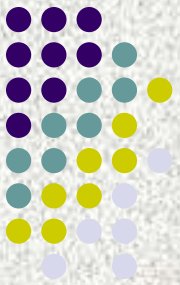


Challenges for MoD ISAs

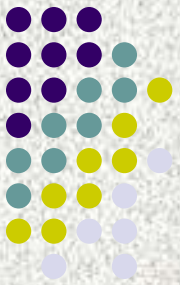
Rhys David

Presentation Overview



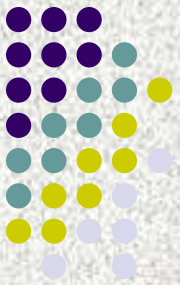
- **Introduction**
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Ministry of Defence



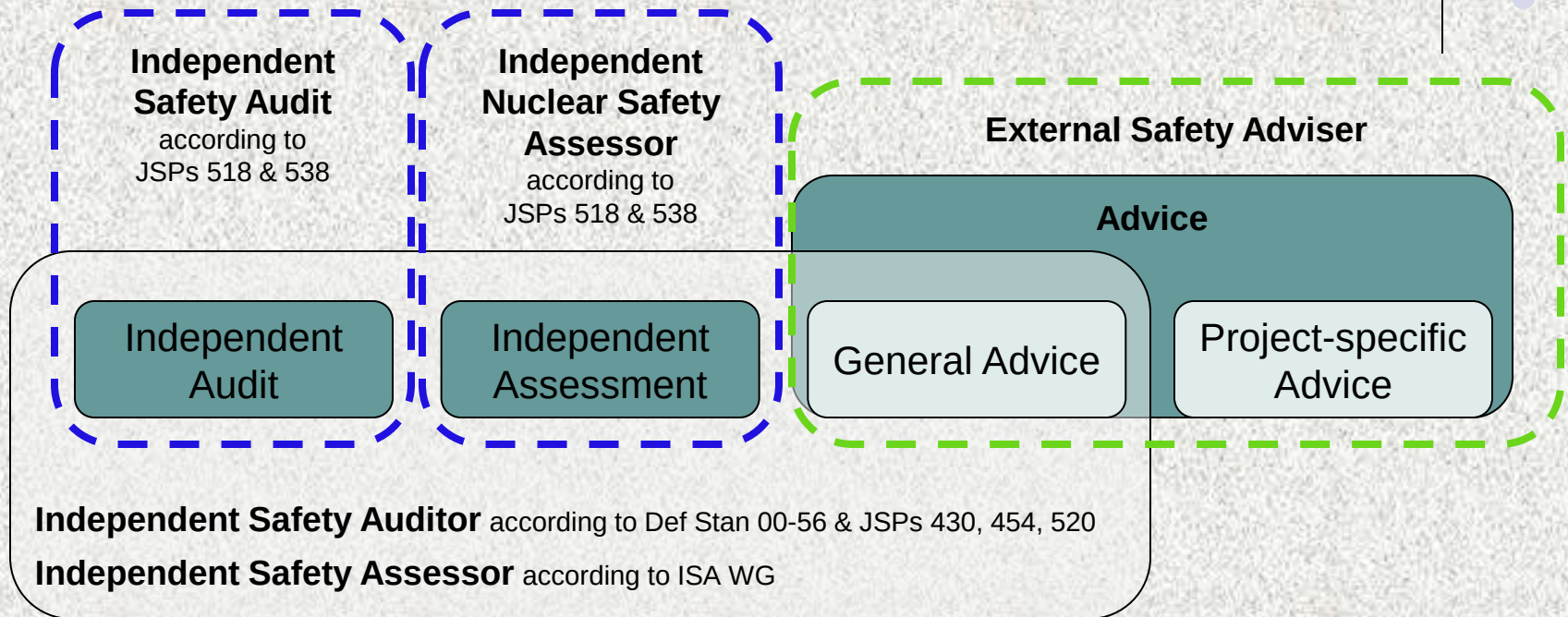
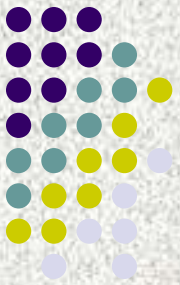
- Large (330,000 people, 240,000 hectares, £35bn budget)
- Diverse
 - Nuclear reactors- railways - airfields – dockyards - bridges - workshops - explosives stores – satellites - warfighting -
- Geographically dispersed
- Subject to Health & Safety Law
 - But self-regulating in several High Hazard areas
- Long History
 - Hierarchical
 - Divided by ‘Domain’, with own concerns, terminology, processes
 - Subject to frequent reorganisations

Defence Equipment & Support (DE&S)



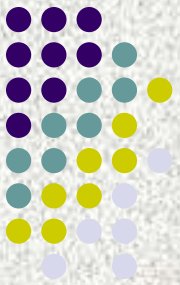
- Provides & Supports Equipment & Services for Armed Forces
 - Current & future Operations
 - Through-life Management (CADMID lifecycle)
- Large (21,000 people, £14bn budget, ~1,900 projects)
- Diverse
 - Military systems (e.g. ships, aircraft, vehicles, weapons, comms. etc)
 - Food, clothing, medical equipment & supplies
 - HM Naval Bases
- Safety Management for Military Systems
 - On behalf of the Army, RN, RAF
 - Project-Oriented Safety Management System (POSMS)
- Works closely with Industry
 - Def Stan 00-56 for Safety Management

MoD ISA Role



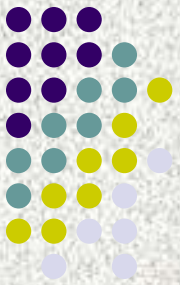
- Usually an ISA Team
- Authority & Responsibility rests with ISA's customer
- Should cover Supplier, Acquirer & User

Presentation Overview



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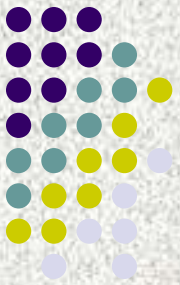
Haddon-Cave & Nimrod ISA (1)



- Loss of Nimrod XV230 in Afghanistan on 2 September 2006
 - Catastrophic mid-air fire
 - Death of all 12 crew and 2 mission specialists
- Investigation by Charles Haddon-Cave QC for SofS Defence
 - Examine arrangements for Nimrod airworthiness since 1979
 - Assess where responsibility lies
 - Assess process for compiling safety cases
 - Make recommendations
- Report on 28 October 2009
 - Physical & Organisational causes
 - Nimrod Safety Case
 - Lessons & 84 Recommendations

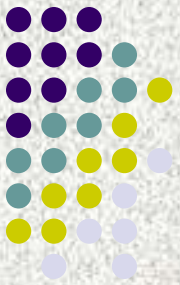


Haddon-Cave & Nimrod ISA (2)



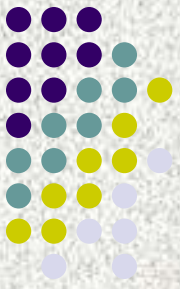
- Nimrod Safety Case developed 2001 to 2005
 - BAE Systems (Phases 1 & 2)
 - MoD Nimrod Integrated Project Team (Phase 3)
 - QinetiQ acting as ISA (but not formally as **Auditor**, de facto **Adviser**)
 - Tension in relationship with IPT [H-C 10A.99]
 - QinetiQ anxious to remain on good relations with IPT & not lose business [H-C 10A.102]
- ISA Lessons from Haddon-Cave
 - Nimrod ISA role unclear
 - Inadequacies in conduct of 'independent adviser' role
 - Checking Risk sentencing
 - Briefing of staff sent to critical meeting
 - Reading safety reports & checking safety work
 - Advising Customer
 - 'Signing off' work when not appropriate

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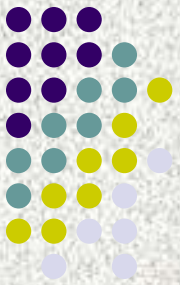
DE&S Safety Improvement



- Safety Improvement Working Group set up Dec. 2007
 - Examined recommendations & lessons from Nimrod & other Inquiries
 - Reviewed the Management of 'Military Systems' Safety
 - Reported 15 April 2008 with Safety Improvement Plan (22 Actions)
- DE&S Safety Improvement Group
 - One workstream was on SIWG Action A3

Examine the role of ISAs supporting DE&S and consider issues associated with their roles, funding, appointment, reporting and monitoring their effectiveness
 - Outputs
 - ISA FAQs
 - Example ISA Terms of Reference & Example Statement of Requirement for ISAs
 - Revised Project Audit question on ISAs
 - Sharing significant ISA findings via Safety Managers & Specialists Group

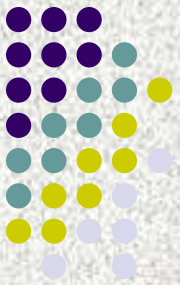
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Challenges for MoD ISAs

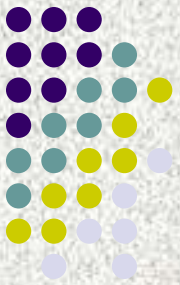
1: Changes to MoD



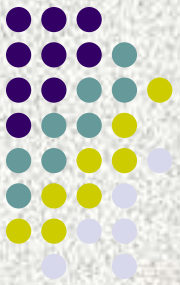
- Budgetary Pressures
- Establishment of Military Aviation Authority
- Defence Safety & Environment Authority
- Audit Regime on MoD Projects Themed & Targeted
 - Based on Risk Profile
- Risk Referral up Management chain
- ‘Duty Holder’ Constructs defined
 - ‘Owning’ activities that impose Risk to Life
 - Implications for budget holding & Safety Case ownership
 - Possible future implications for ISAs ?

Challenges for MoD ISAs

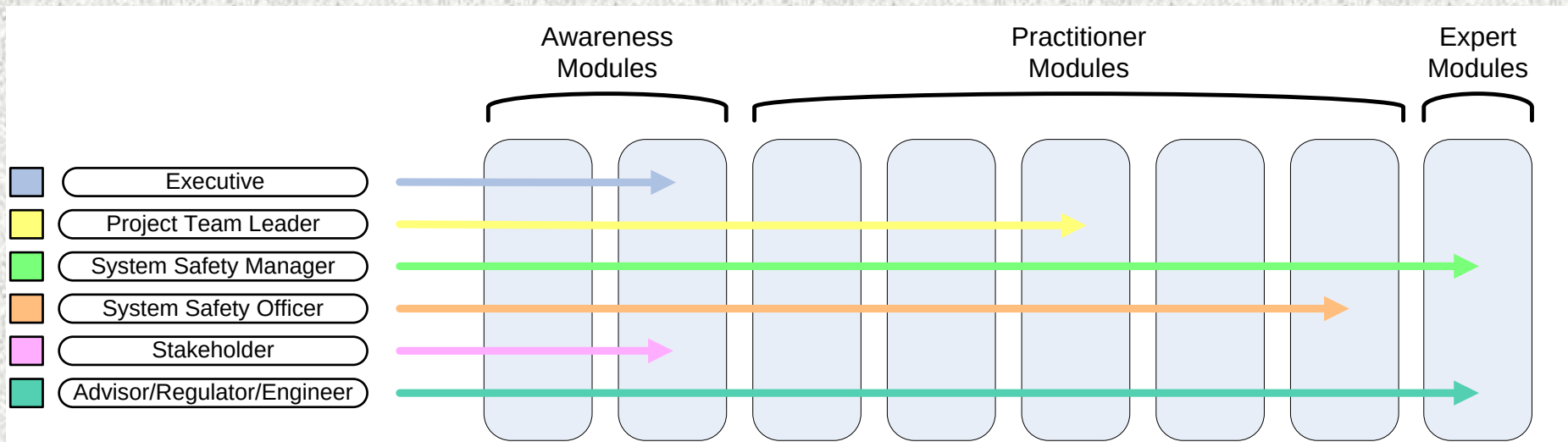
2: Competence



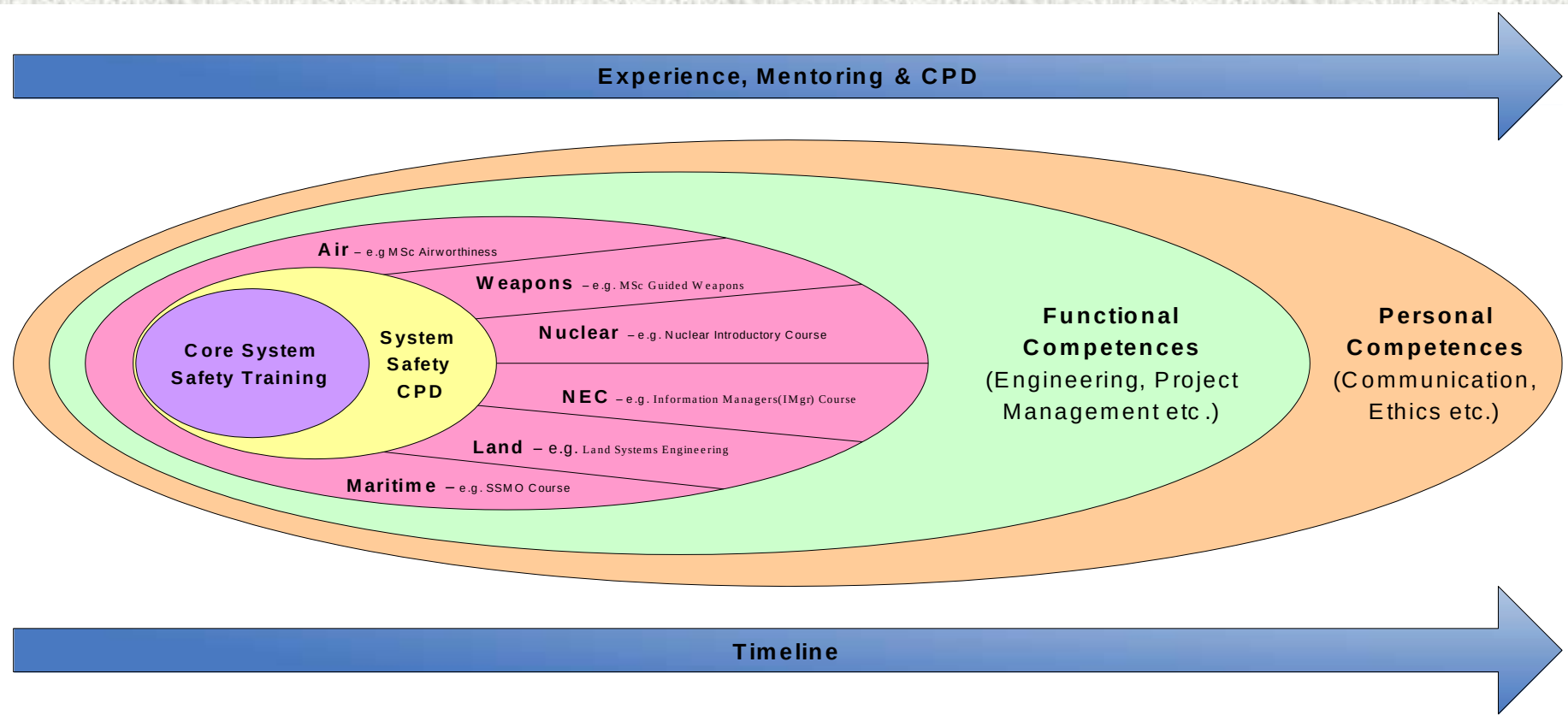
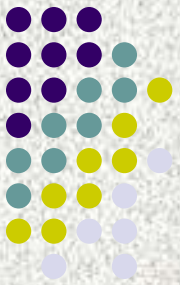
- Competence of ISAs
 - Comply with ISA WG Code
 - Competence Management Framework (e.g. ISA WG)
 - Appreciation of Military Risk & ALARP
- Competence of MoD Project Staff
 - Guidance on ISA issues
 - Competence definitions
 - New e-Learning Courses & Workshops
 - Professional Affiliation



MoD Safety Roles & Training

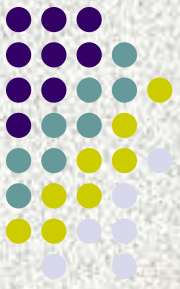


Developing Safety Competence



Challenges for MoD ISAs

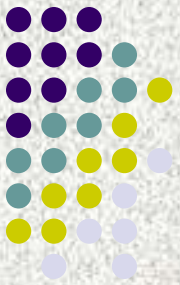
3: Maintaining Independence



- Nimrod & Haddon-Cave show it can be difficult
- “He who pays the piper calls the tune” ?
- ISA acts for potential future victims
- ISA Senior Management must value independence
- Mechanisms to resolve conflict
 - Role of Safety Management Office / DSEA
 - Avoiding “my expert versus your expert”
- MoD expectation of ‘Hard Questions’ from ISAs
 - ISA contracts terminated where not seen as challenging

Challenges for MoD ISAs

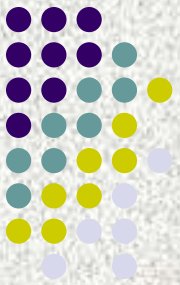
4: MoD Standards



- Defence Standards (Contractual documents)
 - Def Stan 00-56 (Safety Management)
 - Non-prescriptive
 - Under review for update 2012
 - Software Safety Standard
 - Def Stan 00-55 is obsolescent but still in use
 - New document being produced for 2012
 - Joint Services Publications (MoD Policy & Guidance)
 - Impacts of Defence Safety & Environment Authority ?
 - Acquisition Safety & Environmental Management System
 - Recently updated
- + Lots of Guidance Information (general & domain-specific)

Challenges for MoD ISAs

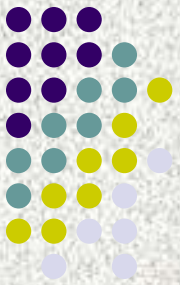
5: System of Systems



- ‘System of Systems’ means different things !
- Which authority is responsible for Integration ?
- Who makes an ALARP justification ?
- Integrity of Data and Information
- Complexity of:
 - Battlefield
 - Reconfigurable Systems
 - Interaction with Systems owned by others (e.g. allies)

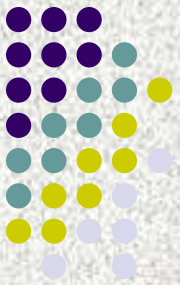
Challenges for MoD ISAs

6: Coverage



- Stakeholders' Management Systems
 - Prime Contractor
 - Supply Chain
 - DE&S Project Team
 - Users
- Lifecycle
 - Involvement at earliest stage (but in what role ?)
 - Safety issues in Military Operations
- Safety Risk
 - Risk to Life (person-centric)
 - Appreciation of Overall (Aggregated) Risk

Conclusion



- MoD has learnt from past experience
- MoD's Duty Holder Construct has implications for how Safety will be managed in future
- MoD upping its game:
 - Safety Management
 - Safety Competence
- The same is expected from:
 - MoD's suppliers
 - ISAs

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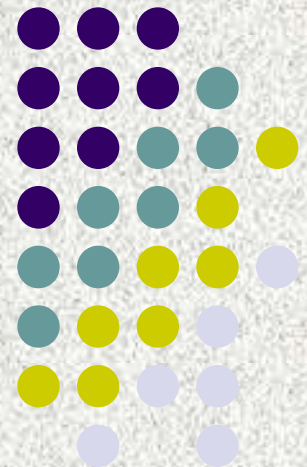
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