



Welcome!

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## Some History...

- 10 Years ago we hosted the 2<sup>nd</sup> ICCRTS Conference
- ICCRTS has grown from strength to strength over the decade
- A testament to David Alberts and his team
- Papers from as far afield as Singapore, Australia, Canada, US – as well as Europe



# Delivering Capability: next steps for the UK





- Challenges – we face now
- Changes – being made
- Charges – on the community



# Challenges

## ● Complexity

- Range of operations and environments
- Range of potential adversaries
- Constraints placed on use of military force
- Globalisation of information and opinion

## ● Uncertainty

- Changing social and political environment
- Changing threat scenarios
- Adaptive adversaries with minimal inertia
- Rapid technology evolution



# The Dilemma...

- Complexity drives us to sophisticated offensive and defensive systems
  - Longer lead times
  - Smaller numbers of complex platforms
  - Expensive military bespoke solutions
- Uncertainty demands agility and flexibility
  - Shorter lead times
  - Rapid innovation and modification of systems
  - Exploitation of commercial technology and acquisition approaches



# Changes

- Long term plan based on capability rather than individual equipment procurements - link acquisition and support
- Integrated approach across lines of development... not just equipment – including information, doctrine, training
- Emphasis on incremental acquisition, upgrade and open systems approaches
- Changed relationship with industry in partnership to address restructuring needs and deliver capability

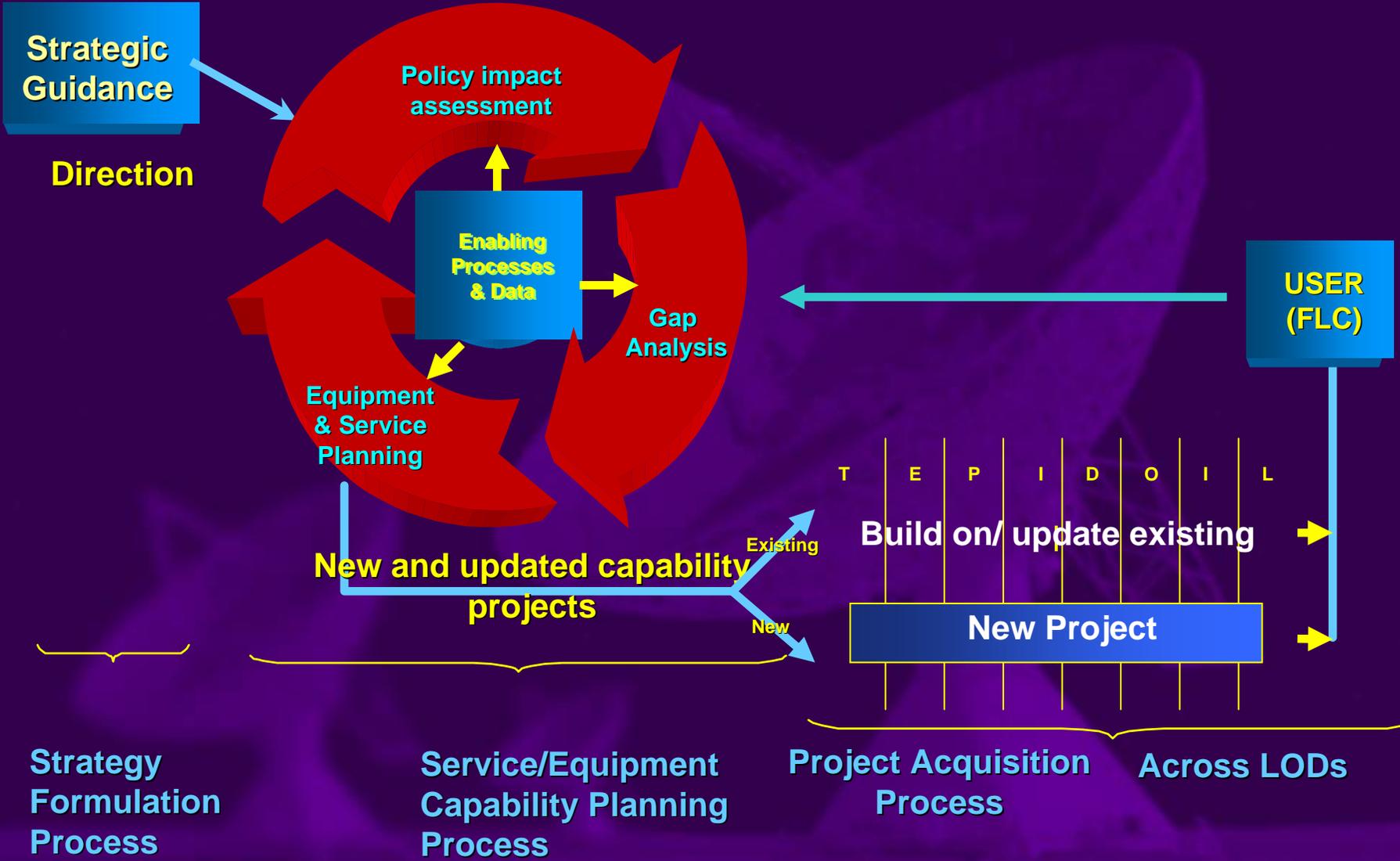


## Through Life Capability Management

*“An approach to the acquisition and in-service management of military capability in which every aspect of new and existing military capability is planned and managed coherently across all Defence Lines of Development from cradle to grave.”*



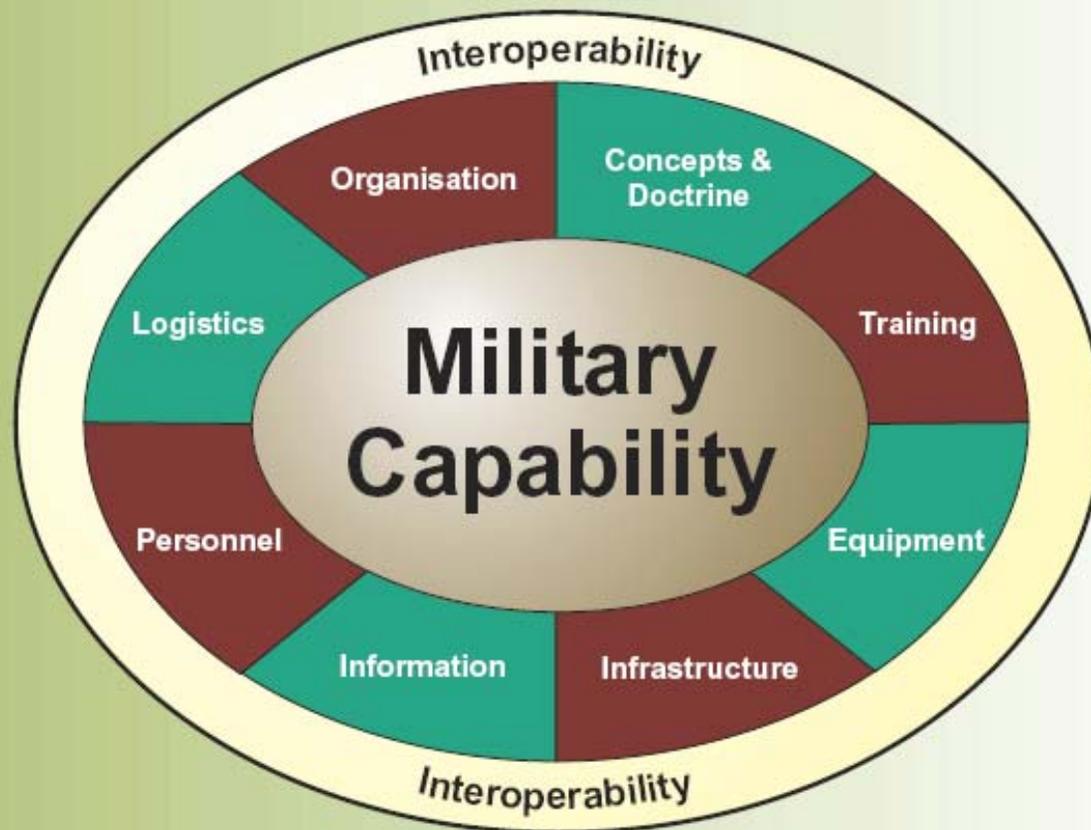
# Pathfinders





# Integration across LOD

## Defence Lines of Development





# Experimentation



- Integrates lines of development
- Engages user directly in acquisition process
- Encourages innovative offerings
- Forces systems integration issues to be addressed

# **NITeworks – Network Integration Test & Experimentation works**

**NITeworks is a MOD/industry partnership providing an environment to undertake Warfighting Experimentation which allows the customer community to assess the benefits of Network Enabled Capability and the options for its effective and timely delivery.**

**NITeworks brings together the best of MOD and industry – people and facilities – to provide a world-class experimentation capability.**

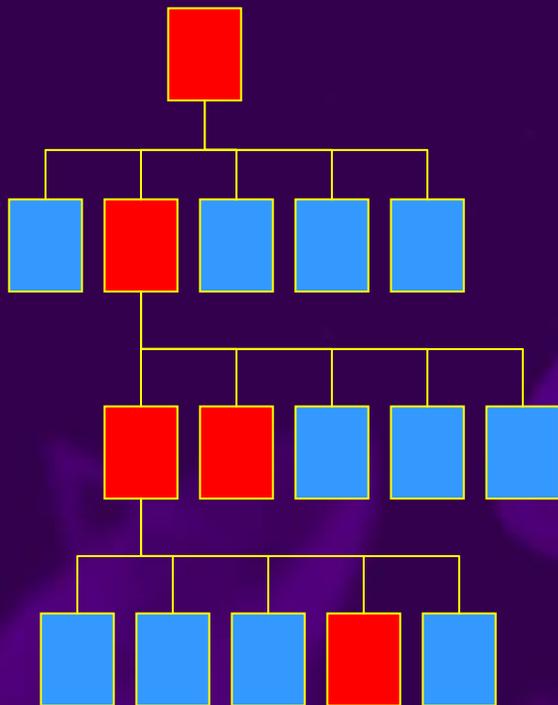
**NITeworks carries out controlled experiments, using Command & Control elements and front line warfighters, to produce accurate and up-to-date evidenced interventions.**

**NITeworks delivers advice and recommendations – with sound supporting evidence – to MOD decision-makers, in support of developing military capability and/or reducing operational and economic risk.**

**NITeworks has demonstrated a proven methodology and capability that supports MOD in optimising its investment decisions within the networked environment.**



# Integration and Open Systems



- **Integration**

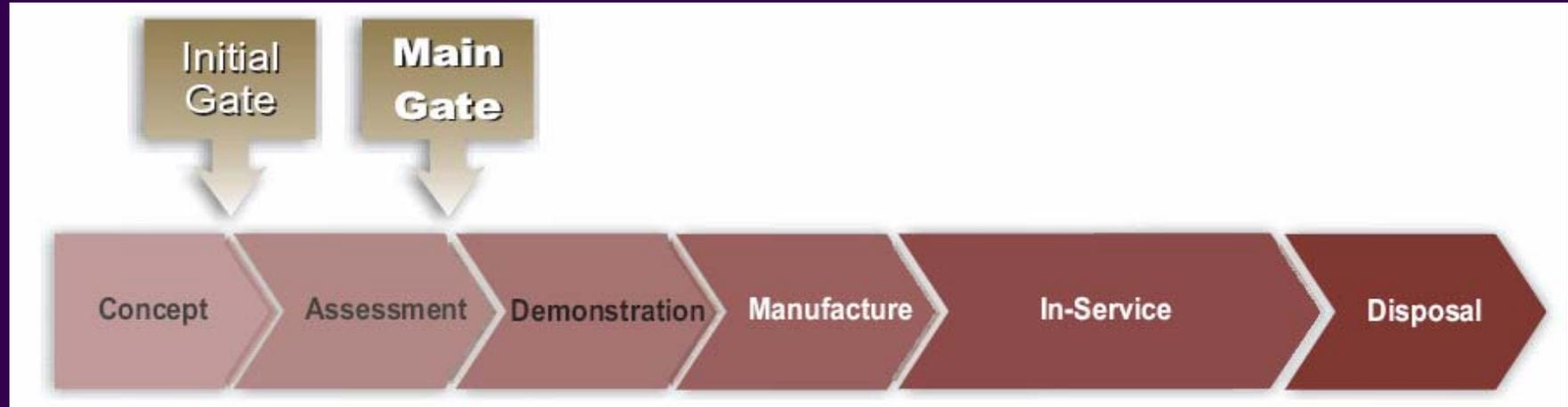
- Systems of system
- Design authority
- Architectural framework
- Integration structures

- **Open Systems**

- Open system principles
- Supply Chain Structure
- Incentives to innovate and improve



# Agility



Risk Spend  
9% Up front

## Cycle Times

- Platform 20-40 Years
- Weapon 10-20 Years
- Comms 5-10 Years
- Software 1-3 Years



# Changed Industry Relationships

- Long term partnering constructs for acquisition and support
- Incentives locked to performance rather than revenue
- Less process more confidence and flexibility to interpret – with the necessary skills
- Behaviours key to relationship – Defence Values for Acquisition



# Is CIS a lesson?

- CIS systems are the most taxing case of acquisition in all respects...
- Except for infrastructure and technology lead times, monopolies and imperfect markets...
- But there are many lessons which can be drawn... not least the importance of system engineering...



And finally...

- AVM Stu Butler will speak tomorrow
- Enjoy your conference
- You are most welcome