting into the game is a nation will determine some of those – some of those outputs. But I think we have to be much more openminded about how is it that we're going to approach the problem set. You know, Einstein I think probably didn't actually say if you keep looking at the problem the same way you're going to get the same answer, or you'll go mad, or words to that effect. We need to embrace as many ways as we can about thinking about these problems.

We go back to interoperability and interchangeability. Because politics will determine who is going to be in that coalition on any one day. Alignment of national interest will always be a challenge for us. Ensuring, therefore, that we've got a choice of people and backgrounds that can then cohere the thinking and the decision making to resolve that problem, to seek solutions, I think is a really important part of doing our business. And why I get very excited about the opportunities around our tilt to the Indo-Pacific, not because it's an opportunity for Royal Navy leadership, but it's absolutely an opportunity for Royal Navy learning. That will make us better and make us – put us in a better position to go back and help others. And fundamentally, that's what we have to be about.

Dr. Jones: So one of the items – this is the last question – that you touched on is people. We've talked about it a little bit. But I wonder if you can end by telling us what gives you most hope about people within the Royal Navy? What do you have – what are you excited about, the direction that the Royal Navy is headed in, based on the people you have?

Adm. Key: So we've been set this fantastic – I began at the beginning saying we've been set this fantastic sort of headmark by our prime minister to become the leading navy in Europe. He hasn't defined what that should be. It's not a debate about tonnage. It's not a debate about number of ships. It's not a debate about, you know, how many guns or missile systems. I think it's more fundamental than that. It's about ideas.

And one of the things that I have found as I've gone back around the service over the last three months is that the Royal Navy is brimming with ideas, much more so than I think I was when I was a young person serving in the Navy. I was much more conditioned to absorb what it is I needed to do and think in the way that the system wanted. Whereas actually we've got I think far greater confidence in being able to handle disruptive or innovative thinking and giving space to young people who are wanting to contribute, but they're also wanting to challenge.

And the thing that gives me greatest confidence is that it's in that far greater variety of perspectives and energy and innovative spirit – entrepreneurial spirit that gives me the confidence that against the challenges we've got today and going into the future, actually we have a reasonable chance of success. And my time as – at the helm of the service is just to make sure that they've got the environment and the conditions to bring that – to bring themselves to work, to be acknowledged, recognized for what they're doing, to feel very comfortable in this environment. And out of that will bubble all the goodness we need to do – to meet the challenges ahead.

Dr. Jones: Well, Admiral, thank you very much for spending time with us at the Center for Strategic and International Studies. We appreciate your time, your thoughts on a whole range of topics from strategic issues down to autonomy but ending with people. It's probably the most important commodity that we have. So thanks for your willingness to spend some time with us.

Adm. Key: Thank you very much. It's been a pleasure to do so.