

Technology Evolution and Partnering for Japan's Security and Diplomacy

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Defence Growth Partnership


UK Defence Sector Facts and Figures 2019



£22.7bn
 Turnover



135k
 Direct Employees



£14bn
 Exports

A different way of working


 Engagement


 Collaboration



 Innovation



Delivering Capability Through Partnership


Team UK is the UK Government, Defence Industry and Academia, working in partnership with you to deliver solutions

UKDSC




Working alongside industry and government to deliver objective evidence based analysis on future capabilities and innovations

DIT DSO




Focused on the requirements of global partners

MOD




Future capability, engagement, assurance and International by Design

BEIS




Developing Defence Industry capability to compete domestically and internationally to contribute to the UK's economic growth

Value Chain




Harnessing the value chain to provide excellence deliver growth and productivity

Skills



Delivering the Defence skills for today and the future



AIRBUS

ATKINS
Member of the SNC-Lavalin Group

BAE SYSTEMS

babcock

COBHAM

GENERAL DYNAMICS
United Kingdom Limited

LEONARDO

defence growth partnership
dgp

THALES

Raytheon


serco


LOCKHEED MARTIN


MBDA
UK & Ireland


QINETIQ


Rolls-Royce


 Department for Business, Energy & Industrial Strategy

 Department for International Trade


 Defence & Security Organisation


 Ministry of Defence


 ADS


 UK defence solutions centre


UKDSC Associate Members


 Southampton


 UCL

 Imperial College London

 MEGGITT

 FUJITSU

 BOEING

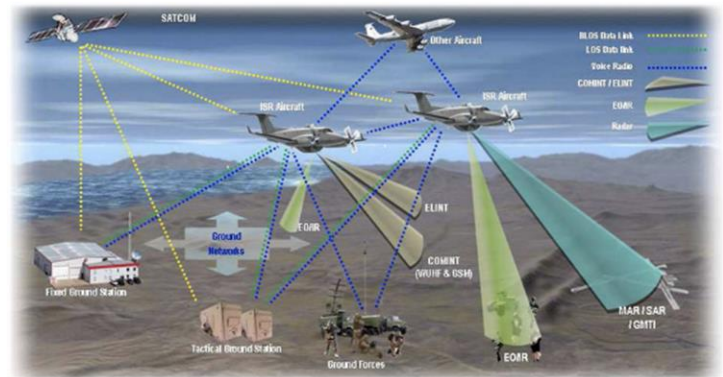
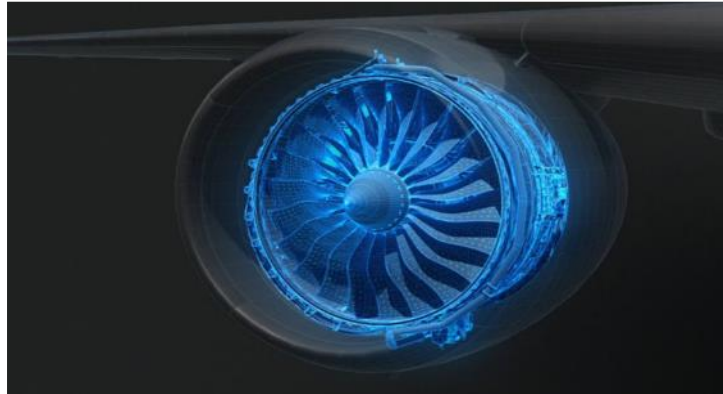
 KINGS COLLEGE LONDON

Market Environment



- Next decade of technological development critical in defining national security and competitive positions
- Fourth Industrial Revolution brings:
 - Rapid development of new disruptive technologies
 - Opportunities for government and industry
 - New and previously unconsidered risks and vulnerabilities
- Competitive landscape will be reshaped by:
 - New entrants and emerging players
 - Sector re-architecting
 - Strategic alliances
 - Private sector investment into dual-use technologies

Challenges



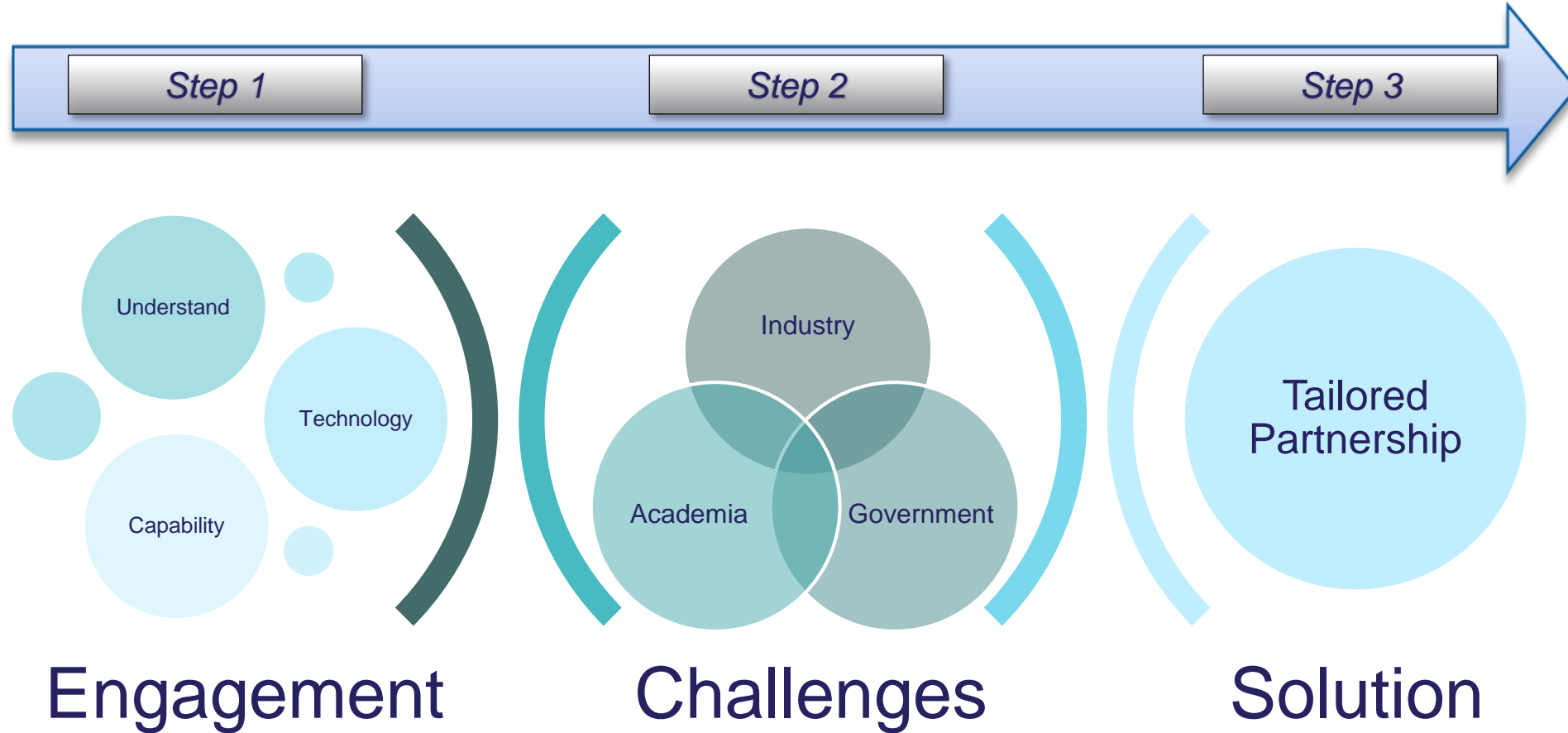
- Digital agenda brings challenges
 - Adoption
 - Maturity
 - Data management
- Increased interconnectivity brings:
 - More informed decision makers
 - An increased threat surface for adversaries to attack
- Future conflict will not recognise borders, even low sophistication technology could be disruptive
 - Provocative “Grey Zone” operations
- Emerging technologies present new opportunities and risks

Effective Partnerships



- Against a backdrop of fierce competition from state-sponsored adversaries and global economic forces, effective partnerships for capability and technology development will be required
- These partnerships are needed to:
 - Create an informed, deliberate and coordinated approach for developing / deploying emerging technologies.
 - Maintain competitive advantage on global economic, technological and geopolitical stages
 - Tailored for the challenges and solutions in question

A Partnership Approach



Japan has World-class Capabilities



- Energy storage and power management
 - Long-endurance lithium-ion batteries
- Communications
 - 5G
 - SOTM (SATCOM on the Move)
- Human Capability Augmentation
 - Mixed reality and exoskeleton.
- Additive manufacturing
 - '3D printing'
- Artificial Intelligence and Intelligent Automation

Example UK-Japan Partnership Initiatives



- UK-Japan robotics and AI research collaboration workshop
 - Alan Turing Institute has initiated agreements with AIST (National Institute of Advanced Industrial Science & Technology), Japan
- UK Science and Innovation Network Japan (SIN Japan)
 - Builds and promotes strategic collaboration between Japan and the UK on key science and innovation themes
- Department for Business, Energy & Industrial Strategy
 - Investing into Entrepreneurial and Innovation Ecosystems in the UK and Japan
- British Council
 - RENKEI - research collaboration between universities in Japan and the UK
- Scottish Enterprise and Nippon Foundation.
 - Joint funding of collaborative innovative subsea technology projects

Thank You

