

# *Aerospace & the Innovation Landscape*

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**Innovate UK**

# We are an innovation nation

The UK is built on innovation. Its genius for invention and creativity has shaped the world.

*From television to world wide web*

*From the discovery of penicillin to in-vitro fertilisation*

*From the jet engine to graphene*

Today our global economic footprint is a testament to those who have innovated before .....

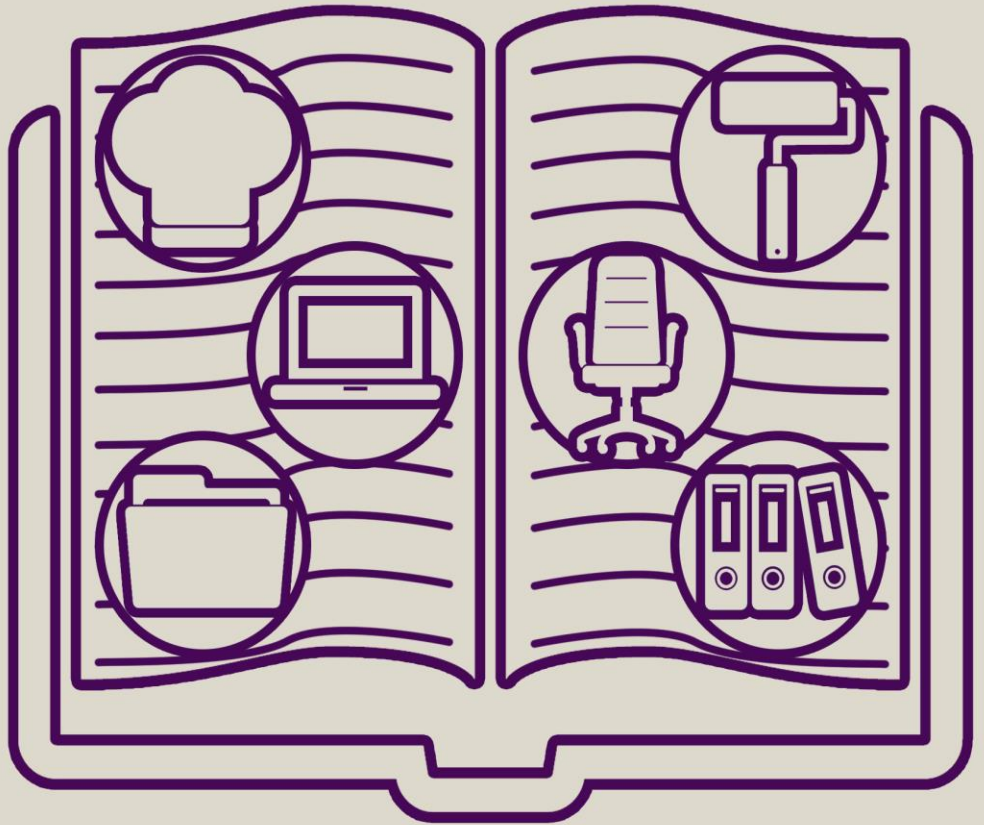
*but we cannot stand still!*

# Innovation doesn't just happen

Strategic innovation doesn't just happen. It happens as a consequence of coordinated collaboration between business, government and research.

This is where **Innovate UK** comes in.

Adding an estimated  
**£7.5bn**  
to the UK  
**economy**  
and creating  
an average of  
**7 jobs**  
per **company**  
we have worked with

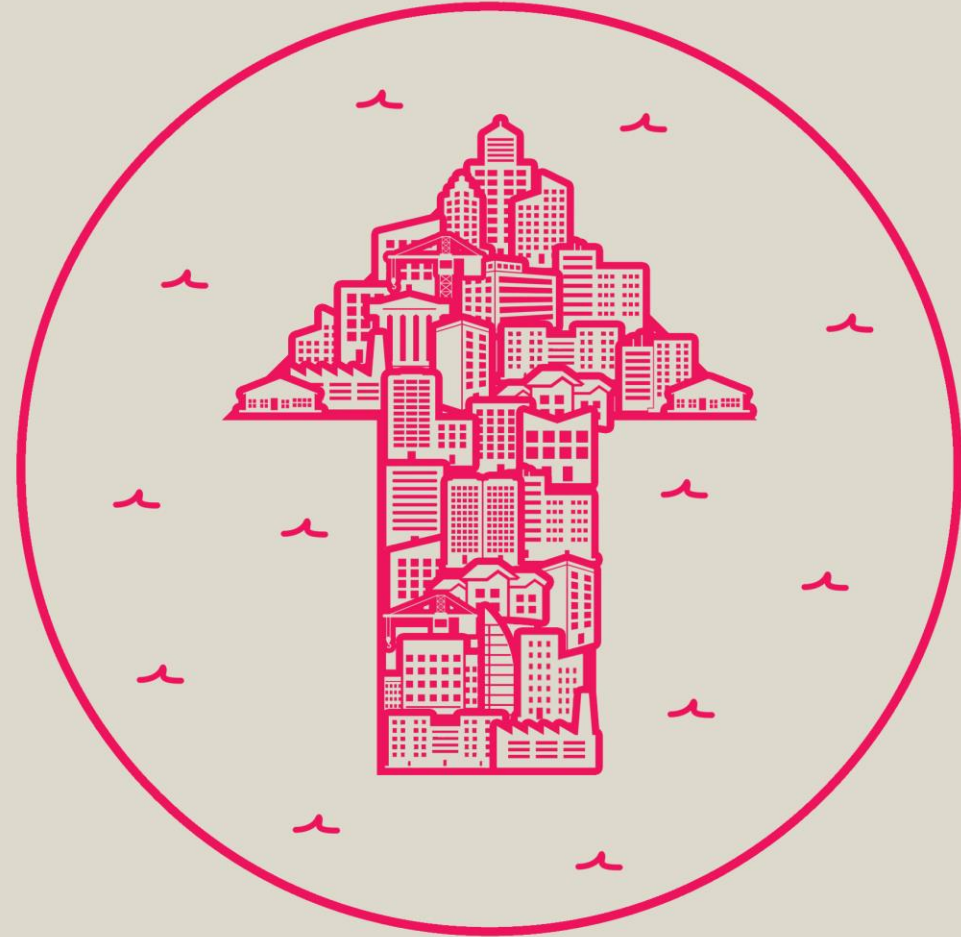


**Why is our work important?**

## 1. Higher-skilled jobs & higher productivity

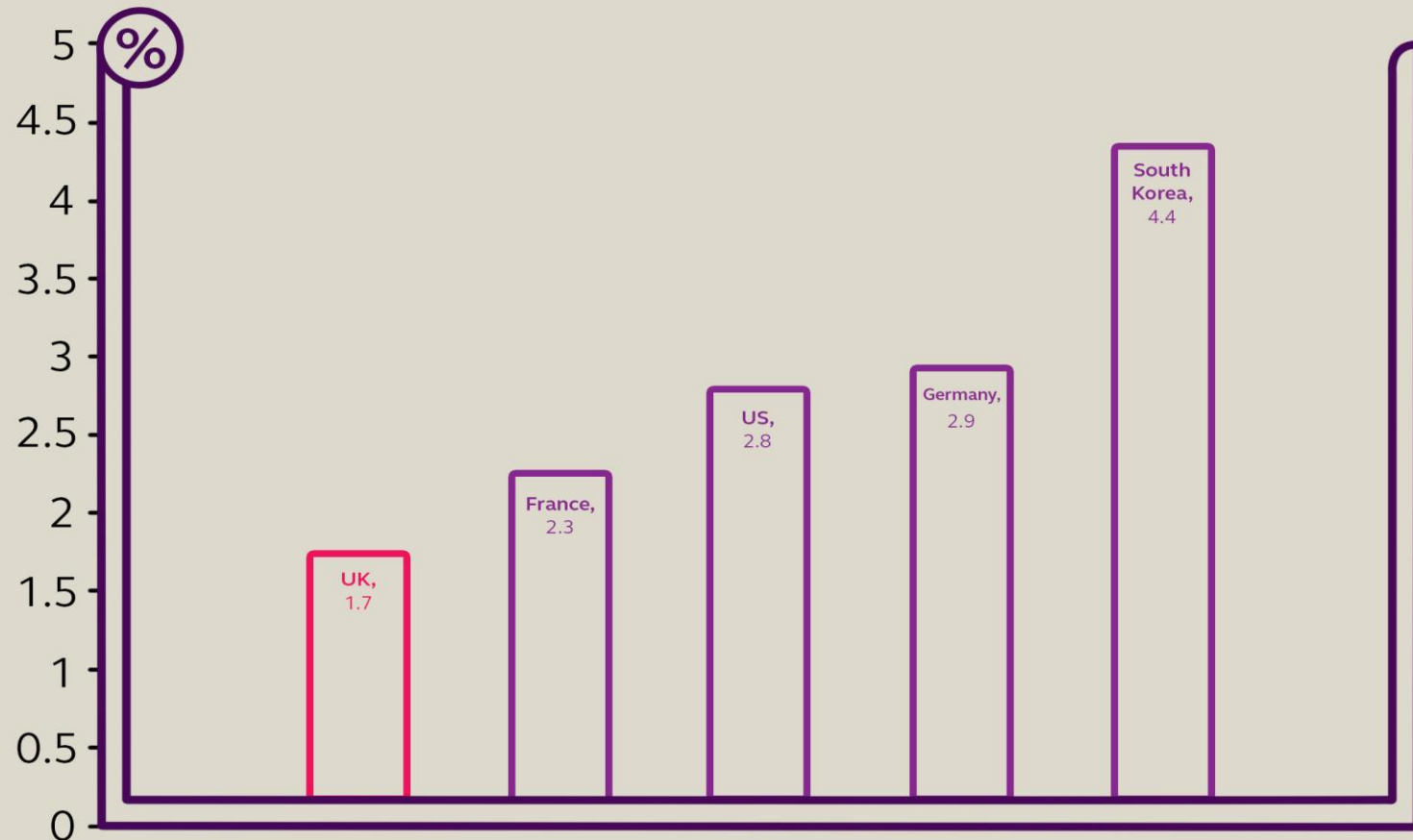
Source NESTA: UK innovation Report 2014

Firms that persistently **innovate** have **13% higher** productivity than non innovators and **9% higher** productivity than occasional innovators



### R&D investment as a percentage of the GDP

(Analysis estimates long-run productivity is maximised with investment levels between 2.3 – 2.6%)



### 3. Innovation is an investment for the future

Source: BIS Innovation Report 2014

Firms that persistently invest in R&D **grow twice as fast as non innovators and have higher exports**





# How we work

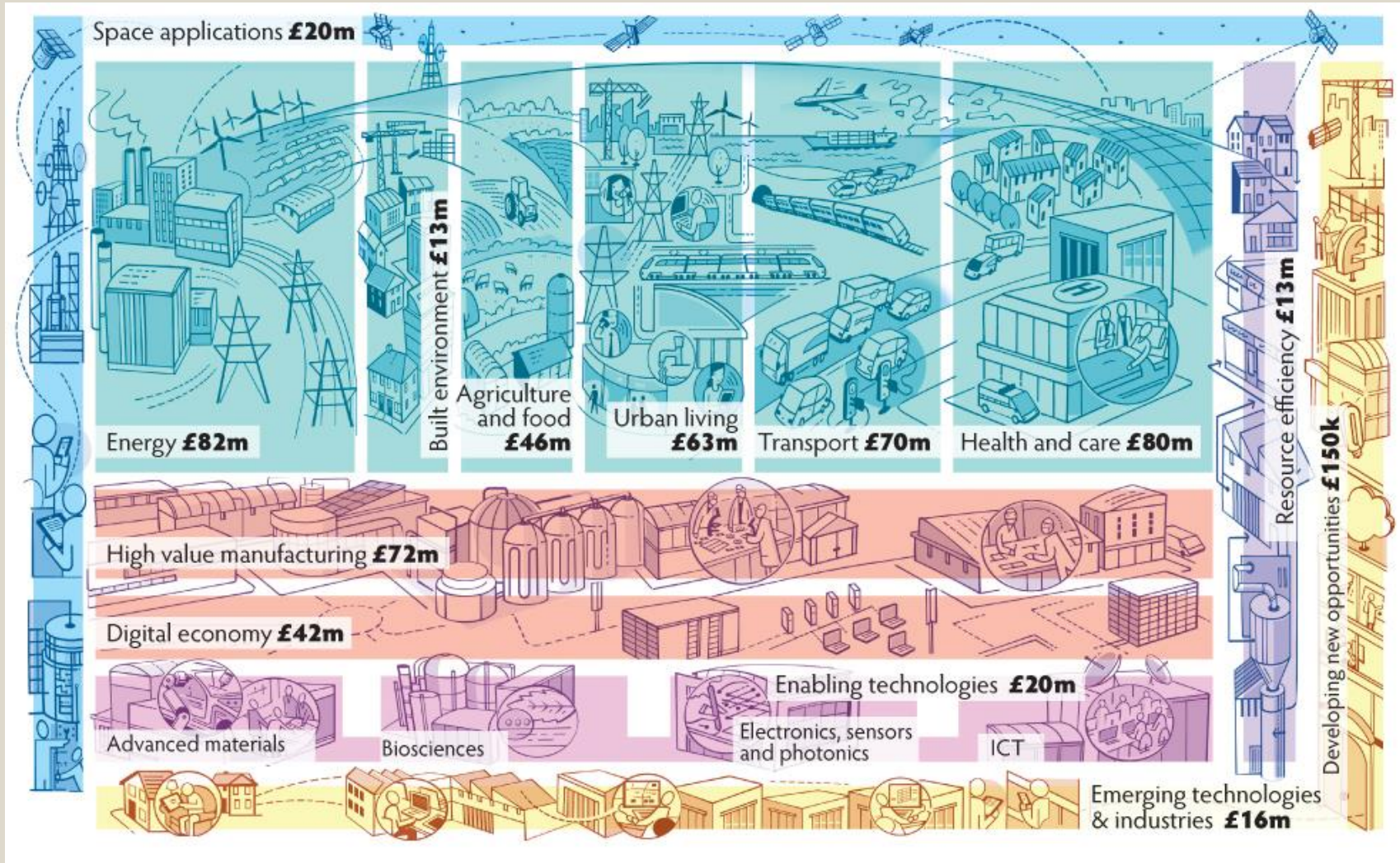
# Steering economic growth



# 5-point plan for future growth

- **Accelerating UK economic growth**, nurturing small, high-growth companies, helping them to become high-growth mid-sized companies with strong productivity and export success.
- **Building on innovation excellence throughout the UK**, investing locally in areas of strength.
- **Developing Catapults within a national innovation network**, to provide access to cutting edge technologies, encourage inward investment and enable technical advances in existing businesses.
- **Working with the research community and across government** to turn scientific excellence into economic impact, and improve efficiency.
- **Evolving our funding models**; exploring ways to help public funding go further.

# Priority Areas in FY 14/15



Sits alongside: Catapults, Innovation Vouchers, Smart, KTP KTN, NCP's, EEN's, H2020

# Innovate UK

## Aerospace



**£19 million**  
IN GRANTS

**30%**  
awarded  
to SMEs

**OVER 100**  
PROJECT  
PARTNERS

**25+**  
universities

**OVER 80**  
INDUSTRY  
PARTNERS

# Innovate UK Aerospace



Department  
for Business  
Innovation & Skills



**Innovate UK**

**BERR** | Department for Business  
Enterprise & Regulatory Reform

**dti**

**£1.6bn**  
projects

**£800m**  
grant

**220**  
projects

**985**  
participants

# Aerospace landscape

## Proving the Opportunity

## Addressing the Challenge

## Delivering Growth

### Discovery & Feasibility

- Discovery and feasibility business led programmes mainly targeted at supporting SME's.
- Supporting new business models, new technologies and light touch support to the supply chain
- Programmes might include, feasibility studies, EPSRC funding, Smart, KTP, NATEP, HITEA, INI

### Evaluation & Translation

- Evaluation of technologies including translation potential
- Does the technology scale to meet the industrial need.
- Collaborative Feasibility Studies, R&T - Collaborative Research, HITEA, INI

### Technology Development

- Development of maturing technology ideas to be ready for deployment.
- Building upon and/or generating capability and capacity to exploit the technology.
- Collaborative Research & Development, HITEA INI

### Industrial Technology Deployment

- Moving technology towards commercial reality, overcoming the final commercial, certification and technical barriers to market entry. Supporting lower tier supply chain.
- Large Programmes, inc Demo in relevant environments
- Single company funding
- ATI strategic programmes, NATEP. EU Clean Sky, H2020, international programmes, INI





# Current Activity – Aerospace



**HITEA 3: Game-changing technologies for aerospace**

£10m CR&D + Feasibility Studies



**ATI: Strategic Research and Technology Projects**



# Highly Innovative Technology Enablers in Aerospace



up to £10 million in collaborative research and development and feasibility studies

**Highly Innovative Technology Enablers in Aerospace 3**  
*Game-changing technologies for aerospace*

# Highly Innovative Technology Enablers in Aerospace

## Key Objectives

- Promote global competitive advantage and economic benefit, primarily in the UK civil aerospace sector
- Development of solutions to key aerospace challenges
- Support broad participation across industry, academia and research organisations and across different industry sectors.



# Competition Scope

**new manufacturing solutions that enhance cost effectiveness and affordability and/or support increasing rates of production**

**improved competitiveness through novel or advanced materials and associated processing technologies**

**technologies that enable improvements to overall vehicle performance and efficiency**

**reduced cost of vehicle ownership through novel technologies or process solutions**

**new modelling and simulation techniques**

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AEROSPACE  
CASE STUDIES

Innovate UK



AEROSPACE  
CASE STUDIES



## Optical technology companies sense their opportunity

Optical sensing technology has the potential to bring really big innovations in aerospace closer to reality - such as the next generation of composite wings and all-electric aircraft.

**“They made us and Smart Fibres work collaboratively. Normally, Airbus wouldn’t speak to us. And without the funding, we wouldn’t have been able to build a demonstrator.”**

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AEROSPACE  
CASE STUDIES



Managing your assets – only when you need to

Aero-engine manufacturer Rolls-Royce earns half of its civil aerospace revenue from servicing engines, often on long-term maintenance contracts offering total support.

**“I’m very grateful for the support I’ve had from Innovate UK. It gets us involved in major R&D programmes where you can do a significant amount of work.”**





# aerodays2015

Aviation in Europe – Innovating for Growth

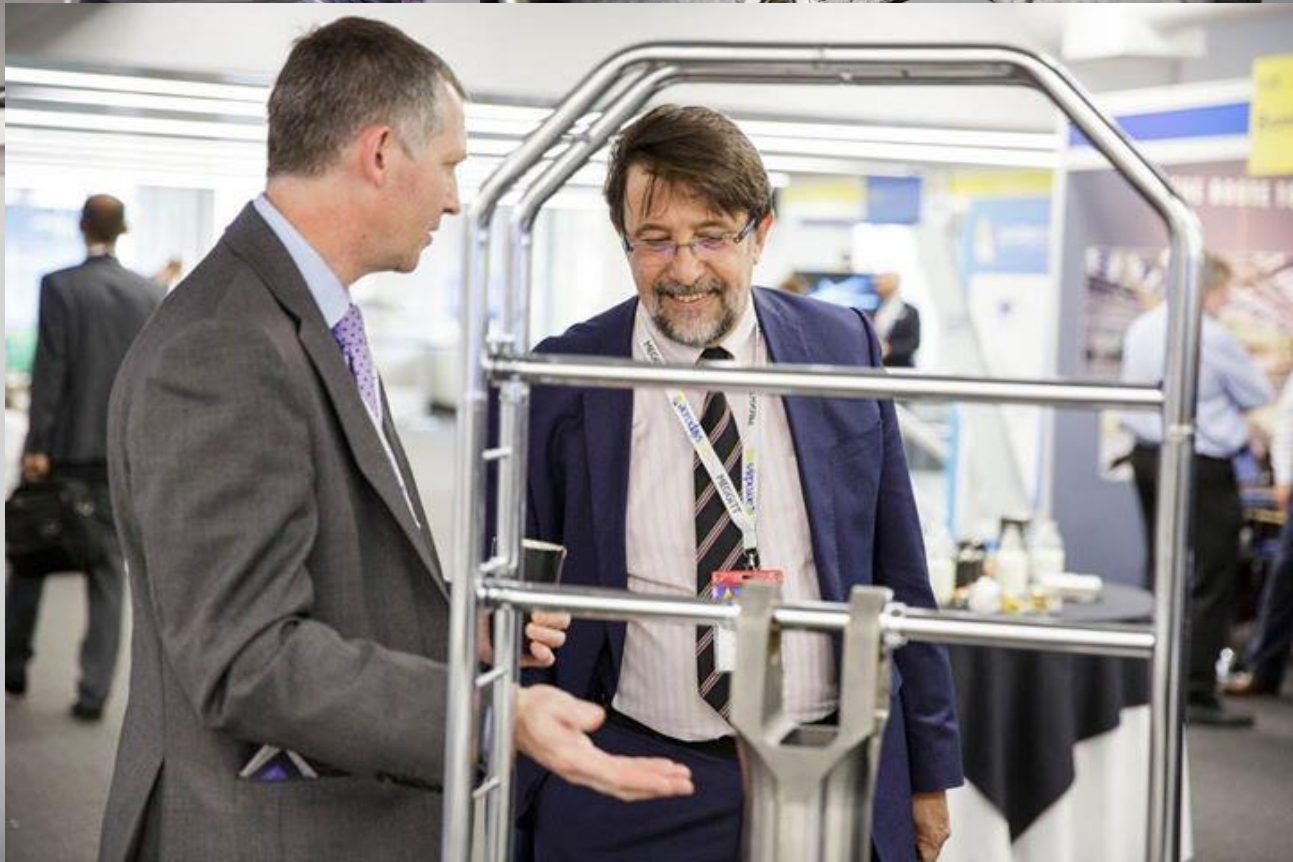
The 7<sup>th</sup> European Aeronautics Days



L O N D O N



20 – 23 OCTOBER 2015



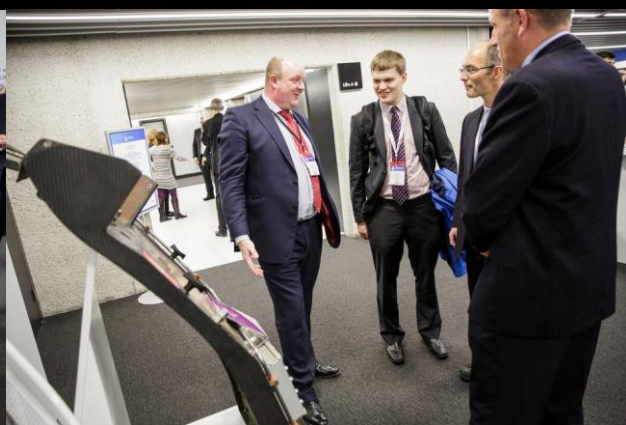












We can't stop thinking  
about the future

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