

# Leading and modernising Test & Evaluation

QinetiQ Group plc  
Investor Seminar

24 April 2019

The QinetiQ logo is displayed in white capital letters on a dark blue background. The background of the entire slide is a photograph of a large aircraft carrier at sea during sunset, with several smaller boats in the foreground and helicopters on the deck.

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# Agenda

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1 Introduction

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2 Market drivers

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3 Modernising the LTPA

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4 How this supports our strategy

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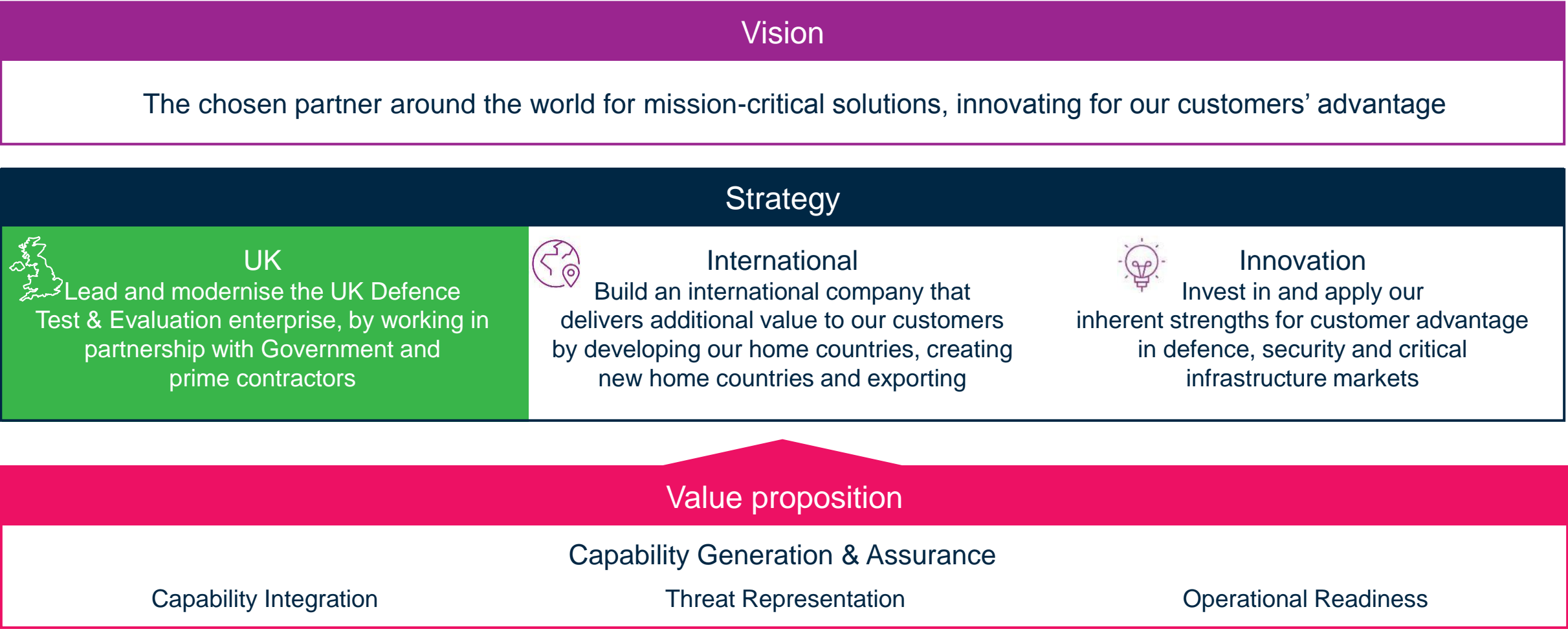
5 Financial summary

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6 Conclusions

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# Test & Evaluation is core to our vision and strategy





# LTPA – modernising UK Defence Test & Evaluation (T&E)

- Long Term Partnering Agreement (LTPA) contract with UK MOD, c.£320m pa revenue
  - c.£220m pa core capabilities e.g. sites + c.£100m pa project tasks e.g. trials
  - 16 maritime, land, air and weapons T&E ranges and facilities across the UK
  - Delivers critical skills and facilities to generate & assure national defence capabilities
- £1bn contract amendment in 2016 to modernise and operate world-class air ranges and test aircrew training core capabilities with extension to 2028, c.£100m pa revenue
  - £180m investment funded by QinetiQ and recovered from MOD over the contract life
- £1.3bn contract amendment in 2019 for remaining capabilities, c.£120m pa revenue
  - Change to output-based contract to drive efficiency and greater relevance to our customers
  - Underpinned by further £190m investment into infrastructure, equipment and ways of working



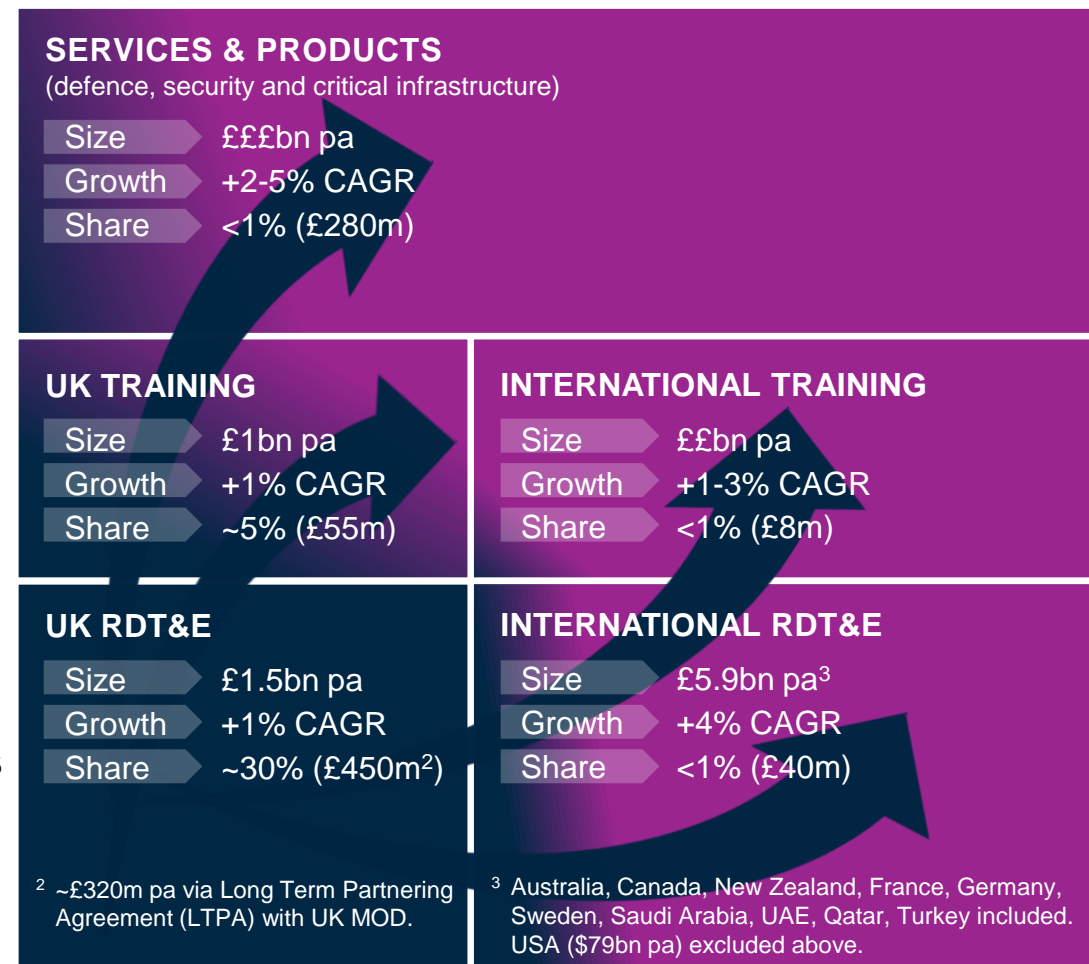
Modernising our core capabilities to meet future needs and creating a platform for growth

# LTPA – creating a platform for growth

- Addressable market > £8bn pa: significant growth potential
  - QinetiQ now positioned as a world-leader in the generation and assurance of military capability i.e. creating, testing & training
- Increasing share in existing UK RDT&E market
  - Focus on delivering major UK Defence programmes
  - Attracting further work from UK and industrial customers
- Leveraging strengths into attractive near-adjacent markets
  - Attracting international customers to our UK T&E capabilities
  - Expanding into UK and International training
  - Delivering indigenous T&E capabilities to international customers

Core to our strategy; enhancing shareholder returns

<sup>1</sup> RDT&E = Research & Development and Test & Evaluation.



Source: Jane's Market Forecast, FY18 market sizing (USD/GBP exchange rate of 0.76), UK MOD. QinetiQ market share based on FY18 revenue. CAGR = compound annual growth rate (FY18-22)

■ current market share ■ future market potential

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# Today's speakers

**Cathy O'Carroll**  
Global Campaign  
Director T&E



- Joined QinetiQ predecessor Royal Aircraft Establishment in 1985
- Responsible for delivery of the LTPA from 2014 – 2018
- Led the December 2016 LTPA amendment process

**Steve Fitz-Gerald**  
Managing Director,  
Maritime, Land and  
Weapons



- Joined QinetiQ in June 2017
- Responsible for delivery of the LTPA
- Industry experience:
  - CEO, Marshall Defence and Aerospace Group
  - President, Cobham Aviation Services Division
  - Group Commercial Director, BAE Systems Avionics
- Successful delivery of large scale defence contracts:
  - Largest globally privatised aerial surveillance contract
  - Managing integrated combat systems into service for Royal Navy's Type 22 frigate
  - Forming sonar joint venture between Thomson CSF and GEC Marconi

**David Smith**  
Chief Financial  
Officer



- Joined QinetiQ in 2017
- Responsible for finance and supporting functions within QinetiQ
- Industry experience:
  - CFO, Rolls Royce Holdings
  - CFO, Edwards Group
  - CEO, Jaguar Land Rover Group



Market drivers

# The LTPA is a critical part of UK defence capability and QinetiQ

- UK transferred majority of its T&E capability to the private sector
- Contracted with QinetiQ in 2003 through the LTPA
- Covers Land, Maritime, Air, Weapons and Training Support domains
- Facilities operated under the LTPA are highly specialised:
  - Hebrides Air Range largest extendable instrumented airspace in Europe
  - Largest climatic test chamber in Europe
  - Test pilot school one of four globally recognised military test pilot schools
- LTPA capabilities are internationally relevant and attractive

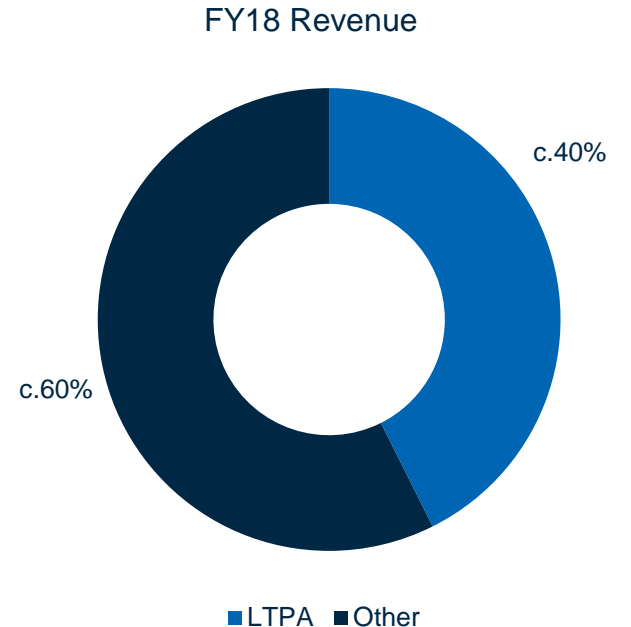
25 year contract

>£300m revenue  
a year

16 sites  
1,800 people

Critical to defence  
capability

A unique UK sovereign capability with international relevance





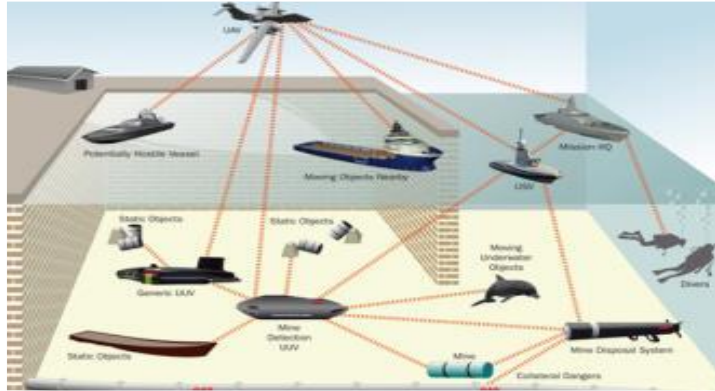
# Growth drivers in T&E



## Increasing threat complexity

- Proliferation of low cost threats
- Cyber & Electronic Warfare increasing in sophistication
- Low cost armed drones, short to medium range missiles
- Sophisticated hypersonic missiles & laser weapons

T&E confirms ability to respond



## Increasing system complexity

- Military effect delivered through multiple connected systems
- Vulnerability and risk between interfaces
- Greater information needed for decision making

T&E provides interoperability



## Increasing technological disruption

- Accelerating pace of technological advancement
- Innovation driven in commercial sector adopted by defence
- Assurance of system upgrade safety and performance

T&E brings technology into war-fighters' hands quicker

## UK T&E market supported by significant UK programmes

- Our investment in the LTPA enables us to grow our market share in UK T&E
- Increasing demand for T&E activity driven by significant change in major defence platforms



### Generational change in major defence platforms



# Modernising T&E capabilities supports our international growth

Mature

Maturing

## Opportunities across the T&E maturity scale

### Mature Markets

- Legacy, outdated infrastructure
- New sophisticated platforms
- Complex threat environments to test and train against
- Looking for innovative technical solutions, commercial models and operational efficiencies

#### Example regions:

- Five Eyes (UK, US, Canada, Australia, New Zealand)
- Western Europe

### Maturing Markets

- Have equipment but need support integrating it
- Looking for a “customer friend” and technical support
- Creating competitive operational readiness

#### Example regions:

- Gulf Region
- South East Asia

# LTPA intrinsic to accessing international T&E market

## International customer coming to QinetiQ in UK

- Use of UK LTPA facilities
  - Specialised capabilities, e.g. Long Test Track
  - Specialised services, e.g. Test Pilot training
  - Hosting / participating in larger scale international exercises, e.g. Formidable Shield



## QinetiQ delivering in country

- Growing international T&E capabilities
  - UK unique in scale of contracting defence T&E
  - Opportunities to contract in other countries
  - Help create T&E capabilities
  - Modernise existing T&E capabilities



# Growth drivers

- QinetiQ has a strong position in the UK market
- Test and Evaluation is a growing market globally
- By modernising the LTPA we:
  1. Grow UK market share
  2. Attract other countries to use our UK facilities
  3. Support other countries develop their own capabilities





# Modernising the LTPA

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# Aligning the LTPA with customer needs

## Pre-2016 LTPA

Availability driven – excess capacity difficult to leverage

5 year repricing – short-term horizon

Investment secured piecemeal from customer

Insufficient investment – facilities not maintaining relevance and risk of obsolescence

Diverging from customer needs

## Modernised LTPA

Output based – freedom to evolve capability, control investment and deliver greater third party work

10 year fixed price – aligned to longer-term horizon

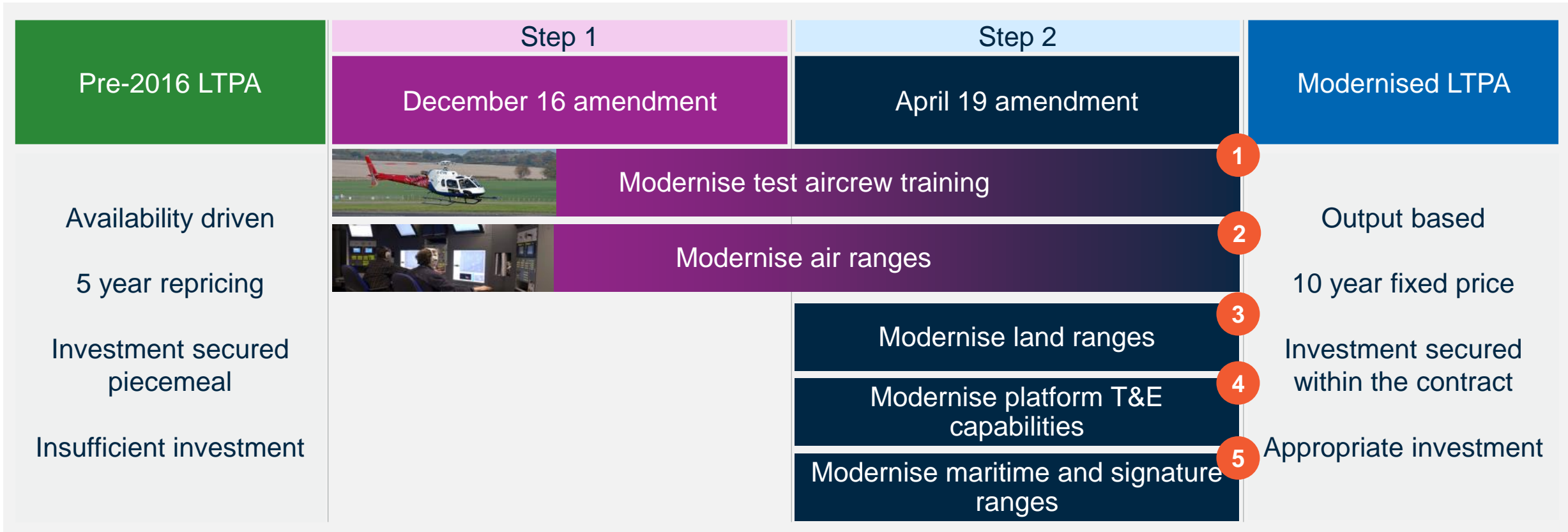
Investment secured within the contract

Focused investment – delivering relevant capabilities with appropriate returns

Aligned with customer needs

# Creating a world-class capability

To deliver our vision, we adopted a two-step approach to modernisation



# Modernising test aircrew training 1

## Aim:

Creating world class flight test training

## How:

£85m of investment to:

- Update modularised course, enhancing flexibility and embracing modern teaching methods
- Modernise more relevant aircraft fleet
  - 4 x Airbus H125
  - 2 x Grob 120TP
  - 2 x Pilatus PC-21
- Commercial certification increases relevance to non-defence and international customers
- Reducing running costs; increasing competitiveness

## Now Delivering:

- New course commenced
- Multi-year contracts signed with Dutch and Swiss air forces
- First two commercial customers



## Modernising air ranges 2

### Aim:

Creating world-class air ranges able to support current and next generation defence capabilities

### How:

£95m of investment to modernise MOD Aberporth and MOD Hebrides:

- Radar, telemetry, instrumentation and control systems
- Centralise air-traffic control
- Enhance sites' physical infrastructure
- Delivering efficiencies; increasing competitiveness

### Now delivering:

- UK MOD work enabling F-35 to enter service
- International customers, e.g. US, Germany, Poland
- Formidable Shield 19, significant multi-nation exercise



# Modernising land ranges 3

## Aim:

Creating land ranges capable of ensuring the through-life operational safety of weapons and munitions

## How:

Investment of £55m into:

- Digitisation to enable integrated data capture and reporting
- Step change in utilising modern instrumentation
- Increase reliability of capabilities such as the Long Test Track and demilitarisation services

## Delivering:

- UK MOD work supporting new weapon systems (e.g. Brimstone, Storm shadow)
- International customers (e.g. South Korea, Turkey)
- Novel weapon systems (e.g. lasers)





# Modernising platform T&E capabilities 4

## Aim:

De-risk the development and certification of next generation of military platforms

## How:

Investment of £50m to modernise:

- World-class, high field strength, outdoor electromagnetic range
- Europe's largest climatic chamber
- Centre of excellence for airborne communications system assessment
- UK's Aircraft Flight Test Centre

## Delivering:

- Enabling the migration of capability from Tornado to Typhoon
- Supporting Wildcat helicopter, Watchkeeper UAV & Ajax land vehicle
- Engaged with the Tempest (FCAS) to inform 6th generation combat system T&E needs





# Modernising maritime and signature ranges 5

- Aim:**  
Improve maritime war fighting capabilities
- How:**  
Investment of £85m to modernise :
- Unique signature and in-water range capabilities
  - Radar Cross Section (RCS) capabilities to ensure current and future threats can be assessed for maritime and air platforms
  - Data management capabilities
    - Big Data
    - Data mining & analysis tools
    - Report generation
- Delivering:**
- Improvements to the operational performance of current ships, submarines and aircraft e.g. Astute & Vanguard class submarines and Typhoon aircraft
  - Supports the development of the next generation platforms including the Dreadnought submarine, T45 destroyer and Tempest (FCAS)

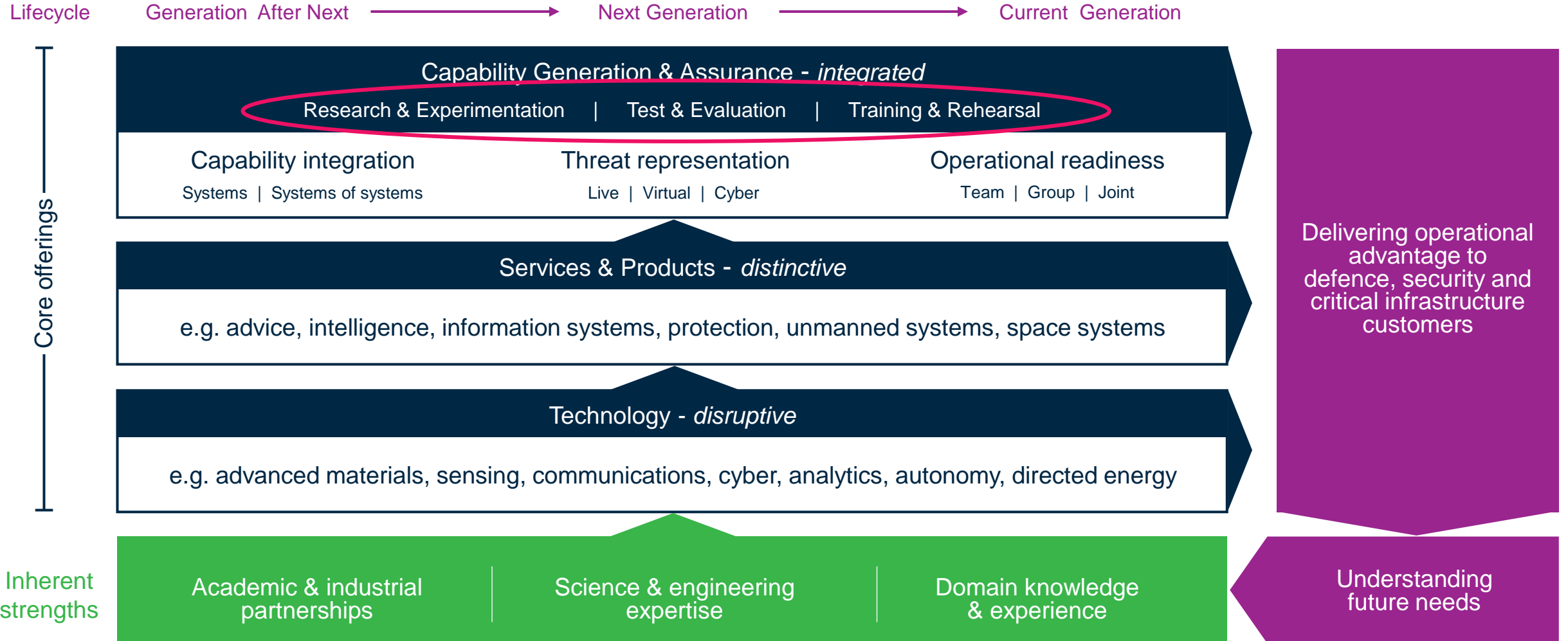




How this supports our  
strategy

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# LTPA is the key enabler in delivering our value proposition

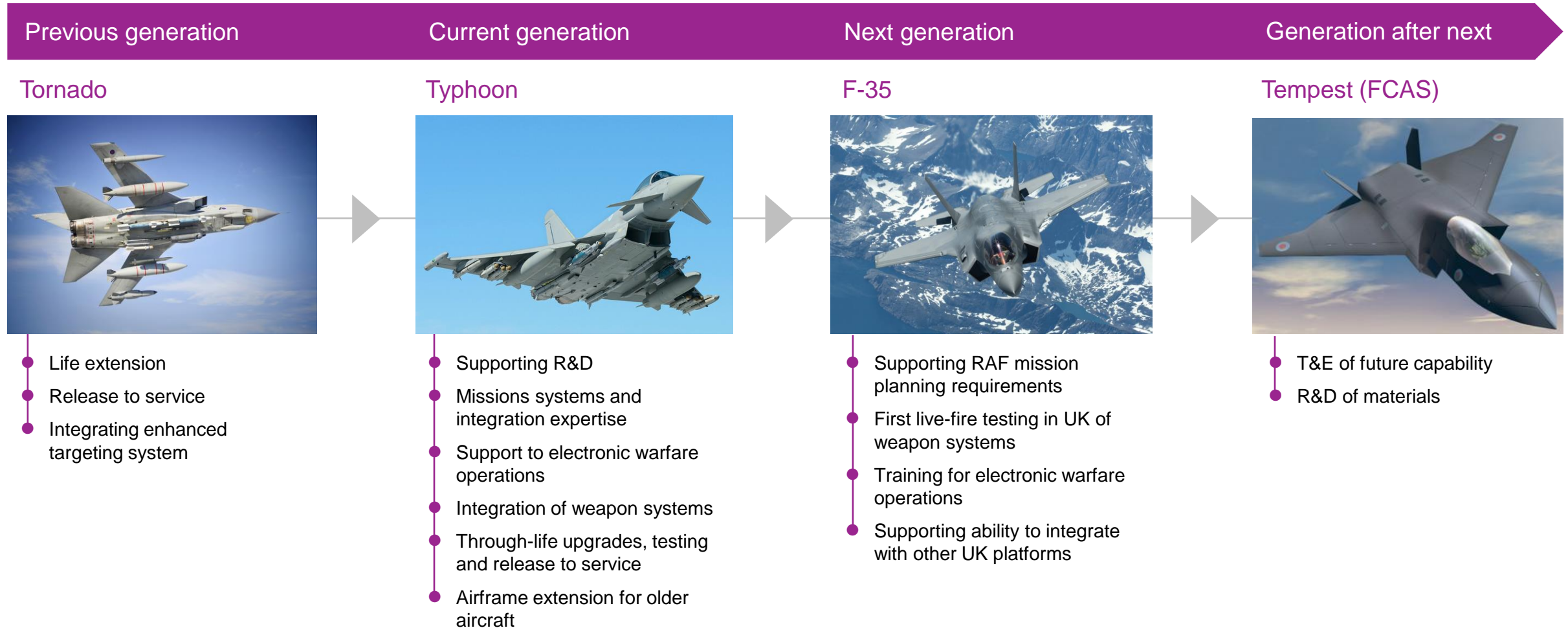


# Research and Experimentation – accelerating the deployment of new technologies

- The LTPA provides an integrated capability to test and prove new technologies:
  - ability to rapidly and safely experiment with evolving technology, creating new capabilities for our customers
- Large scale exercises, enabled by the LTPA, that test the latest technology, provide vital insights into their future deployment:
  - Involving many tens of industry participants
- Growing demand for experimentation evidenced through recent major exercises:
  - Unmanned Warrior
  - Autonomous Warrior
  - Information Warrior



# Test and Evaluation – generating and assuring capabilities across platform lifecycles





# Training and Rehearsal – complex systems require integrated assurance solutions

- UK Carrier Strike Group (CSG) consists of HMS Queen Elizabeth class aircraft carrier accompanied by escorts (2 x frigates, 2 x destroyers, 1 x submarines), support vessels and multiple aircraft:
  - Aircraft used will be a mix of both UK and US Marine Corp F-35 jets
- By 2021 the MOD needs to have trained and assured that all these platforms can operate together against the likely threats they will face
- QinetiQ investment allows this to be delivered through a combination of live, synthetic and virtual assets and threats
- December 2016 investment into modernising air ranges has established a commitment for the next decade from the US Navy for the Formidable Shield series of exercises
  - Large scale exercises to test and exercise NATO task groups in ballistic missile defence
  - US Navy customer investing alongside UK to increase the complexity of exercises ensuring realism and relevance
  - Further introduces QinetiQ's capabilities to a wide range of international customers
  - Engagement through Formidable Shield has attracted new work from Canadian and Polish navies
  - Provides precedent for MOD work in support of Carrier Strike Group





# Strategic benefits to QinetiQ

- LTPA supports our ability to grow in an >£8bn market with the need and pace for T&E driven by increasing:
  - threat complexity
  - system complexity
  - technological disruption
- Securing the amendment and investment to modernise enables QinetiQ to grow its market share through use of the UK LTPA facilities to:
  - deliver greater experimentation
  - deliver current and future UK programmes
  - attract international customers
  - undertake complex multi-asset, multi-service, multi-national exercises
  - leverage into attractive near-adjacent markets e.g. training
- LTPA gives QinetiQ credibility to support growing international T&E capabilities in other countries
- Delivers appropriate returns to shareholders





# Financial summary

# LTPA secures over >£300m per annum of revenue

Revenue is split between “non tasking” and “tasking” activities

Non-Tasking	Tasking
<ul style="list-style-type: none"><li>• QinetiQ is paid to sustain and keep relevant the capability and deliver a volume of outputs</li><li>• Revenue agreed until 2028</li><li>• Pricing locked at 2016/17 and 2019/20 SSRO rates</li><li>• Contractually defined</li></ul>	<ul style="list-style-type: none"><li>• Utilisation fee</li><li>• QinetiQ is paid to undertake a task or activity under the LTPA</li><li>• Historically contracted and delivered in year</li><li>• UK MOD work subject to prevailing SSRO pricing</li><li>• Demand driven</li></ul>

	Average Revenue p.a.	Pricing	Fixed / Variable	Investment
December 2016 – Non Tasking	c.£100m	2016/17 BPR + Adjustments	Pricing fixed until 2028	£180m
April 2019 – Non Tasking	c.£120m	2019/20 BPR + Adjustments	Pricing fixed until 2028	£190m
Tasking activities	c.£100m	Prevailing in year BPR + Adjustments	Variable	
<b>Total</b>	<b>c.£320m</b>			

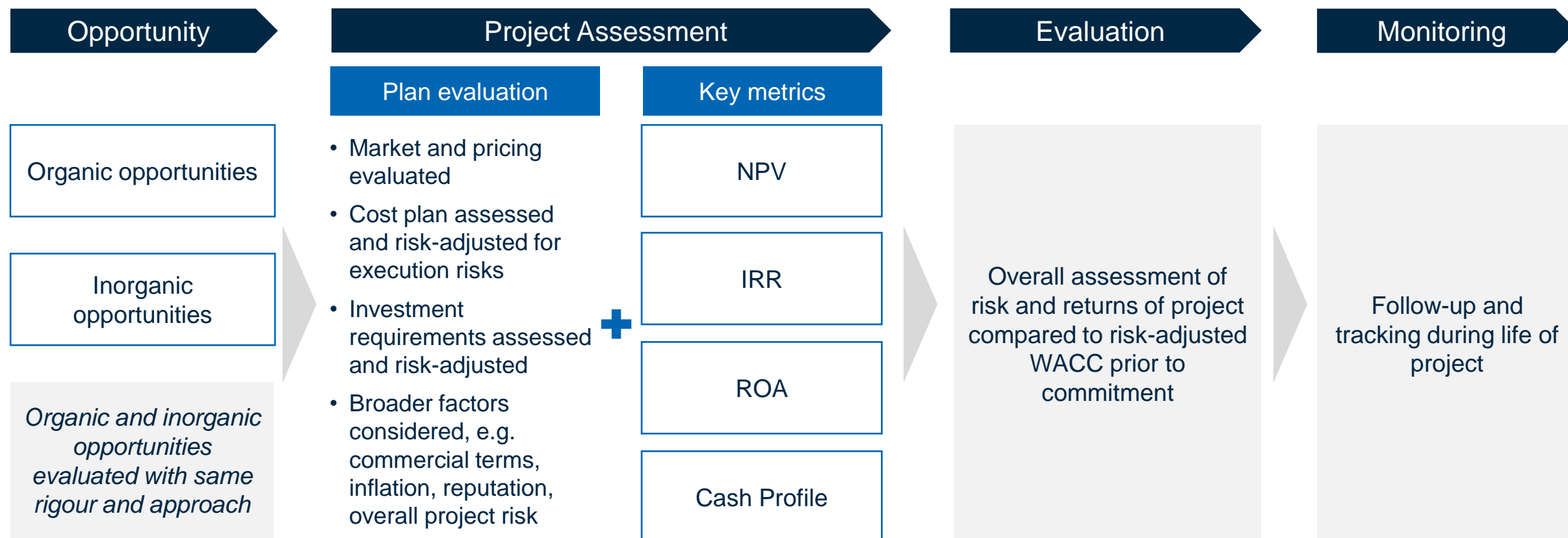
## LTPA is priced based on Single Source Regulations Office (SSRO) pricing

- Baseline profit rate (BPR) is subject to a series of adjustments to build up to a contracted profit rate (CPR)

Contract profit rate steps	Baseline profit rate (BPR)	Cost risk adjustment: +/-25% x BPR	SSRO funding adjustment	Incentive adjustment	Capital servicing adjustment
2019/20Rates	7.63%	+/- 1.9%	-0.042%	Up to 2.0%	Fixed capital - up to 4.0% Working capital - up to 1.2%

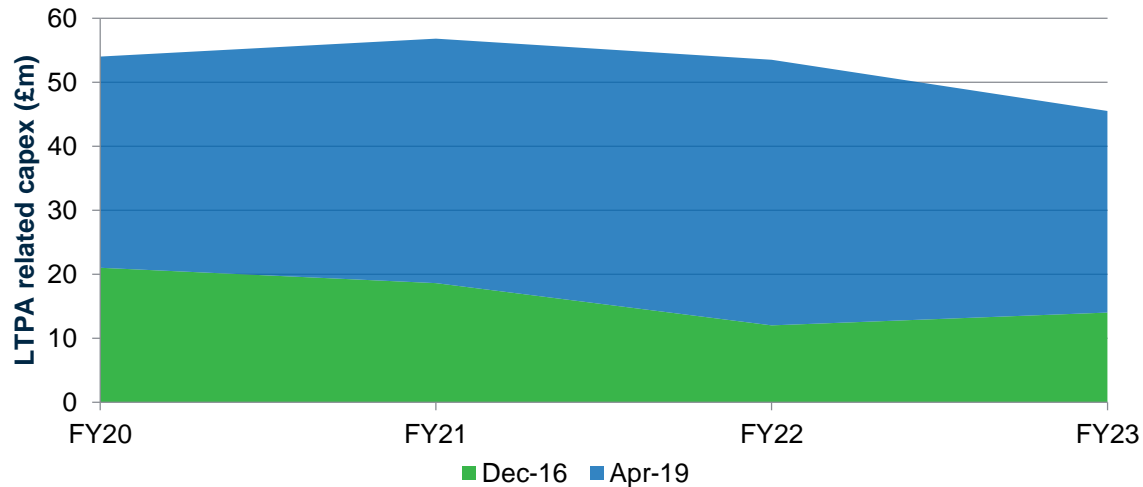
- Move to output based model supported by 16 years of experience
  - Rigorous 18 month process
  - Thorough modelling of both operating and investment cost base
  - Thorough analysis of uncertainty modelled on a “Monte Carlo” basis
  - Built on deep understanding from prior years operations

# We applied our rigorous approach to capital allocation

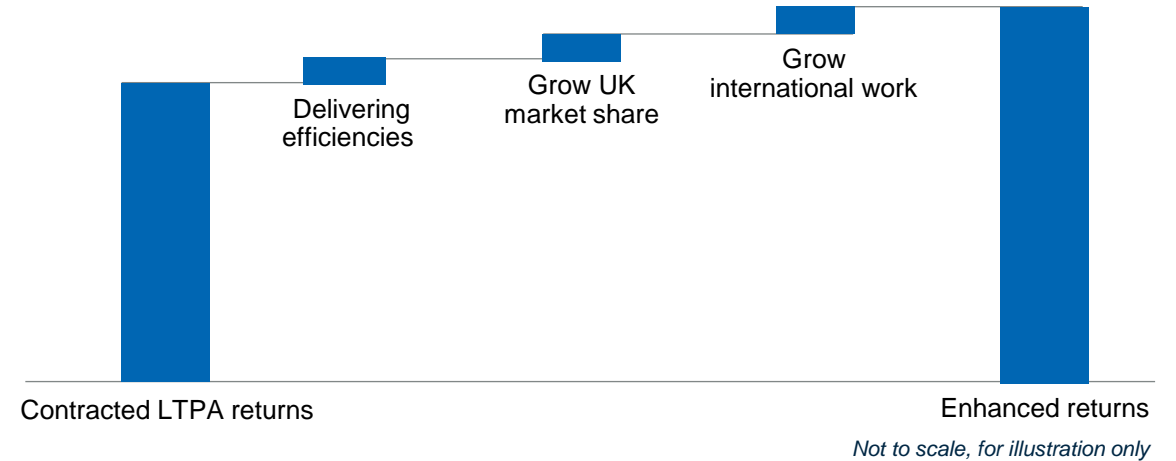


# Clear plan for investment and visibility on returns

## LTPA related investment



## Ability to further enhance contracted returns



- Amendment adds £190m of investment through to 2028
- Between FY20-22 LTPA capex £50-60m/annum, overall Group capex £70-100m/annum
- Investment recovered over life of the LTPA - depreciation of LTPA-related assets is an allowable cost
- Delivers clear contracted returns on investment above our cost of capital
- Ability to further enhance contracted returns

Value for money and enhanced capabilities for MOD – appropriate returns for QinetiQ's shareholders



## Delivers appropriate returns



Secures £1.3bn of revenue and pricing until 2028



Combined with December 2016 amendment, grows our total backlog to in excess of £3bn



Clear, contractual returns that are appropriate for level of risk we are taking



We can enhance this return by delivering efficiencies and growing level of work with MOD and international customers



Investment supports our ability to grow, e.g. world-class facilities, more cost efficient

Increased capability and value for money for MOD – appropriate returns for QinetiQ's shareholders



# Conclusions

# LTPA – delivering strategic benefits to UK MOD and QinetiQ

## Better outcomes for customers

- Secures the UK's critical T&E capabilities
- Modernises capabilities to better meet future needs
- Embraces digital technologies and “big data”
- Achieves cost efficiencies delivering greater value for money

## Driving growth in our business

- Secures £1.3bn of revenue bringing total backlog to over £3bn
- Reinforces our position at the centre of UK defence
- Enables investment with clear visibility on appropriate returns
- Provides a strong platform for growth from UK and international customers

Positioning QinetiQ as a world-leader in the generation and assurance of military capability

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