



Ministry  
of Defence

de&s

AURORA

ENGINEERING PARTNERSHIP

QinetiQ | AtkinsRéalis | BMT



# Engineering Delivery Partner

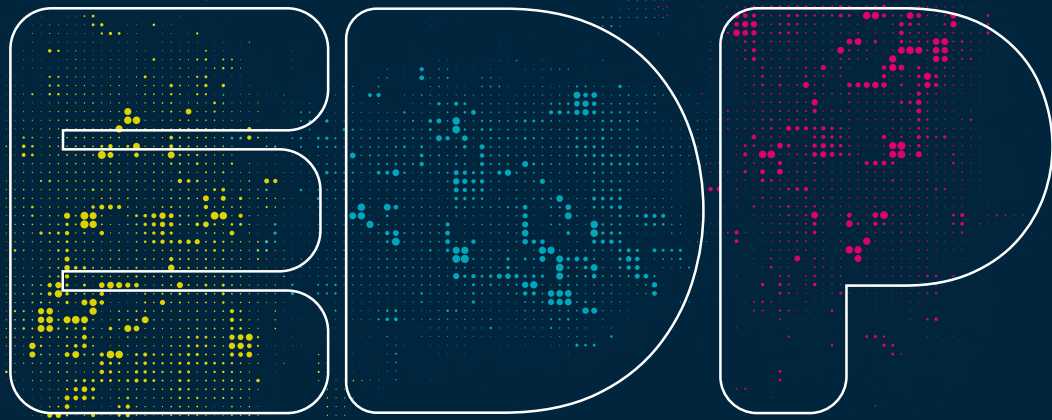
ANNUAL REVIEW

2024



# Contents

<b>About the Engineering Delivering Partnership (EDP)</b>	<b>2</b>
<b>Introduction</b>	
<b>Patrick Smith</b> Interim Managing Director, Aurora Engineering Partnership	<b>4</b>
<b>A view from the Executive</b>	
<b>Stephen Wilcock</b> Director System Integration, Engineering and Safety Authority / Senior Responsible Officer for EDP	<b>5</b>
<b>Leadership Overview</b>	
<b>Will Blamey</b> Chief Executive, UK Defence, QinetiQ	<b>6</b>
<b>David Clark</b> Global Head of Defence, AtkinsRéalis	<b>7</b>
<b>Phil Metcalfe</b> Regional Business Director for UK and Europe, BMT	<b>7</b>
<b>EDP – seven years of experience</b>	<b>9</b>
<b>Our Range of Services</b>	<b>11</b>
<b>Service Delivery</b>	<b>15</b>
<b>EDP Provider Network</b>	<b>17</b>
<b>Futures Lab</b>	<b>19</b>
<b>You said . . . We did</b>	<b>21</b>
<b>Future EDP Focus Areas</b>	<b>23</b>
<b>Case Studies</b>	
Ageing air system assurance – Chinook	<b>26</b>
Guided weapon firing success – Sea Venom	<b>27</b>
Navigation as a Service (NAAS)	<b>27</b>



## About the Engineering Delivering Partnership (EDP)

EDP is the established default route for contracted engineering services for Defence Equipment & Support (DE&S) and is available for use by the wider MOD community. It is a collaborative, progressive and agile programme that accesses the right skills, expertise and resources to ensure the UK's Armed Forces and Front Line Commands receive the best equipment and support. The programme provides capacity and capability across all service areas and focuses on output-based and longer-term outcomes to maximise efficiencies, operational performance and innovation.





## About the Aurora Engineering Partnership:

QinetiQ, AtkinsRéalis and BMT joined forces to form the Aurora Engineering Partnership – an organisation dedicated to support the DE&S change agenda and drive benefits through the delivery of engineering services. This partnership brings together proven defence sector experience and pulls on broader technological, engineering and safety expertise. Together, these three long-term DE&S suppliers are harmonising ways of working to deliver the EDP requirement and have assembled a Provider Network of 220 competitively selected providers. The Aurora Engineering Partnership, supported by this network, have the ability to help the MOD resolve the most challenging technical issues faced in development and delivery of world-leading defence capability. EDP is a ten year collaboration between the DE&S Engineering & Safety Function and the Aurora Engineering Partnership, for the benefit of the UK defence enterprise

### Our vision for EDP:

The vision for the EDP programme is to form a strong and professional engineering partnership with DE&S and the wider MOD community to enable the provision of agile and efficient outcomes for front line equipment and support.

### Our mission for EDP:

The mission for the EDP is to provide leadership across the engineering enterprise in partnership, to drive increased performance and productivity across the full scope of engineering services by focusing on outcomes for those on the front line.



## About Futures Lab:

Innovative by nature, the remit of Futures Lab is to help clients accelerate advanced solutions to the front line. Powered by EDP, Futures Lab is a responsive service dedicated to exploiting the knowledge and experience of industry and academia. It provides constructive challenge and impartial insight to inform the decision-making process and ensure an effective response to the ever-changing and complex threat environment. Through collaboration, the Futures Lab team provides a knowledgeable, trusted and reliable interface from ideation to exploitation for all stakeholders across Front Line Commands.

All Futures Lab services are available through the existing EDP framework and, as part of Future Capability Innovation (FCI) within DE&S, the Futures Lab Team contributes directly to the FCI mission:

“To improve the delivery of military capability through innovation, exploitation of technology and provision of impartial advice.”

# Introduction

## Patrick Smith

Interim Managing Director,  
Aurora Engineering Partnership



2024 saw the sixth anniversary of the EDP contract. In this year, we deepened and broadened the collaboration between Aurora, DE&S and the wider MOD, optimised our task delivery to increase value for money and ongoing flexibility and evolved our service to respond to customer feedback, whilst continuing to deliver valuable and dependable engineering outcomes for our customers. However, we recognise that we must continue to evolve our service.

The year presented a fundamental change in the context for the delivery of our services. The ongoing threat to democracy and the established rules-based approach mean our Armed Forces are under ever-increasing pressure. The need to drive efficiency and optimise public spending has become more and more pronounced. At the same time, technology and innovation has progressed at an unprecedented rate. Building on the progressive changes we delivered last year, the Aurora Engineering Partnership is now responding positively to the clear demand signal embodied within the DE&S Operating Model Refresh.

Within industry, we recognise many of the ideas and concepts inherent within this change, and whilst it may take time, we are confident that the refresh will realise significant benefit.

We are proud to have supported DE&S through the early stage of the implementation of the Operating Model Refresh. We recognise the ideas and concepts inherent within this change and are confident that the refresh will deliver significant benefit. As we move forward, we will continue to listen carefully to our customer's needs and will always look to provide effective responses and provide the best possible support by investing in new ways of working, resources and time.

Throughout the year, we have not only focussed on what we deliver but also how we deliver the engineering outputs required, including the use of more innovative data and software-driven approaches to digital acquisition. We continue to work with ambitious Delivery Teams and Chief Engineers and have created new digital engineering solutions that include the use of new software and systems, model-based systems engineering, and artificial intelligence. From the positive experience to date and our ongoing support of the Digital Engineering Centre, we have no doubt that our use of digital approaches will increase markedly over the next year.

This Annual Review aims to highlight three critical aspects of our service:

- » how the engineering outputs delivered with our customers have had a direct impact on the front line
- » the value and effectiveness of close collaboration across the defence enterprise
- » our ongoing commitment to flex and evolve in line with customer needs and priorities.

# A view from the Executive

**Stephen Wilcock**

Director System Integration, Engineering and Safety Authority /  
Senior Responsible Officer for EDP



The EDP 'One Team' approach has allowed us to respond effectively to protect our national security in a year of significant change and increasing threats. Defence Reform, the Strategic Defence Review, and the Spending Review highlight the imperative to deliver more at increased value for money. The maturing DE&S Operating Model implementation is driving reconfiguration to meet these challenges and I am incredibly grateful for the role that the EDP plays in supporting DE&S to deliver its mission and enhance the speed of acquisition of mission-ready capabilities for our end users.

Our collaborative approach fuels the innovation required to accelerate acquisition and set a new standard. The positive level of support and challenge from Aurora as our trusted strategic partner is greatly appreciated, as is the contribution of the Provider Network in supplying the experience, innovation, and capacity we rely on. I do though recognise the impact our resource constraints are having on the ability of our Provider Network to contribute, so I have challenged the Aurora partnership to work more closely with the Provider Network to improve communications and process arrangements so that we can work more collaboratively through this challenging period and beyond.

We have continued to bear down on the timescales and processes to get on contract, with more improvements on the way, including a new system to initiate, plan and manage tasks from our customers which will further shorten timescales and reduce transactional activity.

Digital Engineering is key to substantial reductions in timescales across the acquisition lifecycle which are essential if we are to maintain our competitive advantage in the face of rapid technological adoption in our adversaries. DE&S is leading change to inspire projects and unlock potential through our Digital Engineering Centre to facilitate better integration and allow us to exploit fully the power of modelling. A key component is introducing a common digital backbone across our customers and suppliers.

I note with real pride and satisfaction the sixth anniversary of the EDP in October 2024. Looking ahead, the partnership between DE&S and the Aurora Engineering Partnership, along with the wider Provider Network, will continue to drive the innovation necessary for our organisation. By leveraging the expertise and resources available, we can meet the challenges of a changing landscape and give our Armed Forces the military advantage they require. I look forward to continuing to work with and alongside our Aurora partners and provider network to continue to meet the challenges from increased threats to our national security.

# Leadership Overview



**Will Blamey**

Chief Executive, UK Defence, QinetiQ

## The Real World Impact of EDP

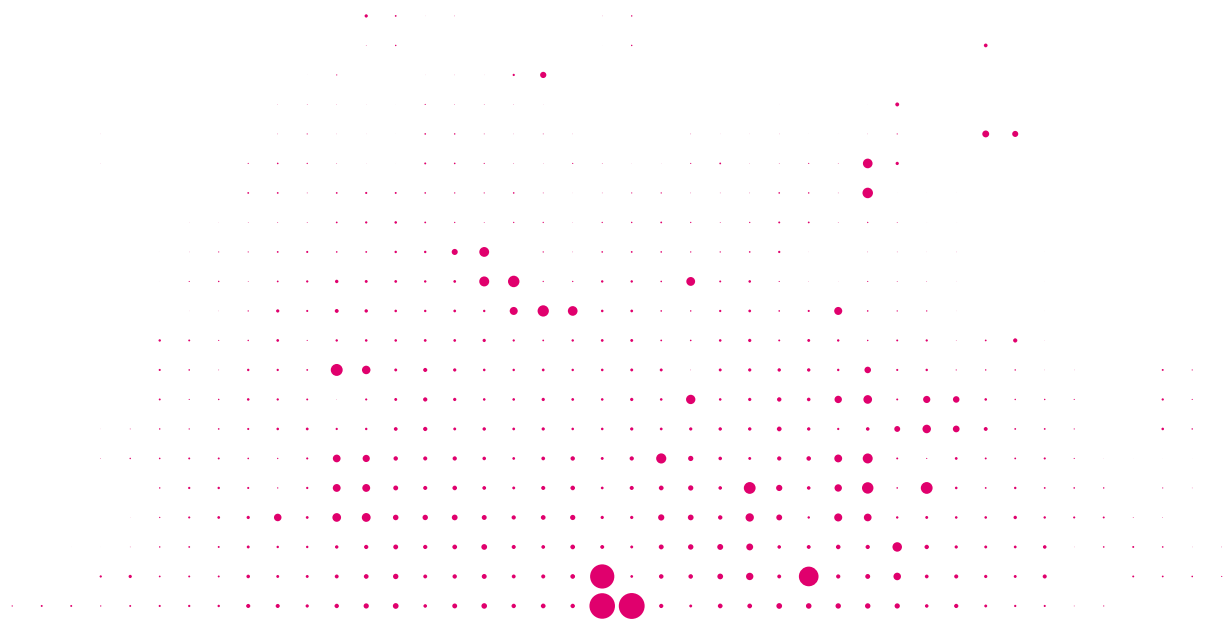
Over the last year, the Aurora Partnership has delivered outputs across 300 specific tasks to support EDP customers. In total, since the start of the EDP contract, we have commissioned nearly 2,000 specific tasks, with over 28,000 outputs delivered. This is a fantastic achievement. Such positive outcomes have only been possible with outstanding support and collaboration from our customers, and I am extremely proud of the collective impact we are having in enabling our Front Line Commands to achieve their missions.

During the year, our teams have focussed on maintaining the quality of the work we complete together – this is a critical component of our commitment to you, our customers. We are also committed to investing in digital approaches to engineering delivery, leveraging new and novel approaches to deliver improved engineering outcomes. Likewise, we are dedicated to reducing end-to-end transaction times by driving greater simplification in our processes.

Since 2018, we have developed a genuine strategic partnership between the MOD and Industry to deliver “best athlete” engineering outputs, driving efficiency through regular competition for services. Our competitively chosen Provider Network – a critical component of our service – delivers over 40% of the outputs customers receive from the Aurora Engineering Partnership.

I am deeply aware of the significant trust placed in the Aurora Engineering Partnership and, in a time of significant changes, we are committed to evolving and developing our services to meet future needs.

We are also committed to investing in digital approaches to engineering delivery, leveraging new and novel approaches to deliver improved engineering outcomes.





**David Clark**

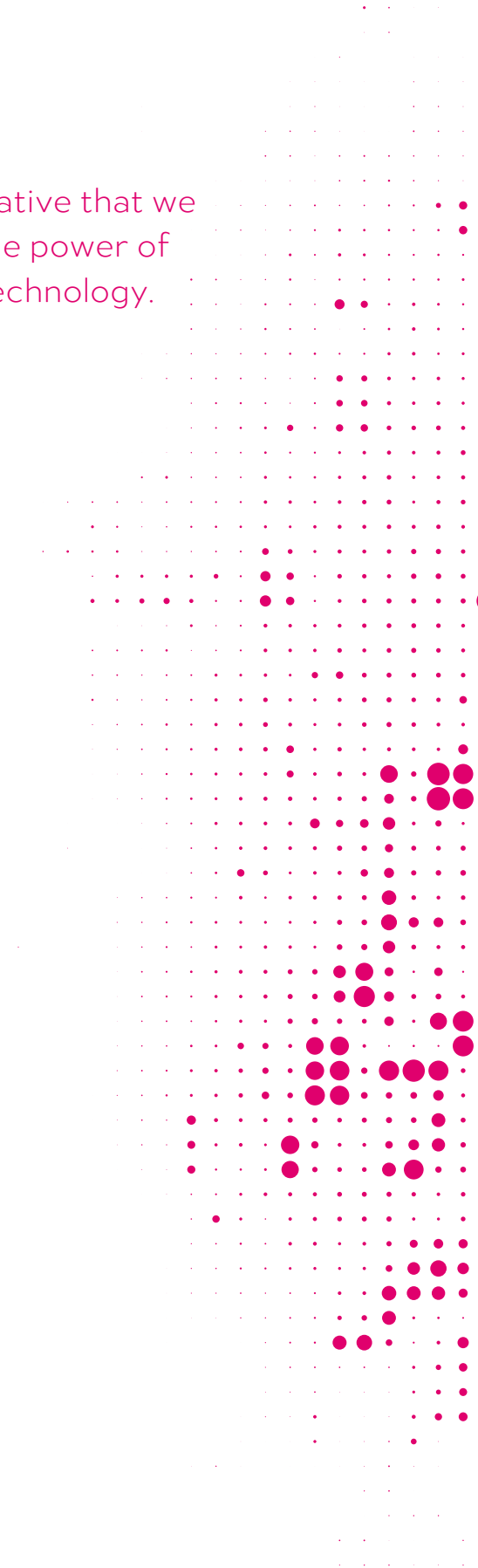
Global Head of Defence, AtkinsRéalis

The unrelenting pace of change in the world, and in defence, continues. We find ourselves in an ever-evolving and dynamic threat environment so it is imperative that we harness the power of modern technology. Digital Engineering will enhance pace, improve agility, and increase the effectiveness of our defence acquisition and support activities. This will help us to gain a competitive advantage against our adversaries while also delivering value for money to the UK taxpayer.

In 2024, the Aurora Engineering Partnership made a significant investment in digital solutions to address both current and future problems areas and implemented software and data driven approaches to deliver positive engineering outcomes. Such initiatives have included the introduction of proven digital twin experience from the infrastructure business of AtkinsRéalis into the defence sector, the deployment of the very latest thinking on large language models used in AI and the creation of a single coherent digital thread through the use of Digital LEAP (Lifecycle Engineering Accelerated Pathway).

As we lean into the organisational changes at DE&S, we are excited by the opportunities this will present for the Aurora Engineering Partnership for improving the engineering outcomes for DE&S, the Submarine Delivery Agency (SDA) and the Front Line Commands.

It is imperative that we harness the power of modern technology.



# Leadership Overview



**Phil Metcalfe**

Regional Business Director for UK and Europe, BMT

The strength of the Aurora Engineering Partnership is founded on an unwavering commitment to build robust partnerships and effective collaboration. EDP's Partner companies and Provider Network demonstrate dedication and professionalism daily. However, maintaining and enhancing such close working relationships requires significant and continuous effort. Developing such a supportive and collective culture is a key focus of investment by the Partnership.

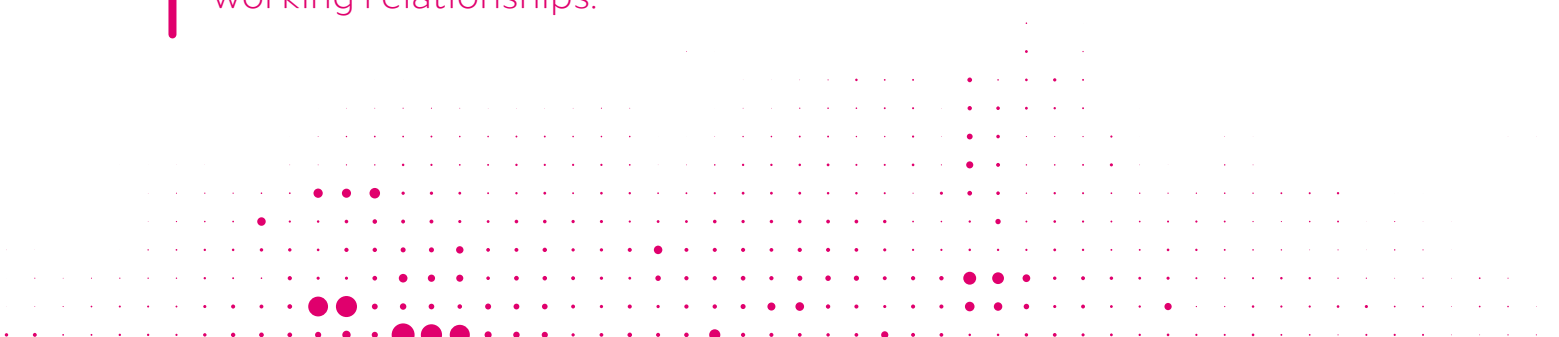
The relationship between the Aurora Engineering Partnership and its direct customer, the EDP Authority Hub, has flourished under the One Hub initiative as it emphasises the importance of inter-team relationships by encouraging a deep understanding of respective roles and responsibilities. A shared mission and clear goals support the principles of joint ownership and the delivery of a continuous improvement programme. This helps to reinforce the collaborative strength of the Partnership and ensures the seamless delivery of the EDP contract.

Aurora is co-ordinating several initiatives to drive closer and more collaborative working relationships. These include the curation and stewardship of the technical capabilities of each partner, aiding the formation of capable pan-company teams and, where necessary, facilitating further skills development.

The standardisation initiative is a cornerstone of these efforts. It aims to deliver significant operational benefits by providing coherent and understandable outputs more efficiently. Pathfinder projects underpin this initiative, offering common ways of working, ontologies, lexicons, and templates. These will enhance SQEP sharing and deliver consistent outputs to provide near-term benefits and long-term digitisation readiness. However, adopting standardisation across MOD systems will require a cultural shift within the customer community that is closely aligned with the ambition of DE&S Director of Engineering & Safety to embrace digitisation and establish a unified model for engineering safety.

Through focused initiatives and collaborative efforts, the Aurora Engineering Partnership is continuing to build, sustain and enhance the value of its partnerships to ensure effective service outcomes in all areas and long-term success in a rapidly changing environment.

Aurora is co-ordinating several initiatives to drive closer and more collaborative working relationships.



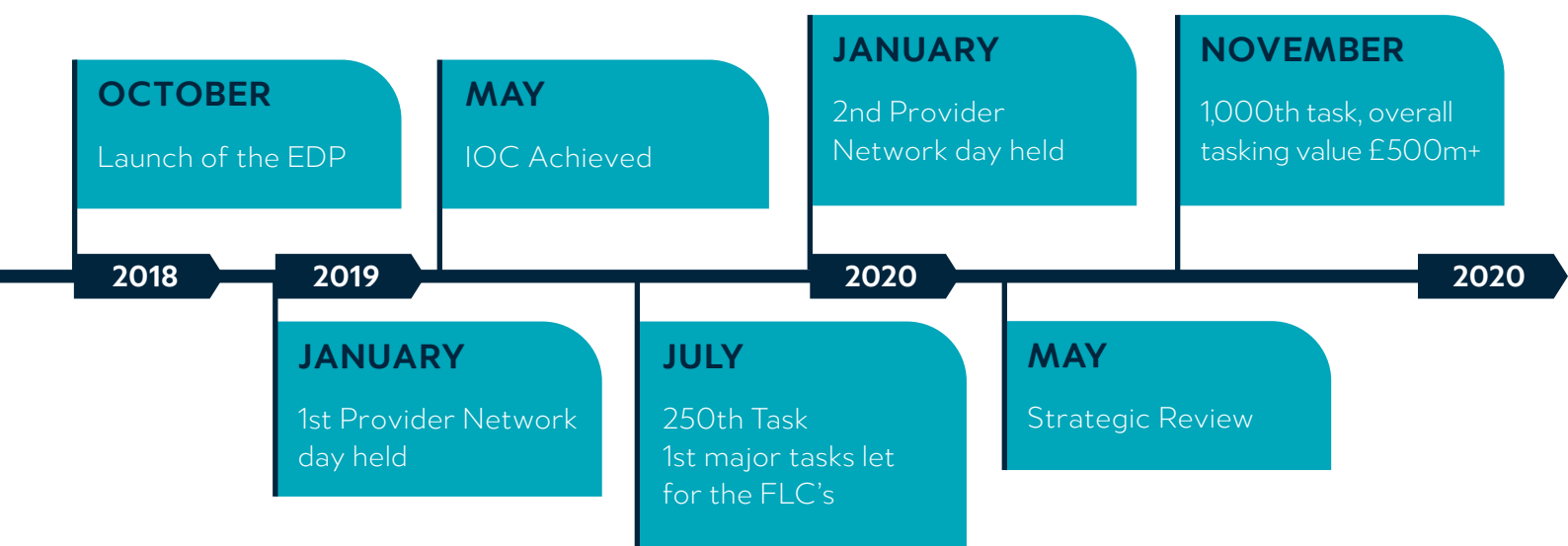
# EDP – seven years of experience

EDP was launched in October 2018 as a new and innovative way of procuring engineering services for DE&S. This move followed an earlier reliance on the Framework Agreement for Technical Services (FATS) where DE&S ran competitions for every technical support task it was looking to place, and every project team had to use the valuable time of a commercial manager to run even the smallest of tasks.

The EDP approach changed all of that. There was no longer a need for project teams to run competitions. They could now provide a statement of requirements through a single front door, with the EDP contractor – the Aurora Engineering Partnership – running the competition and providing a single priced proposal back to the project team. Since 2018, this has happened nearly 2,000 times, saving DE&S countless hours running competitions and helping to maximise efficiencies across the organisation.

In November 2018, the Aurora Engineering Partnership held their first Operations Board with DE&S.

## EDP Timeline



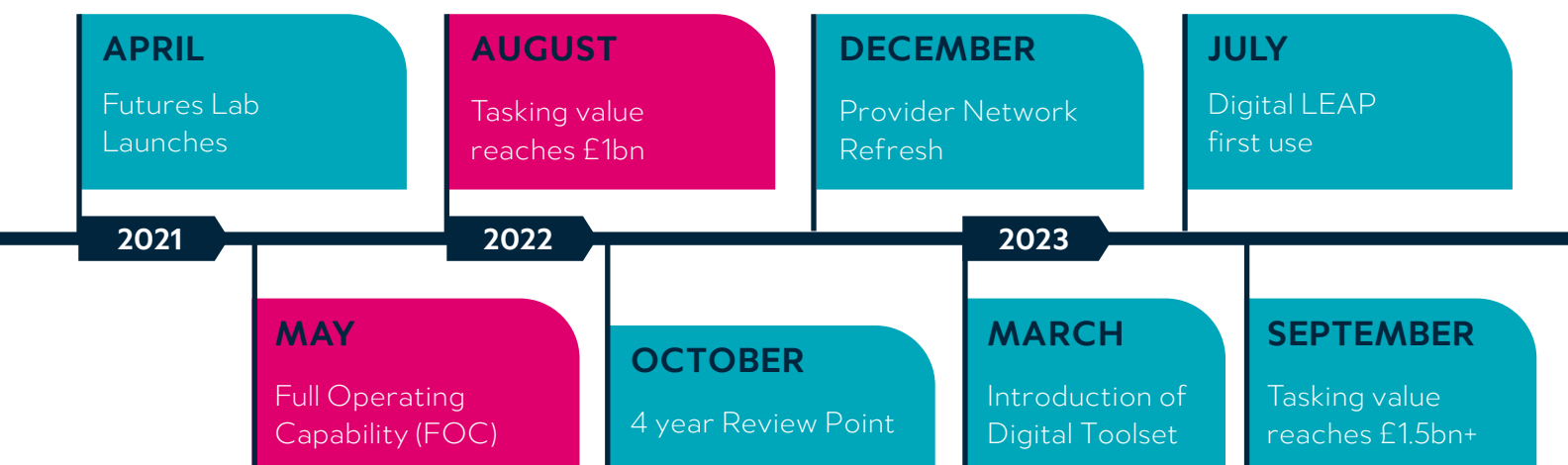
### **Gordon Barr, the first Managing Director of EDP, remembers those early days:**



When the concept of an Engineering Delivery Partner was first conceived, we realised this was a once in a generation opportunity to create the right relationships that would truly transform engineering services.

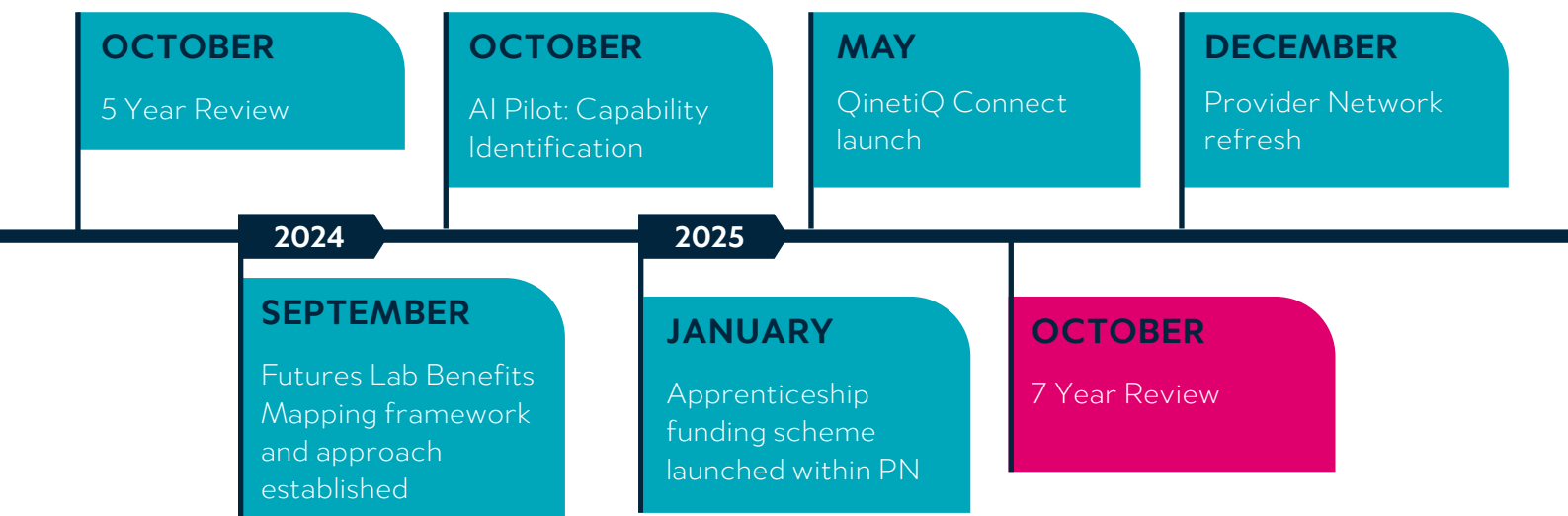
Led by DE&S, the MOD wanted to fundamentally change their relationship with industry to create a much more collaborative environment where high quality and effective solutions could be developed by reaching out into the best of UK industry through a more connected provider network. We formed the Aurora Engineering Partnership to ensure we had the best our industry had to offer in order to meet the MOD's exacting EDP requirements and better support the delivery of the MOD's capability plans

We formed the Aurora Engineering Partnership to ensure we had the best our industry had to offer.



“Together with the wider Defence enterprise, we have embraced the original challenge to create a far more data-rich environment where we maintain operational transparency at all times and only contract the services that are really needed. We have made full use of digital tools to manage the engineering outputs required to ensure MOD teams have the confidence to commit to multi-year and well-specified service delivery plans that have the right level of flexibility.”

“I believe the changes made under EDP programme – many of which are now easily taken for granted – have significantly improved the dynamic between the MOD and industry over the six years of EDP operations. We have been fortunate to have received real support from across the MOD and industry. This has helped us to build on strong original relationships and provided the scope to develop an honest feedback culture and collective intent that are so important for driving continual improvement.”



# Our Range of Services

A common taxonomy has been in use across EDP to ensure that our customers have a clear understanding of the key engineering and service categories. Below we provide examples of tasks completed under each category.

## AURORA CATEGORIES

### CONTINGENT LABOUR

Provision of Contingent Labour into customer organisations.

During 2024 EDP provided 225 Suitably Qualified and Experienced People (SQEP) to support on a range of projects and programmes. The demand ranged from individuals, through to teams of up to thirty. They provided a wide range of essential and specialist skills including, safety, environmental, ordnance, munitions and explosives to name but a few.

### SYSTEMS ENGINEERING

Supporting requirements capture and validation, development of architecture and planning acceptance.

Futures Lab supported Strategic Programmes Test and Evaluation to develop a Robotics and Autonomous Systems (RAS) Test Bed concept demonstrator.

The customer required the ability to test the autonomous behaviours of ground and near-earth platforms, using physical and virtual methods, in off road battlefield environments, to define the operational design domain of the autonomous behaviours with respect to weather, terrain and dynamic elements. A RAS Test Bed Facility Concept Demonstrator was developed. This activity contributed to assuring the safety of systems that make decisions for autonomously crewed vehicles, including both Uncrewed Air Systems and Uncrewed Ground Vehicles.

## AURORA CATEGORIES

<b>DEFENCE LINES OF DEVELOPMENT (DLODS) &amp; CAPABILITY SUPPORT</b>	Supporting the (non-Equipment) DLoDs contribution to introduction and integration of capabilities.	As part of the Novel Weapons programme Concept Phase, Futures Lab carried out an independent SQEP review of the Test and Evaluation capabilities available to UK defence. The study identified delivery risk and opportunities for investment, thus helping future military solutions, using Directed Energy Weapons technology, to be delivered and supported through life.
<b>CYBER &amp; SECURITY</b>	Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning.	The Special Projects 1* portfolio in DE&S needed Secure by Design (SbD) support from the EDP partnership, so effort was moved from other projects to allow SbD processes and documents to be produced that have now been adopted across multiple Delivery Teams in Special Projects. The ability to flexibly use resources across Delivery Teams to fill gaps or deal with surge tasking was considered to be a major advantage.
<b>SAFETY &amp; ENVIRONMENTAL</b>	Supporting the generation and maintenance of safety environmental management systems including the demonstration of safety compliance with safety and environmental regulations.	Through a recent EDP task we were involved a full range of services to address safety and environmental issues. This included the delivery of twelve Streamlined Energy and Carbon Reports for the Mechanical Handling and Lifting Delivery Team, delivery of twelve Hazard Identification sessions resulting in Hazard Logs updates to e-Cassandra (the MOD-preferred tool for constructing hazard logs) In addition, structural fatigue investigations were conducted for the Type 23 and Naval Architecture support for the Type 45.

## AURORA CATEGORIES

### PERFORMANCE OPTIMISATION

Supporting the optimisation of system, platform or equipment performance.

The Aurora Engineering Partnership supported the Voyager Delivery Team to undertake an Ageing Aircraft Audit of the in-service Voyager fleet.

An Ageing Aircraft Audit was conducted at the midpoint between Voyager's in-service date and out of service date. The audit was conducted to the satisfaction of the Military Aviation Authority and in accordance with the Manual of Air Systems Management to ensure the continued airworthiness of the Voyager fleet.

### TECHNOLOGY MANAGEMENT

Investigation, understanding, integration and exploitation of new technology into capability solutions.

Futures Lab supported Strategic Command in capability development and the development of mission planning and tactics capabilities.

The proliferation and sophistication of threat systems around the globe continually increases. Defence Intelligence (DI) needs to understand the performance of these threat systems if it is to be able to offer reliable and up-to-date analysis in support of Capability Development and Front-Line Command mission, planning and tactics development. Modelling and simulation is an intrinsic precursor to these functions and the importance of having a support/software integration support service continues to increase year on year. Furthermore, due to policy changes, UK customers now have a mandated requirement to verify threat models with DI. This increasing requirement directly supports the need to continue providing the delivery, assessment and integration of threat models. This service provides the expertise required to take intelligence assessments and modelling outputs into deliverable customer tools to enable the UK to maximise its operational advantage.



## AURORA CATEGORIES

### LEGISLATIVE & REGULATORY COMPLIANCE

Supporting the optimisation of system, platform or equipment performance.

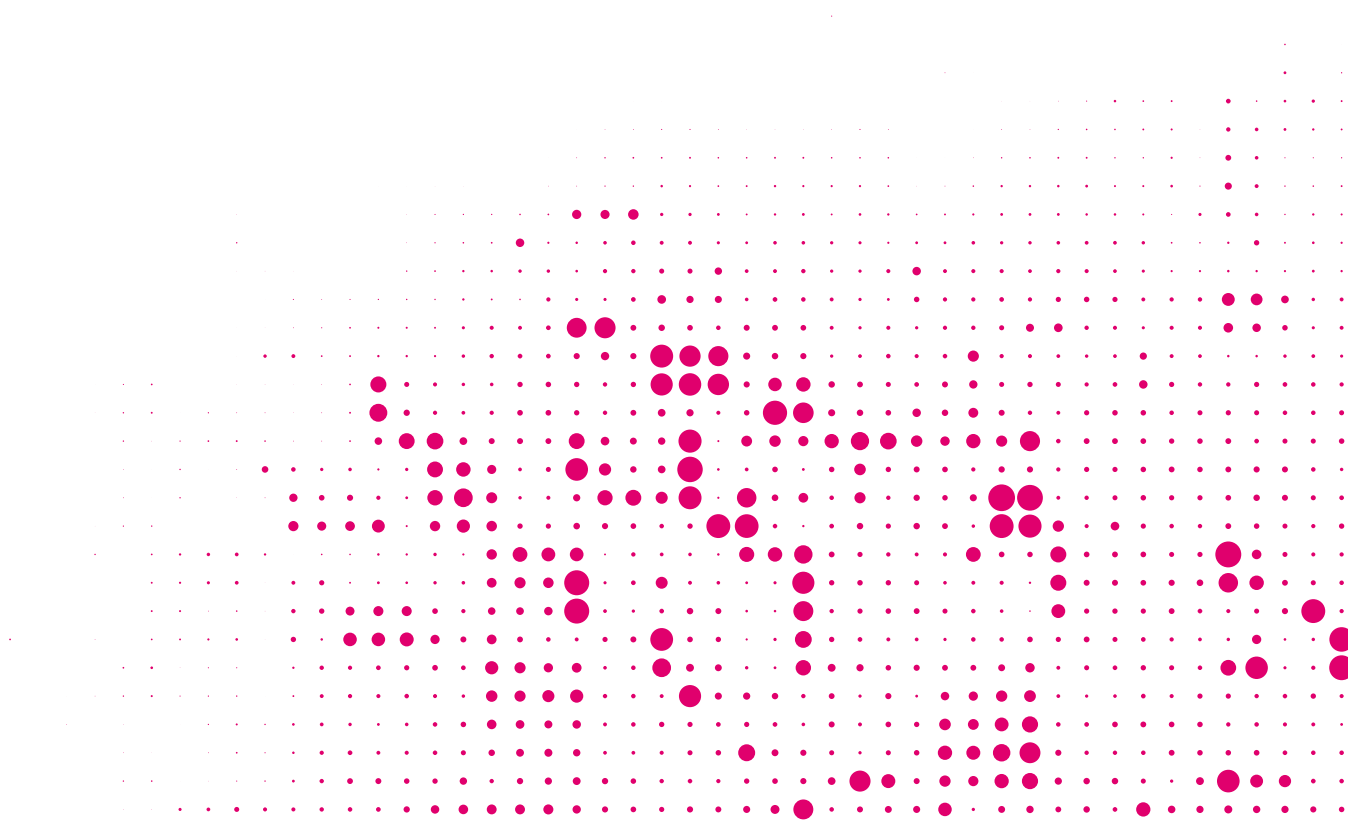
The Aurora Engineering Partnership were tasked to support the Defence Maritime Regulator (DMR) in the initial production of the Guide to Regulation of Maritime Autonomous Systems (MAS). The DMR had identified that MAS was being demonstrated and bought into service and legislation and regulation was not clear for these equipment, systems and platforms. The guide is now in use throughout the defence MAS community. Cdre Ian Groom RN, the DMR, stated that “this work has been pioneering and has been offered up to and been well received, by other Nations”.

### ENGINEERING MANAGEMENT & APPROVALS

Supporting engineering governance and decision making.

Futures Lab has supported RAF Digital to deliver an innovative, evolving, and cross-industry enabled Professional Service to support its Architecture Function.

The RAF Digital Architecture Function provides a range of services to the Air Top Level Budget such as Information Defence Line of Development support to Air Programmes, Solutions Architecture, Enterprise Architecture and Secure by Design Assurance. The Futures Lab support enabled RAF Digital to implement evolving services to its customers in accordance with the published Blueprint.



# Service Delivery

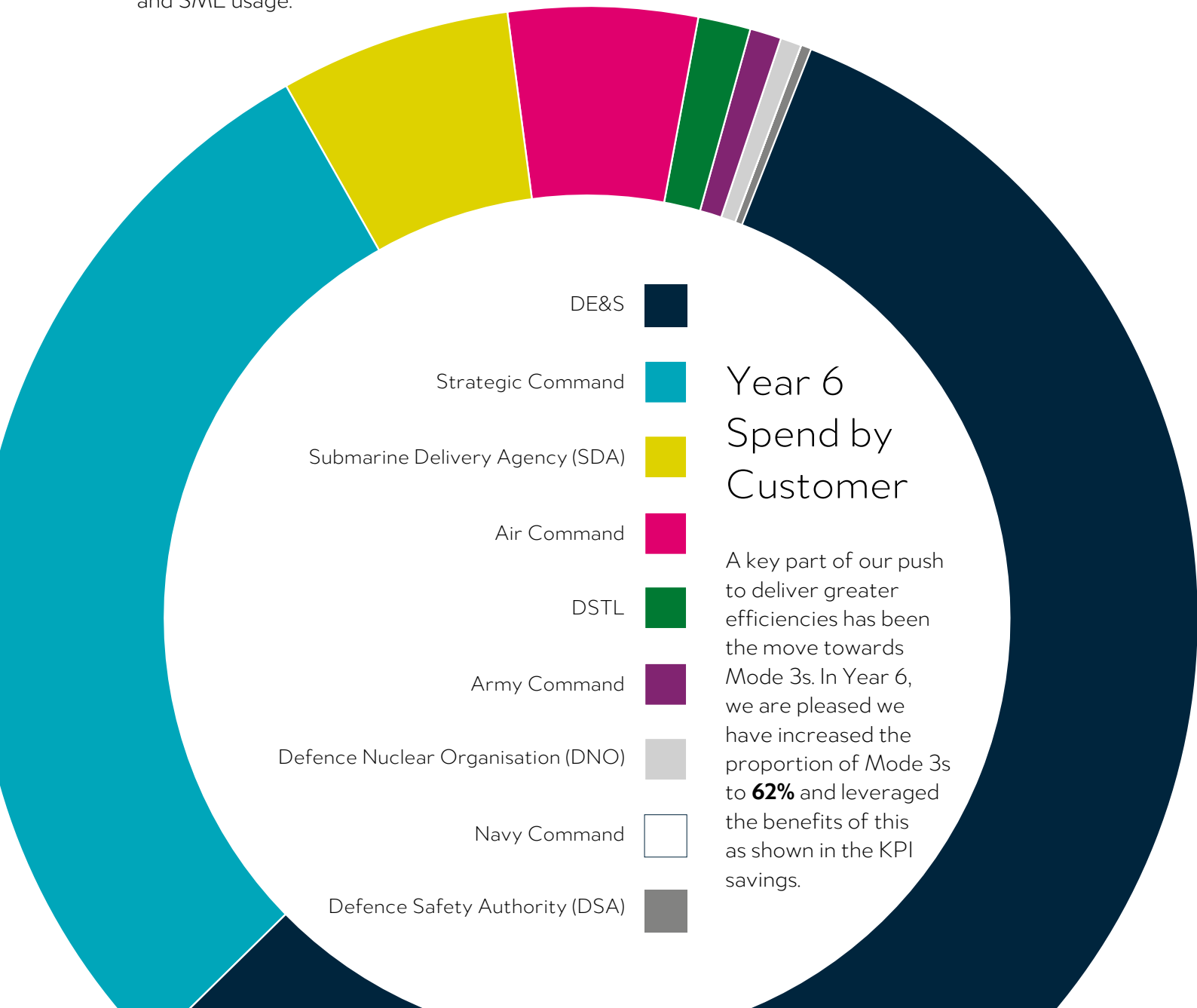
We're delighted to say that we are rapidly approaching the **£2 billion** mark for total contracted work since 2018.

Since its inception, Aurora has delivered the EDP contract under a Key Performance Indicator (KPI) regime designed to push our performance year on year. The KPIs are all stretch targets, that is, their baseline is an assumption that we are already delivering an excellent service.

The KPIs cover: financial savings; engineering output delivery, timeliness and quality; process timeliness; Diversity and Inclusion and SME usage.

Aurora have continued to deliver savings across the customer base and the modes.

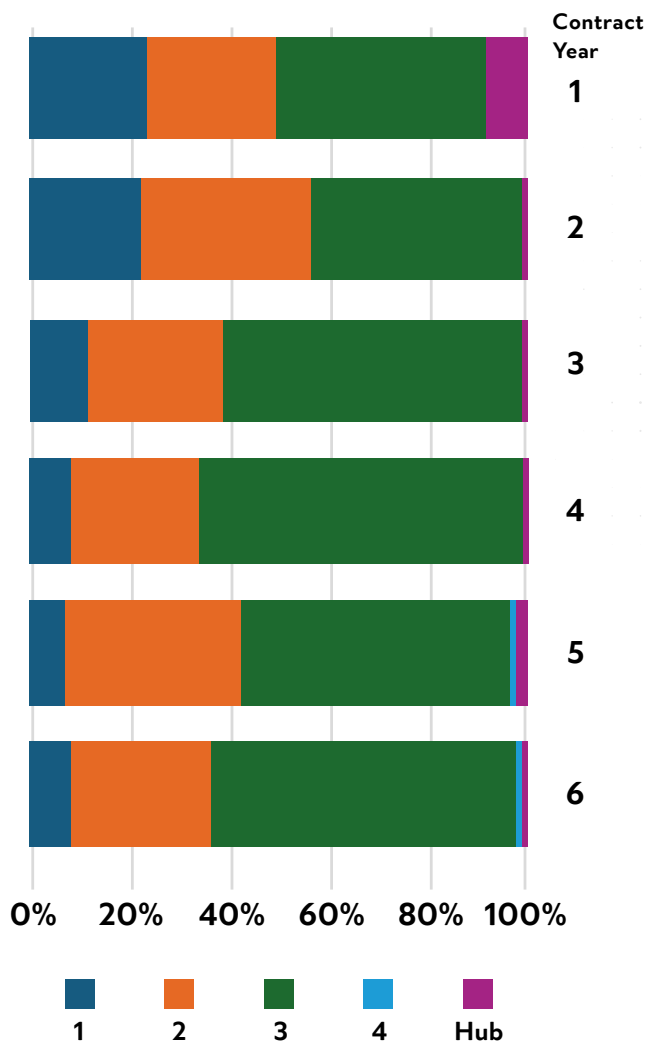
We have also increased the relative diversity of the customer base. In Year 6 DE&S represented **54%** of contracted value, whereas in Year 1, **88%** of contracted value was with DE&S.



Year 6  
Spend by  
Customer

A key part of our push to deliver greater efficiencies has been the move towards Mode 3s. In Year 6, we are pleased we have increased the proportion of Mode 3s to **62%** and leveraged the benefits of this as shown in the KPI savings.

## Transaction values by mode



## Output Delivery KPIs for Year 6

In Year 6, we maintained high standards in both quality and timeliness of deliverables, across the higher Modes.

We guarantee the quality of our work and resolve any shortfalls, at our cost, to ensure the tasks meet the requirements before payment is made.

**99.24%** of our outputs, across all tasks, were assessed by customers as being of appropriate quality and right first time. We are proud of this delivery heritage; however we recognise that much of this work is only possible through close collaboration with our customers and our Provider Network.

**97.24%** of our outputs were delivered on time or early.

### MODE ONE

**£4m = 13%**

### MODE TWO

**£6m = 6%**

### MODE THREE

**£39m = 16%**

### TOTAL SAVINGS

**£49m**

## What are the Modes?

**Mode 1:** Provision of engineering resources

**Mode 2:** Delivery of short-term, output-based tasks on a firm price basis

**Mode 3:** Delivery of long-term, output-based tasks through a collaboratively developed programme of work, on a firm price basis

**Mode 4:** Delivery of long-term, outcome-based tasks through a collaboratively developed programme on an incentivised fee basis

# EDP Provider Network

## Sam Maxfield

Commercial and Provider Network Lead, Aurora Engineering Partnership

Over the past year, we have made a significant amount of progress with the Provider Network. However, we can also see how there is always more we can do to ensure our value chain is aligned right through to the MOD and that service and process improvements continue.

We have started to introduce a number of more strategic contracts to deliver further advantages for both the MOD and the companies involved. These contracts tend to be large and of long duration. This allows greater involvement of the Provider Network in more complex projects, with greater engagement and knowledge sharing and increased scope for investing in the development of our core asset – our people.

There is a growing recognition amongst the Aurora Partners of the huge value that the Provider Network brings to EDP projects, especially in terms of innovation and additional capability. This has required more strategic thinking and decision making about how we engage and a move away from only considering the Provider Network when required by capacity demands.

Feedback indicated that we were not always providing sufficiently clear project requirements or timely responses to proposals. As a result, we have revised our procedures and processes, improved transparency in evaluation criteria, reset expectations on how we interact and improved access to customer insights.

It is a point of pride that we have been able to support some members of the Provider Network SME community with specific funding donations for apprenticeships to support learning and development. This initiative has included military veterans transitioning into civilian jobs. Some really high calibre individuals were also selected through a competitive 'Dragons Den' process who we are sure will bring real benefit and added value to the defence sector.

Looking ahead, it is clear we need to apply specific focus on the value for money initiatives – particularly on strategic partnering – and we look forward to the Provider Network refresh and a concerted effort to bring the Aurora Partners and Provider Network ever-closer together. In very challenging times for the defence sector, we must continue to work together as one team to provide the best possible outcomes for the MOD.



## How the Provider Network supports critical military capability

Fast and reliable access to digital systems is vital for ensuring situational awareness across the battlefield. A special project Delivery Team of DE&S is addressing a wide range of engineering and security challenges in this field, supporting specialist users with hardware and software capabilities through separate but often interlinked projects across different portfolios. This covers everything from body-worn communication and Situation Awareness capabilities to advanced radio data networking and long-range HF capability from fixed or mobile sites.

C3IA is a company which is part of the Provider Network. The C3IA team is involved in all aspects of the Delivery Team's work and provides the specialist insight and expertise, and most of the engineering resource. Significantly, the team draws upon first-hand experience as well as a deep understanding of the operational demands and time constraints of users founded on close working relationships spanning many years. Such sound advice and advocacy have proved to be invaluable.

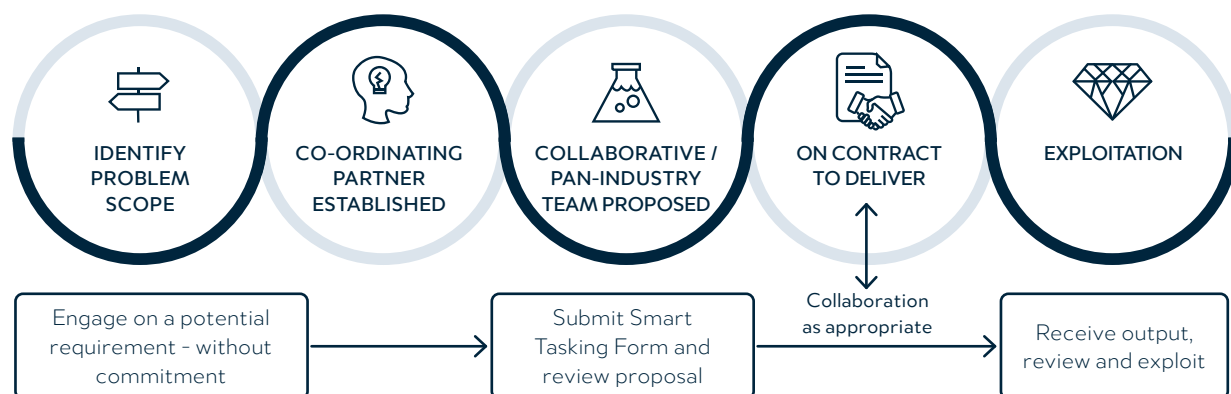
### Agile delivery

A progressive migration to agile delivery methods for various portfolio projects is enabling the delivery team to adopt new and more effective ways of working. The C3IA team has developed various initiatives and played a central role in this service transformation. Such support has included planning sessions to improve knowledge of different projects within the portfolio and to highlight any dependencies that exist. A series of workshops have also been held to ensure the delivery team is fully aware of its new responsibilities and steps have been taken to establish the principles of continual development in the service model for future projects.

The success of the transformation owes much to the embedded knowledge, insight and wider company experience of the C3IA team. This has helped to establish a dynamic team spirit, a more collaborative mindset and a 'can do' culture. The positive outcomes and achievements delivered at pace by the Delivery team have secured no less than two Director Awards and four Team Leader awards over the past year.

- » "Your tireless work and dedication were instrumental in the successful delivery of this critical capability on current operations without any delay."
- » "Your resolute support for 3 days of intense negotiations over and above your existing workload was invaluable and demonstrates your ongoing commitment to the success of the project."
- » "You played a critically important role in generating and securing SRO endorsement of the security case on the Urgent Capability Requirement (UCR)."

# Futures Lab



Futures Lab, powered by EDP and part of the Future Capability Innovation (FCI) within DE&S, offers responsive service, impartial guidance and expertise to support defence in three key areas:



Operating as a small team, Futures Lab works fast to take a demand signal from the Front Line Commands and provide a costed proposal that incorporates at least 70% Provider Network involvement. It is a key tenet of Futures Lab that there is a 'Rainbow Team' approach in order to bring a pan-industry view to an issue. These will assist the Front Line Commands (FLC) through provision of evidence-based decision support tailored to their needs and aligned with the Futures Lab service categories.

Under the new leadership of Sid Godbole, the Futures Lab team has challenged itself to articulate the tangible Value for Money benefits to Defence in terms of Efficiency, Effectiveness, and Economy (as defined by the National Audit Office). Initial analysis has shown that Futures Lab can save between 50-88% of the time it takes to move from ideation to a statement of work. As a result, more time is available for productive use on other project commitments.

With the majority of Future Lab's work going to the Provider Network, it is vitally important that we maintain a wide range and mix of providers, innovators, and technology leaders from various industries.

Organised with a clear taxonomy, the Futures Lab network includes over 250 organisations - ranging from micro and small businesses to medium and large enterprises - as well as five universities. We have grown the network by 45% in the past 15 months. This has been achieved without compromising the SME focus - 77% of members are classified as SMEs and 59% as micro or small organisations. We operate as an open network, regularly on-boarding new providers and maintaining low entry barriers. All members receive access to relevant information requests regardless of their service delivery focus.

# Futures Lab

Powered by EDP

To keep the network engaged and informed, the Futures Lab team offers structured updates, including monthly pipeline briefings, bi-monthly newsletters, bi-monthly provider meetings and an annual provider network event.

Futures Lab works across all Front Line Commands delivering a wide range of projects ranging from early experimentation to horizon scanning studies. All of Futures Lab work is coordinated through the Future Capability Innovation team and is pre-concept phase, de-risking or feasibility type work.

Examples include:

- » Digital Twin Capability Concept Demonstrator
- » Packaging Material Flow Analysis
- » Developing Digital Measures of Effect for Defence Digital
- » Research and develop products that support future drone development and procurement activity
- » Digital architecture, and Crypto modernisation
- » Analysing the breadth of lithium batteries and their supply chain
- » Developing innovative approaches for a Hypersonics framework - understanding industry approaches for embedding the principles of a circular economy, reviewing standards for qualifying parts produced using additive manufacturing
- » High-Altitude Effectors, Artificial Intelligence and Novel Deep Effects.

# You said ... We did

## Reduce End to End (E2E) timescales

Over the last three years the EDP approach has reduced the E2E timeframe from 90 working days to 50. This measures the time from the Customer first making contact with EDP to the Task being contracted and involves many stakeholders and dependencies. Such a significant reduction has been achieved by increasing consultation at the pre-proposal stage to minimise any surprises at a later date, as well as a refreshed proposal template and a clear focus on the time to produce the proposal and conduct competitions. EDP will continue to seek solutions to reduce transaction times wherever the opportunity arises.

## More innovation - Dragon's Den

EDP has driven innovative solutions by facilitating special SME presentations of ideas to critical Authority decision-makers. Quarterly 'Dragons Den' events have been held at the Innovation Hub in MOD Abbey Wood and have resulted in tangible tasking for many ideas. These events will continue, with ongoing alignment to the refreshed DE&S operating model.

## Full digital tasking

EDP has benefited from the use of Enterprise On Line (EOL) for the majority of its operations. Developed by QinetiQ, this solution delivers proposals for acceptance and then monitors output delivery. The use of EOL has been extended to process Mode 1 changes and all new tasks and has delivered transactional efficiency and greater transparency for all tasking modes and stages. The EOL platform will be replaced by QinetiQ Connect in Spring 2025.

## Modernise proposal presentation

In response to user feedback and in partnership with the Authority, EDP has transformed the task proposal template to a single electronic file that combines task costings with the technical proposal in a clear and easy to comprehend solution. Replacing the conventional 'Document + Cost model' format has reduced the error rate and enabled a much more rapid assimilation of what is to be delivered and how. This has now been used on over 300 tasks.



### **Increase digitisation of the service – QinetiQ Connect**

Increased digitisation is a key goal for EDP. The deployment of the QinetiQ Connect (an Internet hosted 'Software as a Service' solution) digital platform will provide a significant step in helping us to achieve this goal by transforming tasking and contracts delivery processes. This will enhance the engagement experience and achieve operational efficiencies and enriched insights for all stakeholders.

Connect is available across Aurora and delivers efficient workflow and decision-making solutions for enquiries, task commissioning and delivery. It also includes graphical overviews supported with direct messaging and document management designed to reflect the complexity of the tasks. It is cleared to Official Sensitive and is available to customers, partners within the Aurora Engineering Partnership and suppliers to ensure the EDP eco-system is fully joined up.

### **Deliver continuous improvement**

The EDP programme benefits from an unwavering commitment to identify and pursue improvements across all key service areas - from Solutions, Service delivery, Engineering, Communications and Commercial to the Provider Network and Finance. Working in partnership with our customers, the teams have taken proactive steps to coordinate actions and ensure alignment on change goals to deliver beneficial outcomes that are fully shared.

### **Maximise task flexibility**

By working with customers to identify ways for combining tasks into fewer, larger scope tasks, the EDP programme is enabling customers to re-direct resources to fulfil re-prioritised tasks with minimal transactional burden. Now in place across most customer sectors, these optimised tasks have received very positive feedback for their ability to flex in response to changing priorities and maintain operational agility.

### **Respond to the DE&S Operating Model Refresh**

As a customer-focused operation and with the full encouragement of its Senior Responsible Officers (SROs), the EDP programme has maintained extensive engagement across DE&S as it has transitioned through its Operating Model Refresh process. This has enabled effective tracking of task migration to 'new' DE&S owners and helped to ensure continued service evolution and development. We are confident we can continue to provide the best solutions, taking full account of the revised demands of the department.

# Future EDP Focus Areas

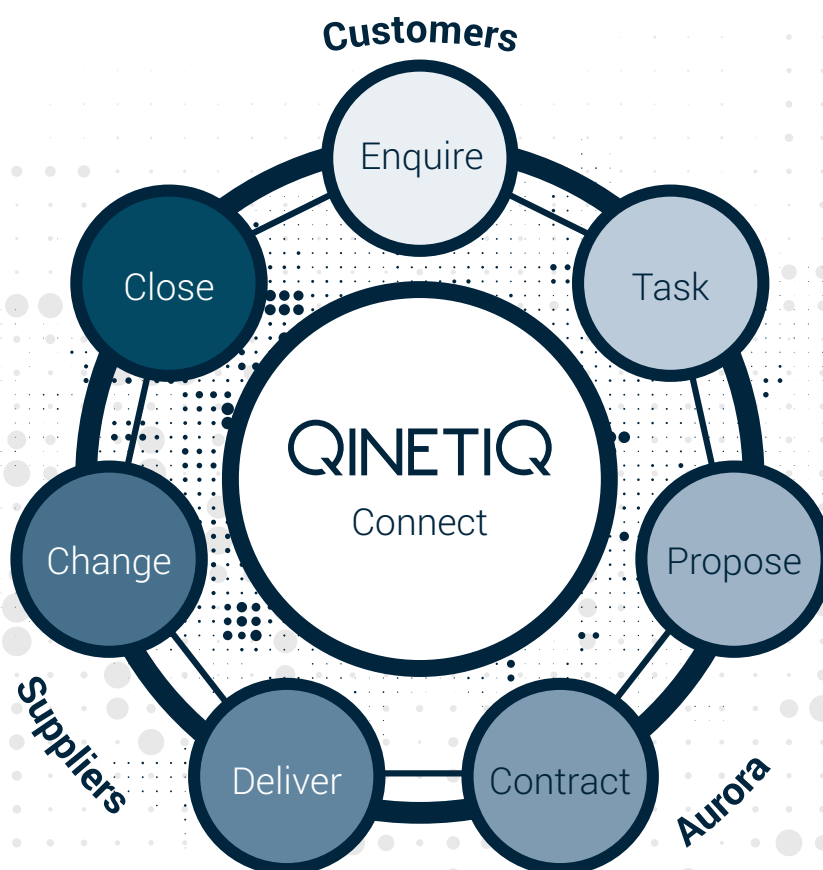
To fulfil its mission to bring the best value engineering service to the MOD, the Aurora Engineering Partnership must not only deliver today's engineering services but also prepare for the future.

DE&S is making significant operational changes to achieve its corporate vision. A key element of this is digital transformation. As the engineering partner to DE&S, the Aurora Engineering Partnership is fully focussed on the adoption of digital ways of working – not only across the partnership itself, but also across DE&S and the wider MOD. Several important initiatives with private investment, have been introduced by the Aurora Engineering Partnership to bring digital best practice to DE&S. We have set up the Aurora Digital Office to oversee, coordinate and govern the outputs and drive the successful achievement of our digital goals.

A few of our larger initiatives are outlined here – from digital transformation to the pursuit of new capability and resourcing.

## **QinetiQ Connect**

QinetiQ Connect will link the MOD with the Aurora Engineering Partnership and its suppliers to provide efficient access for enquiries, task commissioning and delivery. The system aims to increase operational efficiency across DE&S and we estimate a significant 25% reduction in contracting cycle times in the first year of implementation.



## Digital LEAP

Digital Lifecycle Engineering Accelerated Pathway (LEAP) is an Aurora Product Lifecycle Management toolset. It brings increased efficiency and productivity by providing project teams with a method to combine data from DE&S, EDP and the OEM.

Based on cloud technologies, LEAP provides a collaborative environment and workflow management through the whole engineering lifecycle. It provides a 'digital thread' through the life of the project, recording decisions and supporting evidence as the project progresses along its pathway.

The benefits of Digital LEAP vary according to the role of the user. It provides pan-enterprise connectivity to OEMs while respecting IPR, ITAR and security constraints. It provides impact analysis for requirements changes and stores corporate knowledge of decisions. It facilitates progressive development and assurance of MOD artefacts (safety cases, ITEAPs, etc).

## Provider Network

The Provider Network generates 40% of EDPs revenue and supports SMEs across the UK, with over 230 companies providing engineering skills and expertise to benefit customers.

As we approach the next refresh point, we are taking the opportunity to ensure that our Provider Network continues to meet current and future MOD requirements. We are also looking at ways to optimise the Provider Network management so that dedicated support to improve offerings and competitiveness is available.

## Enterprise Capability Development

The defence enterprise needs to continuously monitor and address emerging capability gaps.

Working collaboratively with DE&S, the Aurora Engineering Partnership is taking a strategic and integrated approach to capability development. We are challenging ourselves to improve access to engineering SQEP (Suitably Qualified and Experienced Personnel), and ensure we have facilities in the right locations and are providing the best tools and processes to generate maximum benefit for the Defence Enterprise.

Our collaborative production of a Capability Development Operating Model will help to monitor and address any gaps between future demand and current capability across the Partner and Provider network. This will interface with DE&S and reflect the different types of demand we see from across the new DE&S operating model. Working in partnership with DE&S and our other EDP customers, we will generate a coherent long-term approach to capability development, providing positive support for the Defence Enterprise today and into the future.

## Standardisation

Standardisation lies at the heart of our efforts to improve our ways of working and drive costs out of engineering delivery.

Through standardisation of data, process and outputs we can achieve a single source of truth for the MOD. Greater efficiencies will be attainable as re-use of data and repeatable processes and standards become the norm rather than the exception. We have selected four pathfinders: Secure by Design; Safety Management (in the Land environment); Military Air Systems Certification; and Cyber Security Airworthiness.

## CASE STUDIES

# Ageing air system assurance – Chinook

### The challenge

The effective management of airworthiness risks is vital for maintaining rapid mobility of ageing aircraft throughout their service life. However, the limitations of the traditional Ageing Air System Audit were compromising informed decision-making on integrity management and future airworthiness of the MOD's fleet of ageing Chinook helicopters. This was providing insufficient data on the impacts of ageing across the wider fleet, as attention was normally focused on the condition of only one sample Chinook.

### The solution

To overcome this problem and provide greater operational assurances, The Chinook Delivery Team contracted eight surveys on aircraft chosen from different manufacturing lots for completion within a period of fifteen months. This has provided a much more comprehensive and insightful picture of the condition of the ageing fleet.

It was essential for the team to have sufficient experience in mechanical, avionics and electrical systems to cover the scope of the work. Consequently, AtkinsRéalis and QinetiQ each provided one aircraft surveyor. Technical leadership was shared between the partners, with the benefit of additional support in specific areas of aircraft engineering from the partnership's wider pool of specialist expertise. The assigned Project Manager and Technical Assurance Reviewer from AtkinsRéalis ensured compliance with a rigorous technical assurance process prior to the delivery of independent and impartial reports to the client.

### The outcome

The eight surveys were completed during a maintenance period, so the team had much greater access to areas of the Chinook previously excluded from earlier assurance inspections. The approach shed new light on the ageing process and highlighted trends that the Chinook Delivery Team are now able to draw upon to make well-informed decisions about airworthiness and future integrity management activities.



# Guided weapon firing success

## – Sea Venom

### The challenge

Meticulous planning and a collaborative approach were required to demonstrate the first guided firing of a major technological advance in anti-surface missiles. The trial programme was enabled through an EDP Mode 3 Contract covering air support certification and release to service and marked a significant milestone in the integration of the Sea Venom missile onto Royal Navy Wildcat helicopters.

### The solution

The Air Test and Evaluation Centre (ATEC) at MOD Boscombe Down is part of the combined test team producing safety cases for the successful integration of this new capability as part of the Future Air-to-Surface Guided Weapon (FASGW) programme.

In view of the complexity of the Sea Venom demonstration, the Ministry of Defence, the Royal Navy, Leonardo, MBDA, QinetiQ and SME's from across the wider Air Ranges Capability all worked closely together to optimise critical data capture and maintain safety and efficiency throughout the trial. Constant dialogue and communication between the different stakeholders enabled the first guided firing of the advanced missile system from a Wildcat to be completed successfully at the MOD's Aberporth range.

### The outcome

The success of the demonstration is expected to deliver a step change in operational capability to Carrier Strike Group (CSG) 25 and beyond. ATEC is now reviewing all data from the trial to provide recommendations for the in-service deployment of the Sea Venom missile.



## CASE STUDIES

# Navigation as a Service (NAAS)

### The challenge

The certification process required by naval Platform Authorities (PAs) that verify a class of ship is navigationally safe to operate needed to be improved and streamlined. Internal certification needs to be submitted to the Naval Authority and Technology Group before the PAs receive navigation certification to confirm the class is safe. A more agile and forward-looking approach would drive a higher level of safety assurance as well as improve consistency of data, drive greater efficiencies, deliver significant cost savings and reduce the processing burden on the PAs.

### The solution

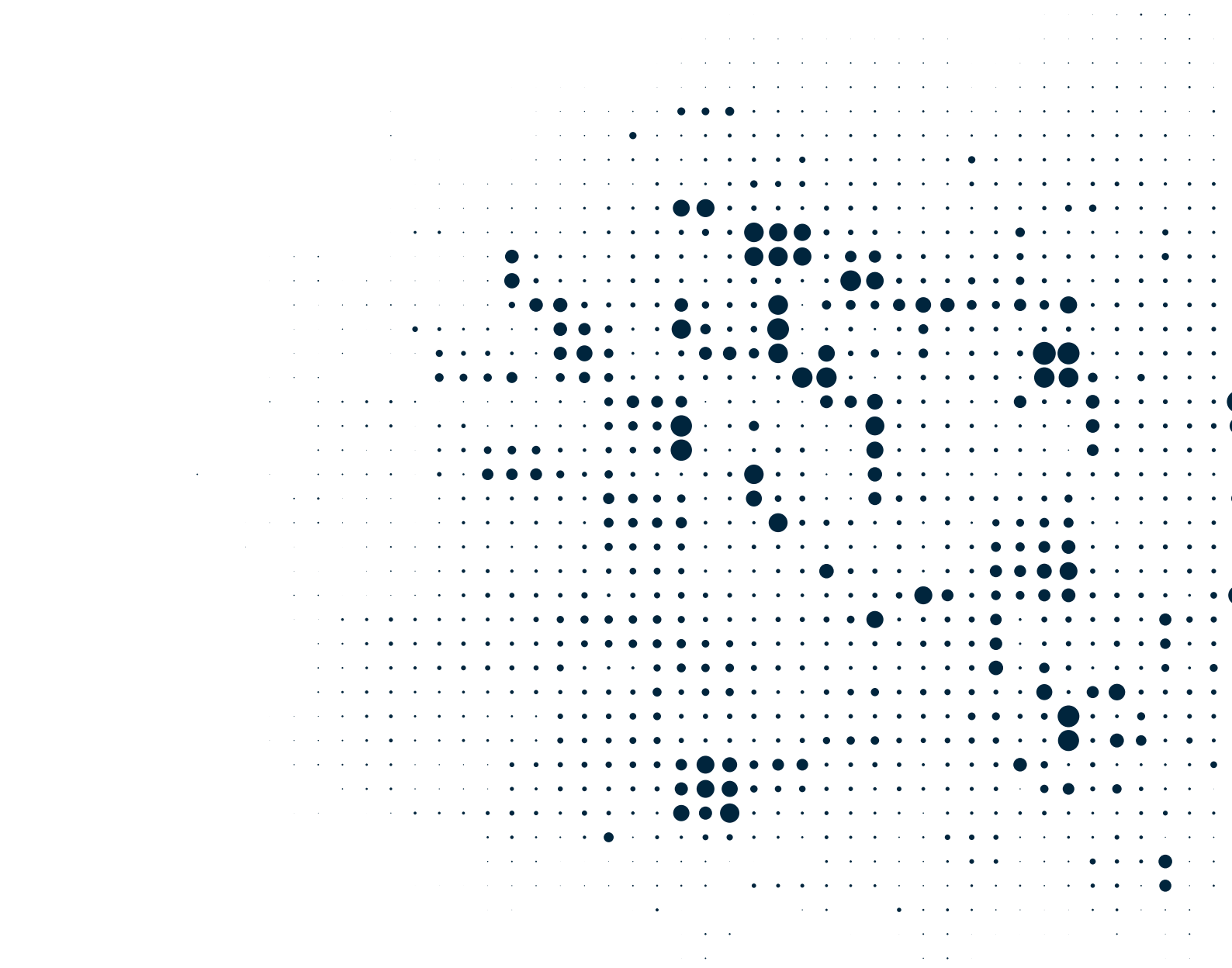
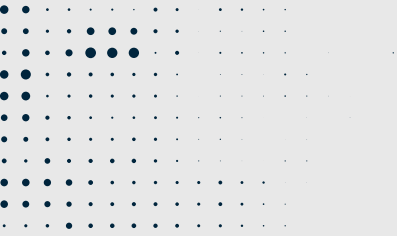
The Navigation as a Service (NAAS) project originated from an idea pitched at the first 'Dragons' Den' event in 2021. Building on The Aurora Engineering Partnership's innovative approach, the project was initially set up as a two-year contract through EDP. This has now been extended. The initiative provides navigation submissions for certification, horizon-scanning and future impact assessments as well as advice from Suitably Qualified and Experience Personnel (SQEP) to eleven classes of Royal Navy warships.

### The outcome

Close liaison between BMT and the PAs resulted in seamless ship visits to validate the required information and ensure that all details were submitted promptly and in the requisite format for certification. As well as the guarantee of a high level of safety assurance, this has minimised delays and inconsistencies in the certification process and has provided cost savings of 38% in the first two years. Twenty-two submissions and eight horizon scanning reports were delivered in this period and the focus is now on maintaining the submissions as live documentation and advising on the steps required to rectify any gaps in certification.

Another class of ship has been added to the NAAS framework and the Communications and Situational Awareness Equipment Authority are also in the process of joining, providing additional cost savings and further benefits from a more aligned approach for future equipment challenges.







## Existing customers and partners

For existing customers and partners, visit our EDP extranet page. This site provides information on the purpose of EDP, the scopes of service and how to be involved.

For external organisations and customers who want to learn more about EDP, you can find out more at [\*\*www.QinetiQ.com/EDP\*\*](http://www.QinetiQ.com/EDP).

If you have any enquiries, please contact [\*\*AuroraProviderNetwork@QinetiQ.com\*\*](mailto:AuroraProviderNetwork@QinetiQ.com).

## Futures Lab

Demand to join the Futures Lab Provider Network remains high. If you're interested in learning more about what Futures Lab is and how it supports Defence, contact us by email to join our monthly briefings.

For any other enquiries, please get in touch via [\*\*FSLabProcurement@QinetiQ.com\*\*](mailto:FSLabProcurement@QinetiQ.com).