

# UK Opportunity and Funding

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# Industry Strategy - Why Care?

- Steer/direct/influence government investment to 2021+
  - All funding agencies
    - Innovate, EPSRC, UK Research and Innovation UKRI, LEPs
- Covers
  - Prioritise
  - Rules of engagement
  - Framework for support/ cash
  - Specifics interventions
    - **New funding**
- National productivity infrastructure fund
  - **Extra** £425million 2017, £2billion in 2020,
    - Innovate,
    - UKRI
    - Industrial strategy challenge fund – **New**



**WHY?**  
Industry deliver growth  
Whilst gov delivers BREXIT

# Key elements – 10 Pillars

- Not all pillars have equal weight
  - Impact
  - Attention

 Investing in Science, Research & Innovation	 Developing skills
 Upgrading infrastructure	 Supporting business to start and grow
 Improving Procurement	 Encouraging trade & inward investment
 Delivering affordable energy & clean growth	 Cultivating world-leading sectors
 Driving growth across whole country	 Creating the right institutions to bring together sectors & places

**Emerging 'top' priorities**

- Productivity
- Place
- People

# Industry Strategy Challenge Fund

- >4£bn new money, £2bn/yr by 2020
  - Focused on industry – Academic collaboration
  - 5 year plus impact, substantial £
- Invested/ announced in waves
  - Wave 1 - add £ to previously submitted projects
  - Wave 2 – consultation with industry Jan 2017
    - Predefined challenges
    - Announcement expected in November
  - Wave 3
    - How to get relevant challenges on agenda?

## ISCF Wave 1

- £246m **Batteries** – Faraday challenge
- £197m Accelerating **innovative medicines**
- £93 **Robotics** and AI for harsh environments
- £38m **Driverless cars** R&D
- £26m **Composites** for aerospace automotive
- £99 **Satellite test** facility

## ISCF Wave 2 ?

- **Bioscience & biotech** – for food energy, material production.
- **Manufacturing and Materials** - manuf of next gen products
- **Quantum tech** – sub-surface imaging, GPS free
- **Transformative digital tech** - data, AI, security, HPC, 5G, modelling

# Sector deals

“Government will work with sectors that organise themselves behind strong leadership to help deliver upgrades in productivity”

- Can cover regulation, competition, commercialisation, institutions, policy.....
- Separate process to ISCF
  - Focus on unlocking near-term growth
  - No new money
- 5-6 preordained in Industrial strategy
  - Nuclear, Creative industries, Life-sciences, Low emission vehicles adoption +
  - **Industrial digitization -**
    - Focus on productivity
    - Led by Siemens
    - Digital innovation hubs....



<http://industrialdigitalisation.org.uk/>

# MoD Science and Technology strategy- Why Care?

- Steer/direct/influence government investment to 2021+
- Covers
  - Upstream into policy / decision making
  - Downstream developing capability
    - Capabilities, enablers, systems
  - Research Prioritise to accelerating implementation
- Key technologies
  - Machine learning, quantum, **advanced/novel materials**, autonomy, synthetic biology, data science etc

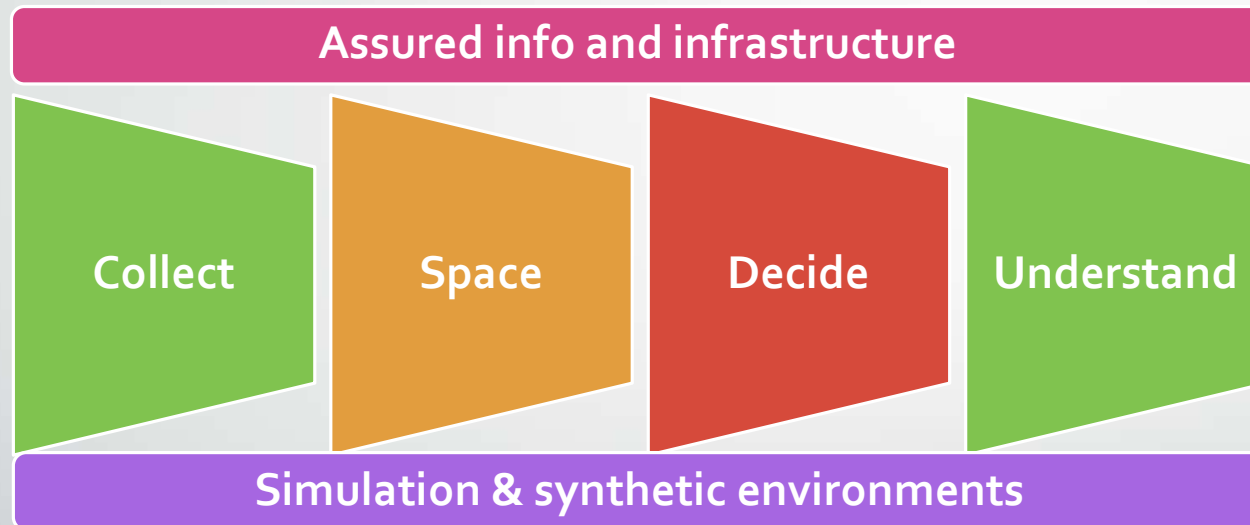


**“Every S&T project will require a clear case articulating benefit to defence”**

**“strategic and high-risk, high-reward S&T”**

# SERAPIS

- New funding framework for dstl to access low TRL innovation
- £200million across 6 Lots
  - To prime to distribute to specific project.



- Focus on low TRL low classification innovation
  - Compliment to other frameworks e.g. R-Cloud
- In place Jan 2019

# Impact on Innovate

- Five regular 6 monthly innovation calls remain.
  - Open, Infrastructure, Health & Lifescience, Emerging and enabling, Manufacturing & Materials
- Expect enhanced £ around
  - Productivity/ industrial digitisation
  - ISCF challenges e.g.
    - Robotics for harsh environments
    - Faraday challenge – batteries
    - Autonomous vehicles
    - Satellite test
  - In targeted competitions, foci in innovation calls.
- Loans in pilot to augment grants



# Impact on EPSRC & RCUK

- Increase support for manufacturing the future theme
- Increased alignment to industry strategy
  - Impact on productivity, people place.
- Greater collaboration / joint calls with Innovate around industry strategy challenge fund
  - >50% of ISCF £ to go via research councils

# Grand Photonics challenges

Infrared contribution?

Affordable, accurate location information

Overcoming security threats and enabling autonomous vehicles with instantaneous awareness of rapidly changing local surroundings

Delivering Internet 5.0,

Where data delivery is ubiquitous, invisible and instantaneous to all people and all factories, no matter where they are or what they are doing

Enabling UK manufacture of the car of the future,

Using light to digitally process, monitor and control cutting, joining, marking and assembly for lighter weight, safer, more efficient vehicles

Making home healthcare as effective as hospital care by 2030,

Providing simple pre-clinical diagnoses and health screening tools for use in the home and pharmacy, decreasing the load on primary and hospital

# Photonics Leadership Group

Bring together industry, academia, support agencies and government

**Making UK Photonics bigger, faster, stronger**

[www.photonicsuk.org](http://www.photonicsuk.org)

[www.photonicshub.org](http://www.photonicshub.org)

[www.chalcogenide.net](http://www.chalcogenide.net)

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**UK has world leading photonics industry  
Stand tall be Proud**

Prepared with the support of the Future Photonics Hub  
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