Defence Innovation in the UK

Deputy Head, Defence and Security Accelerator

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The **Defence Innovation Initiative** was launched by the Defence Secretary in 2016:

- **Defence Innovation Fund**: £800m over ten years
- **Innovation Research and InSight Unit (IRIS)**
- **Defence and Security Accelerator**: launched in December 2016, building on the Centre for Defence Enterprise
Defence Innovation – Internal ‘Ecosystem’

Front Line Commands / Business Units

- Navy DARE / Marworks
- Army Innovation / ARIEL
- Air Innovation Exchange
- Joint Forces JW, jHUB, Intelligence
- Head Office Innovation Teams

Central Enabling Functions

- Government / International

Command/ Business Unit Innovation Hubs

- Defence and Security Accelerator
- De&S
- ISS

Innovation Strategy & Coordination
The Defence Technology Framework

Technology Families

- Advanced materials
- AI, machine learning, and data science
- Autonomous systems and robotics
- Power, energy storage, conversion, and transmission
- Sensors
- Advanced electronics and computing
- Effectors

Application Areas

- Space
- Platforms
- Comprehensive intelligence, surveillance & reconnaissance
- Modernised logistics and support
- Enhanced cyber and electronic warfare
- Next-generation weapons systems
- Resilient communications
- Human enhancement
- Next generation command and control

The Framework in practice…

- Optimising Defence’s processes, organisations and partnerships…
- Developing policies, doctrine, and procurement strategy…
- Informing capability development
- Reshaping of our Core Research Programme…
- Shaping our approach to prosperity

Defence Innovation Priorities

Integrate Information and Physical Activity Across Domains
• How can we integrate information and physical activity across domains (particularly Space and Cyber), and synchronise with wider Government to increase understanding and operational tempo?

Delivering Agile Command and Control
• How can we deliver agile Command and Control, to offer decisive advantage in complex operations?

Operate and Deliver Effects in Contested Domains
• How can we operate and deliver military outcomes in denied and contested domains?

Defence People – Skills, Knowledge and Experience
• How can we access people with the right skills, knowledge and experience?

Reflecting Future Battlespace Complexity
• How do we reflect future battlespace complexity and higher levels of integration in training, wargaming and experimentation?

https://www.gov.uk/government/publications/defence-innovation-priorities
Defence Innovation Priorities

They are central to our response to the threats facing Defence – to mobilise, modernise and transform the MOD and the Armed Forces

Defence Innovation Priorities:

• We are looking for ideas and opportunities in unconventional relationships

• The intersection between our most pressing problems and where we think collaboration with the civil sector shows most promise
Defence and Security Accelerator
We find and fund exploitable innovation to support UK defence and security quickly and effectively, and support UK prosperity
Scope

- Any level of development
- Any science, technology or service
- Anyone with a good idea
- Any exploitation pathway
DASA Operating Model

Outreach

Development

Exploitation and implementation

LEPs
SMEs
Innovators
Tech companies
Security industry
Third sector
Start ups
Academia
Defence primes
Partner organisations

Innovation Partners
Regional hubs
Collaboration spaces
Market Intelligence
Innovation champions
Online portal

Open call for Innovation
Competitions
Hackathons
Sandpits
Pitch panel

Mentoring
Piloting
Investors
Commercial aspects
Procurement
Co-investment

Defence Equipment and Support
Joint Forces Command
Army, Royal Navy, Royal Air Force
Police
Security Services
Market
Exports
Home Office
Dept for Transport
Why work with us?

**Customers**
- Free resource
- Access to whole supply base (incl. primes, SMEs, academia)
- Bespoke services to meet customer requirements
- Rapid contracting
- Focus on impact / exploitability

**Suppliers**
- 100% funding – no match funding
- Simple and easy way to access defence and security incl. end users and technical advice
- Opportunities to network
- Benevolent terms and conditions - no equity or IP taken

Investment of £76.3m
505 projects

- MOD CSA £38.4m
- DIF £19.2m
- Security £12.2m
- Forces £6.4m

1:5 successful
What’s different

2331 Proposals Assessed

From 1023 organisations

21% Academic
19% Large
60% SME

Exploitation

Defence & Security

Outreach

3 weeks to contract

Open Call for Innovation

>> ANY TRL

>> FAST TRACK

>> 1 PAGE PITCH

>> PITCH PANELS

>> HIGHER MAX BIDS

>> SHORT FORM CONTRACT

39% new recipients

~1000 Trained assessors

Outreach

Bigger team

Cross Gov’t

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DASA Competitions
Themed Challenges

• Deliver bespoke services for defence and security customers, initiated through a cloud based submission service

• Themed challenges – customer pull
  – Bespoke design of service to meet specific requirements including solicitation of market capabilities, scoping events, hackathons, sandpits, small competitions, large multi phase competitions....
Dstl Space Programme 2035 Vision: “Resilient Space domain capabilities for UK Defence and Security, international by design, delivering freedom of action in and through space.”

- **Collaborating** both nationally and internationally, we have identified, designed, and developed innovative and resilient Space domain architectures, concepts and technologies which have led to new Space services.
- Defence has a detailed understanding of the military utility of Space.
- S&T has delivered **freedom of action in and through Space** for UK Defence and Security, protecting and defending our capabilities.
- This is underpinned by a thriving UK Government, Industry and Academic technical capability in Space Science, Technology, Systems and Applications, where the UK is delivering greater than 10% of the global Space market.
Space to Innovate - Challenges

1. Characterisation of objects in space and their intent
2. Technologies for defending future UK space assets
3. Novel sensing and Intelligence, Surveillance and Reconnaissance enablers.
4. Overcoming the technical issues of ‘Space to Sea Level’ optical communications.
Open Call for Innovation

Continuously open to new concepts, products or services with a defence and security application.

Emerging Innovations
- TRL
- Length
- Funding

Rapid
- Status
- Length
- Funding

Defence
Guideline:
3 to 12 months
£50k to £350k
(discuss with an Innovation Partner)

Security IFAs
Contact us

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