Typhoon  Future Survivability

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Paul Smith
BAE Systems
Paul Smith – BAE SYSTEMS

- Royal Air Force: 23 years
- >3000 hrs Fast Jet
- >600 hours Typhoon

- Front line / Ops / Test & Evaluation
- QWI / Fighter Weapons School Instructor
- 5 years Industry
  - Future Capability
  - Operational Capability Delivery
  - Weapons integration
Context of Typhoon Future Growth

P3E on operations today
Continuous evolution of Typhoon
Core Enhancements

Sensors
- Captor-E: ECRS2
- PIRATE

Survivability
- EA
- DASS
- Smart Dispenser System

Weapons / Roles
- DEAD / SEAD
  - SPEAR / SPEAR-EW SIJ
  - Meteor Upgrade
- Maritime Strike
  - JSM
  - Marte-ER

Platform

Performance
Eurofighter Future ConEmp

Common Core Nation ConEmp

Genesis

ConEmp
- Coordinate with UK and coalition assets
- Or
- Full access, manoeuvre, target alone
EF Survivability & Shaping Future Battlespace

2 Elements
Survivability
AA AD

Capabilities Illustrated
Now
Future

Videos
Classification
Simplified
Survivability

Battlefield SA
Mobile / Pop up threats
CCMs
  HMI
  Smart Dispenser System (SDS)
  Effective vs latest threats

Advanced & multi-layered defensive systems
High Survivability

Coordinated CMs

SDS
- Expendables
- Chaff
- AMD
- 55mm
- 218 / 118

Brite Cloud

ECM
- On-board
- TRD
- ECRS2 EA
Brimstone and SPEAR against Mobile SAMs

Weapon System and HMI
Brimstone
SPEAR
=>
Rapid targeting
Flexible precise effect
Multi-use weapons
MANPAD survivability

Launch Detection
- Rapid awareness
- MAW
- Expendables

MANPAD engagement
- Rapidly target
- Litening V
  - Full colour
  - Hi resolution
- Brimstone
- SPEAR
Battlefield Survivability Video
EF Significance / Survivability in AA-AD Theatre

Access
- Multi-layered defences
- FoM
- Smart multi-spectral sensors

Threat
- Precision location
- ATR
- Suppression
- RAP generated and shared

SPEAR 3
- Reshape battlespace
- Counter IADS defences
SPEAR: Stand-off Strike  SPEAR–EW: Stand-in Jammer

• Network-enabled air-launched surface attack capability.

• Precision effect - survivability of the delivery platform.

• Multi-effects warhead – effective vs:
  • Re-locatable Air Defence Units
  • fast manoeuvring vehicles
  • naval vessels

– Trials completed from Typhoon
– Contract award May 2016
– Reshape the battlefield
  – Stand off
  – Lethality
Eurofighter Access to AA-AD

Suppression
On-board
Off-axis
SPEAR-EW
SIJ

HMI
DL
Cockpit
Striker II
Eurofighter Weapons Mass

12 x SPEAR 3
+ 6 x Meteor / AAM
Litening V
2 x SFT

Multi-use weapons
Multi-spectral sensors
DEAD achieved via Suppression & Saturation

SPEAR-EW SIJ
Stand-off EA
SPEAR
  Long range
  Smart precision endgame
Overwhelm IADS
Multiple targets
DEAD – Reshaping the Battlespace Video
EF Relevance/Survivability in AA-AD Theatre

Freedom of Manoeuvre

Threat
- Precision location
- ATR
- Suppression
  - On-board
  - SPEAR-EW SIJ

SPEAR 3
- Counter IADS defences
- Reshape battlespace
Eurofighter Future

Maintaining operational dominance, high lethality against any threat

Mass, Momentum and Investment

Force integration and coordination

Enabling other Force Elements
Questions