

Typhoon Future Survivability

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Paul Smith – BAE SYSTEMS



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

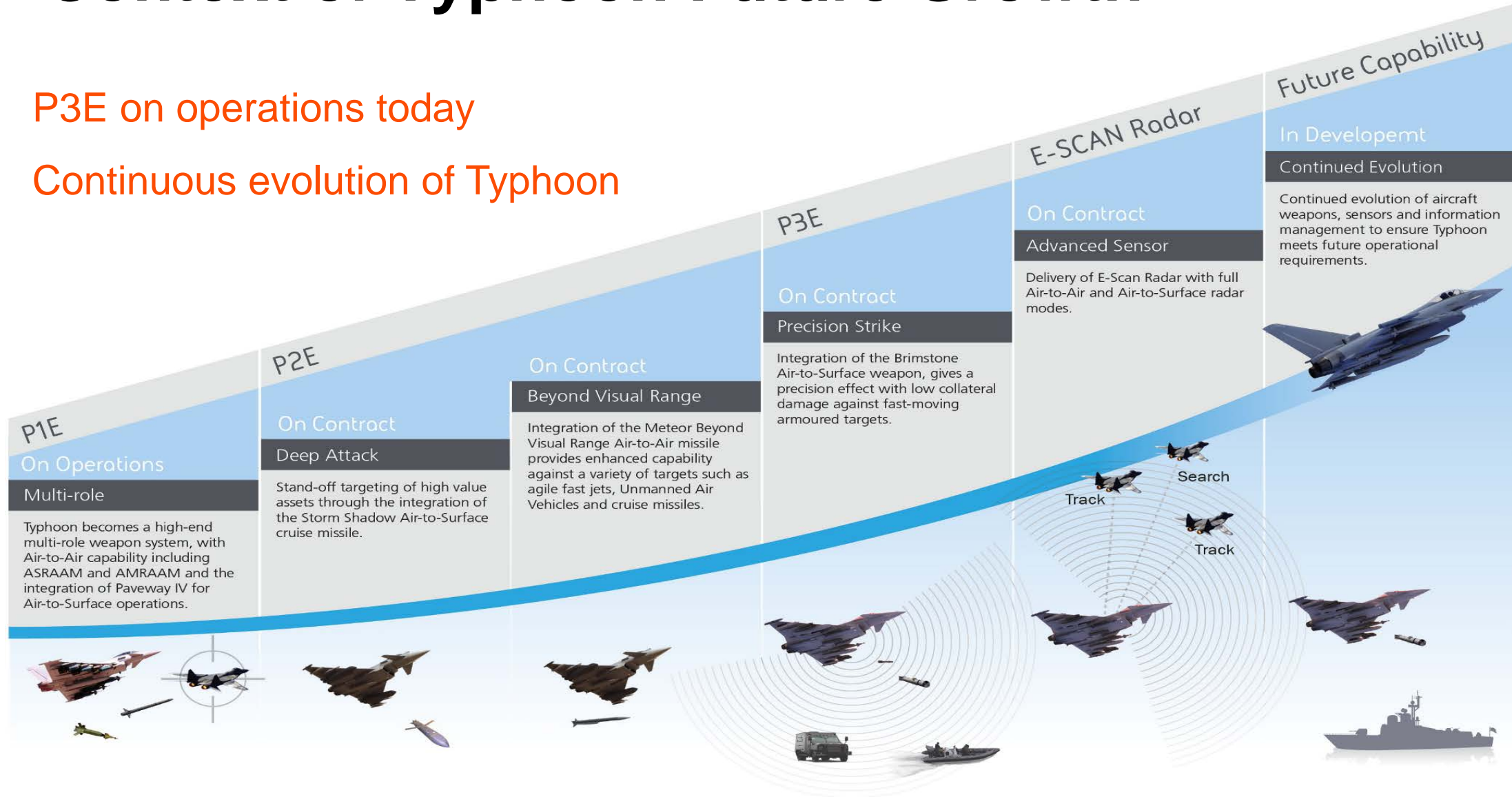


- Front line / Ops / Test & Evaluation
- QWI / Fighter Weapons School Instructor
- 5 years Industry
 - Future Capability
 - Operational Capability Delivery
 - Weapons integration

Context of Typhoon Future Growth

P3E on operations today

Continuous evolution of Typhoon



Core Enhancements

Sensors

Captor-E: **ECRS2**
PIRATE

Platform

Survivability

EA
DASS
Smart Dispenser System

Performance

Weapons / Roles

DEAD / SEAD

SPEAR / SPEAR-EW SIJ
Meteor Upgrade

Maritime Strike

JSM
Marte-ER



Eurofighter Future ConEmp

Common Core Nation ConEmp

Genesis

ConEmp

Coordinate with UK and coalition assets

Or

Full access, manoeuvre, target alone



A vision for the future of UK Combat Air

EF Survivability & Shaping Future Battlespace

2 Elements

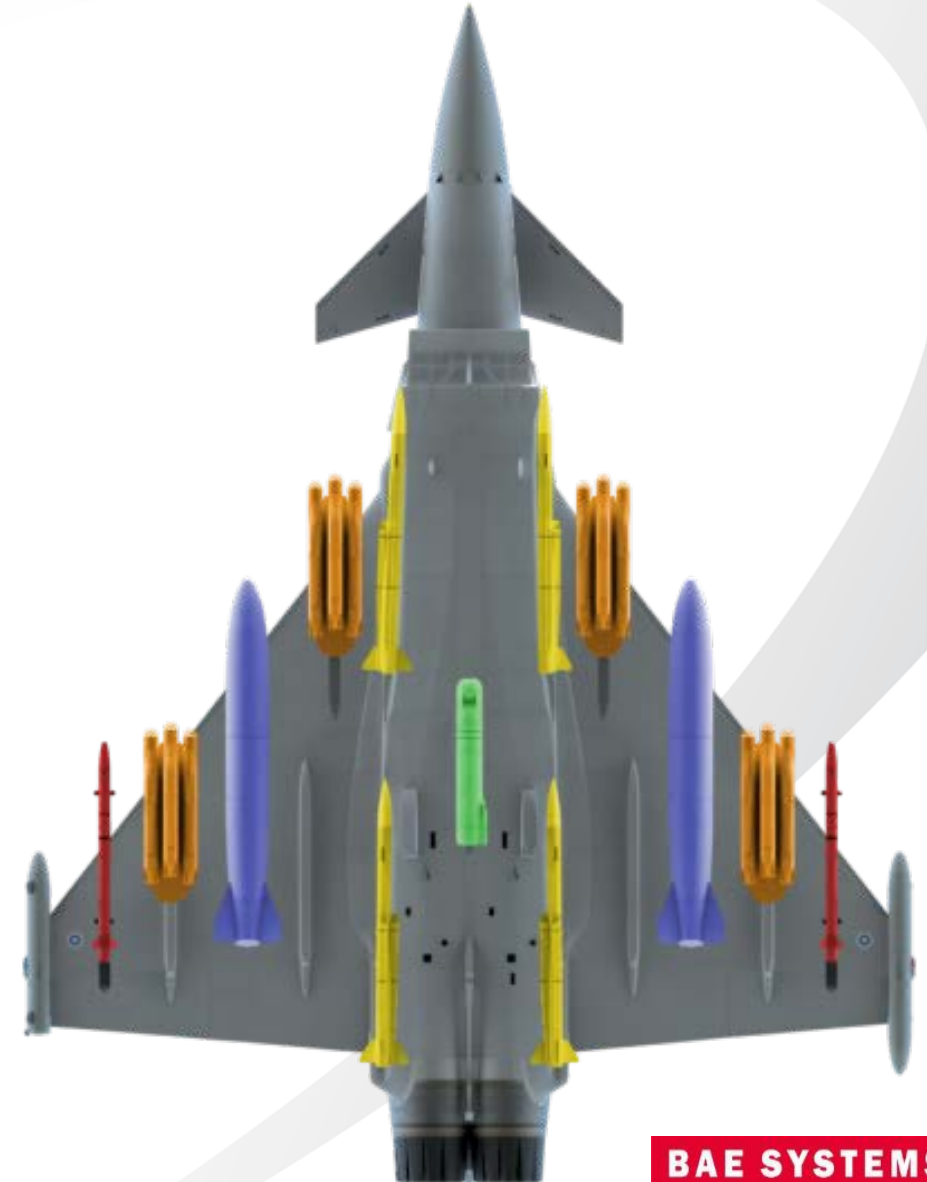
Survivability
AA AD

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

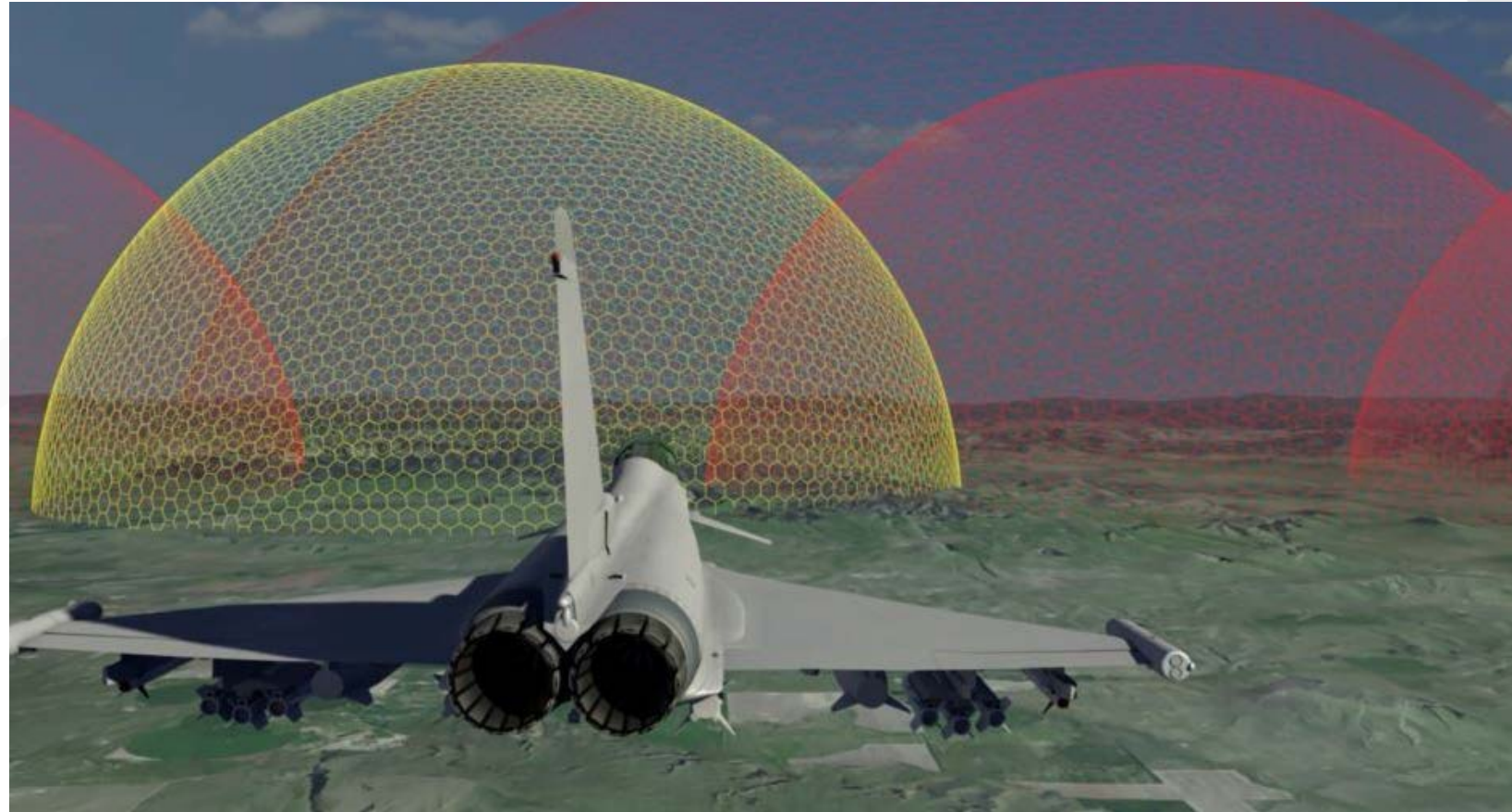
SIJ

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

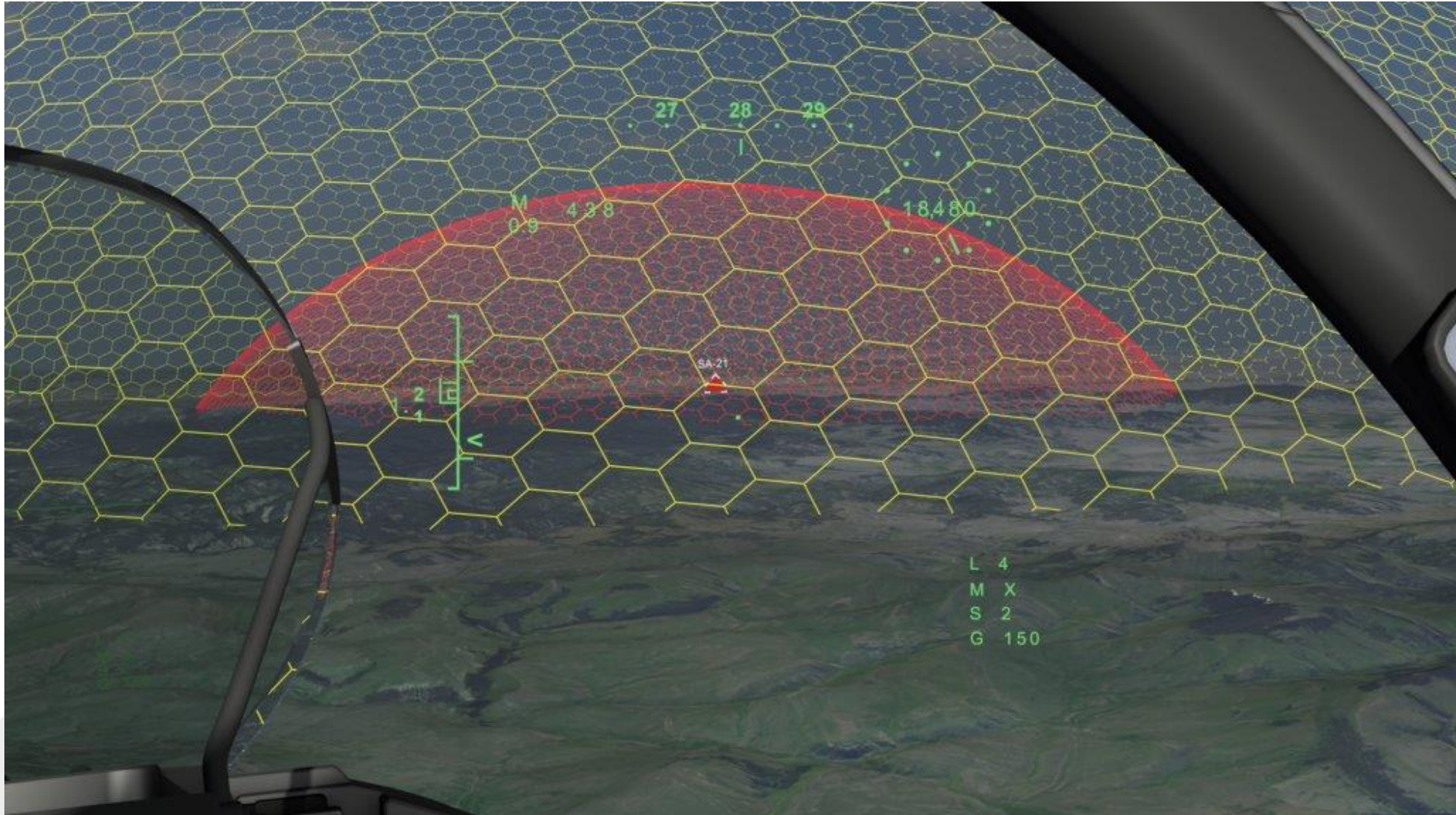
Smart precision endgame

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

