



UAV Systems

ADS Programme Seminar, 24 May 2006
Kelvin Conference Centre, Glasgow

WATCHKEEPER a “Capability driven” Programme

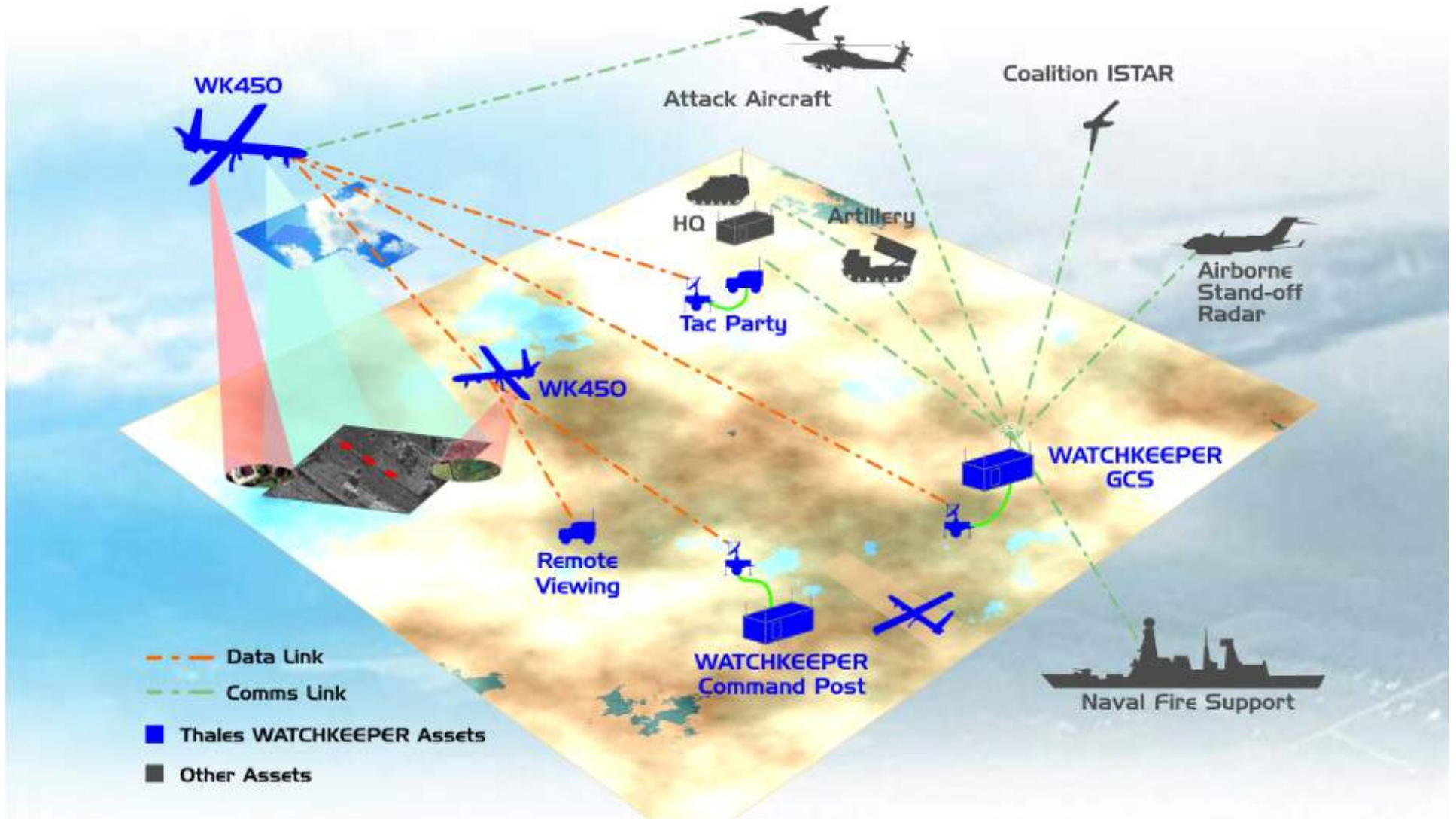
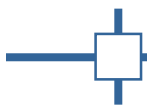
- WATCHKEEPER is not about supplying UAVs but delivering operational capability to the End User
- Incremental capability – planned growth from IOC to FOC and beyond
- The “eight lines of development” are integrated within the programme:



- Whole Life Cost optimisation is a key driver

“Delivery of Capability”

What is a WATCHKEEPER ?



“a Capability – not just a UAV”

JUEP – UAV Support to Maritime Operations

UAVs offer huge potential for improving operational effectiveness, in a range of different situations and environments. We cannot anticipate all their capabilities and uses – or indeed limitations – ahead of putting them in the operators' hands.

Rt Hon Geoff Hoon - SDR New Chapter

TEAM JUEP

- Successfully achieved:
 - UK first UAV flight controlled from RN warship
 - UK first launch of a UAV from RN warship
 - UK first recovery of a UAV to a UK warship
 - UK first networking of UAV to a RN airborne asset
- Achieved a flight of 8hr 14 minutes controlled from HMS SUTHERLAND
 - Reserve fuel for further 5 hours
- Trained UK personnel to fly UAVs using a mix of real and synthetic systems
- Cost effective, persistent contribution to maritime ISTAR
- Year 2 & 3 programmes achieved within 6 months of Contract Award



Captured Imagery



Typical UAV Video Capability



Typical UAV Video Capability





- Persistence (On-Demand Services)
 - Endurance
 - Reliability
 - Predictability
- Sensor Evolution / Multi Sensor Exploitation
- Commonality of control, exploitation and subsystems
- Collaborative Airborne Networks
- Bandwidth Management
- Autonomy
- Interoperability

- Civil Applications – beyond the barrier



■ Defence

- Information collection -ISTAR, EW, NBCR, Air Defence, digital mapping, Meteorological, Air Traffic Management
- C2 Infrastructure – Battlespace Comms, Rebro – EW, GPS, Info Ops
- Payload delivery – Weapons, remote sensor, logistics, personnel

■ Civil Government (non-military)

- Border Surveillance, Police Air Support Unit, Civil Emergencies, Maritime EEZ patrol

■ Commercial Applications

- Information Collection – Air-Ground surveillance, mapping, meteorological and environmental monitoring
- Communication Infrastructure – psuedo satellite,
- Payload Delivery - dispensing, freight, air transport

- **Optimistic Future for UAV Systems**
 - The success of the UAV Systems requires a cultural acceptance of the benefits of change
 - Access to Airspace
- **WATCHKEEPER Capability will be a major consideration in future UK UAV requirements**
 - Through Life Insertion
 - A “family of UAV Systems” with a Common Architecture and Infrastructure
- **Close collaboration between Industry teams and Customers is essential**

THALES



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