The Army Equipment Development Plan

A practical implementation of an information environment and decision support tool for visualising Land risks and priorities

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Note that all visualisations in this presentation are built using representative, but not real, data

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Overview

- Aim of this presentation
  - Overview of the context, process and output of the recent Army Equipment Development Plan project, including a demonstration of the solution
- Why is it relevant?
  - Example of a pragmatic solution, based on solid EA principles and tools, that is directly improving military capability
  - Some re-usable elements approaches with wider utility
- Structure of the presentation
  1. Context – who are we and why was there a problem?
  2. Output – what was the solution that we developed?
  3. Detail – how is it built and managed?
  4. Summary – so what?

AEDP - Context

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- Equipment Strategy (Army) – Why, Who, What
- Equipment Capability Challenges – Defence, Land
- The SDSR and NSS
- The Army (Land) Strategy
  - The Requirement
  - The Outputs
  - The Concept

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AEDP – The Requirement

Risks

Visualised

Coherence

Engagement
(Top Down)

Evidence

Decisions

Priorities

Ownership

Short and Long Term (0-10yrs)

Judgement and Analysis

Influence

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The Niteworks solution

- Niteworks is a partnership between the MOD (including Dstl) and industry
  - 12 industry partners, 60+ associate members
  - MOD (military and civilian), Dstl and industry collocated in Farnborough
  - Receives MOD core funding, and full Projects are funded directly by Sponsors
- We work across the MOD-industry space to analyse problems, examine options and de-risk requirements, helping the MOD to make better, faster and more informed decisions. In this case through:
  - Visualisation of complex problems
  - Understanding the mechanisms behind cross capability trading
  - Supporting solid enterprise-driven solutions
  - Combining analytical rigour with pragmatic solutions
- In this project Niteworks supported ES(A) by developing:
  - A methodology which would enable the Land environment to mature a vision of issues and risks which would be common across the multiple stakeholders;
  - An information environment which enabled structured interrogation of the information and supported decision making;
  - A way of visualising and navigating the results.

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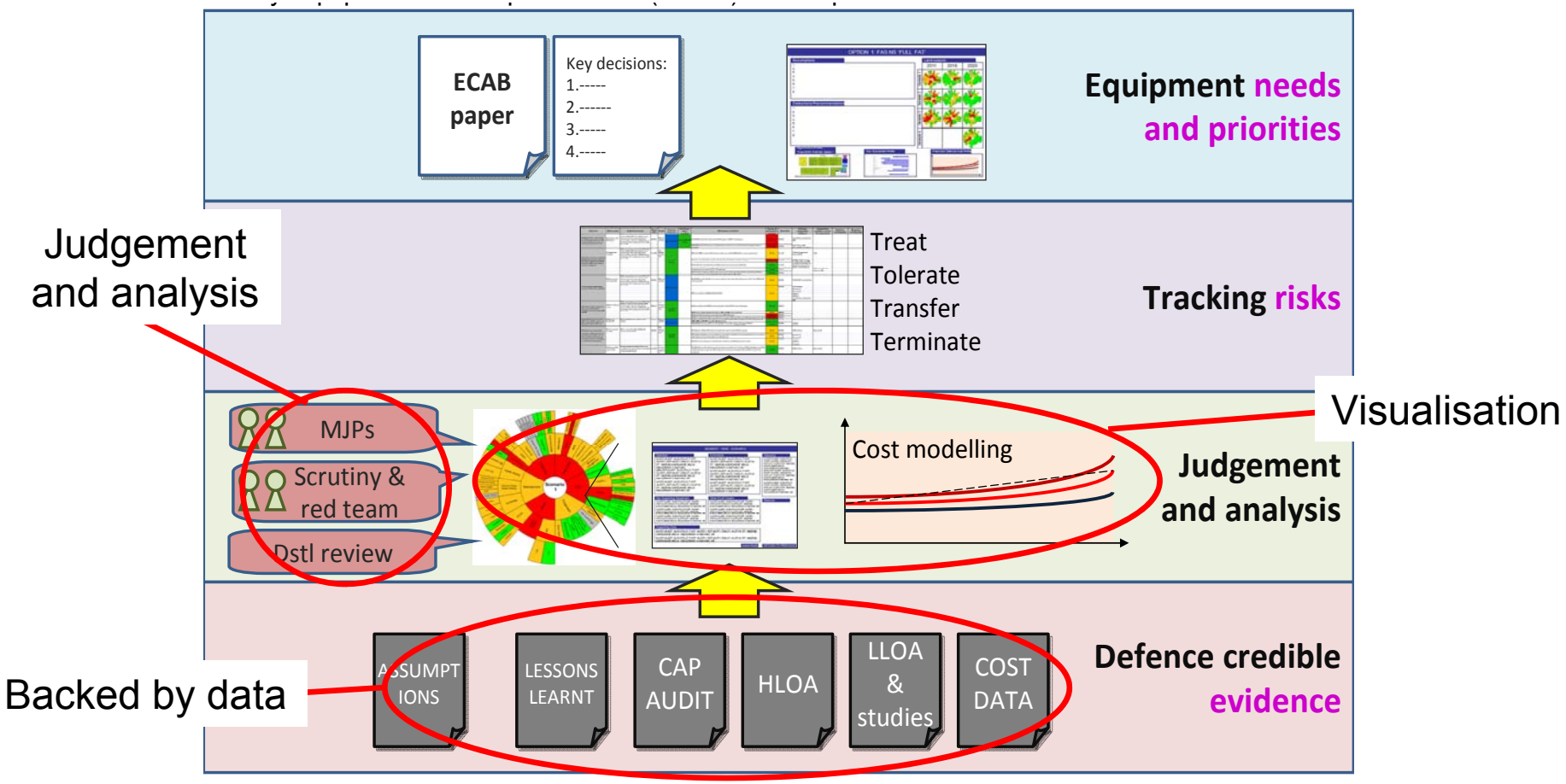
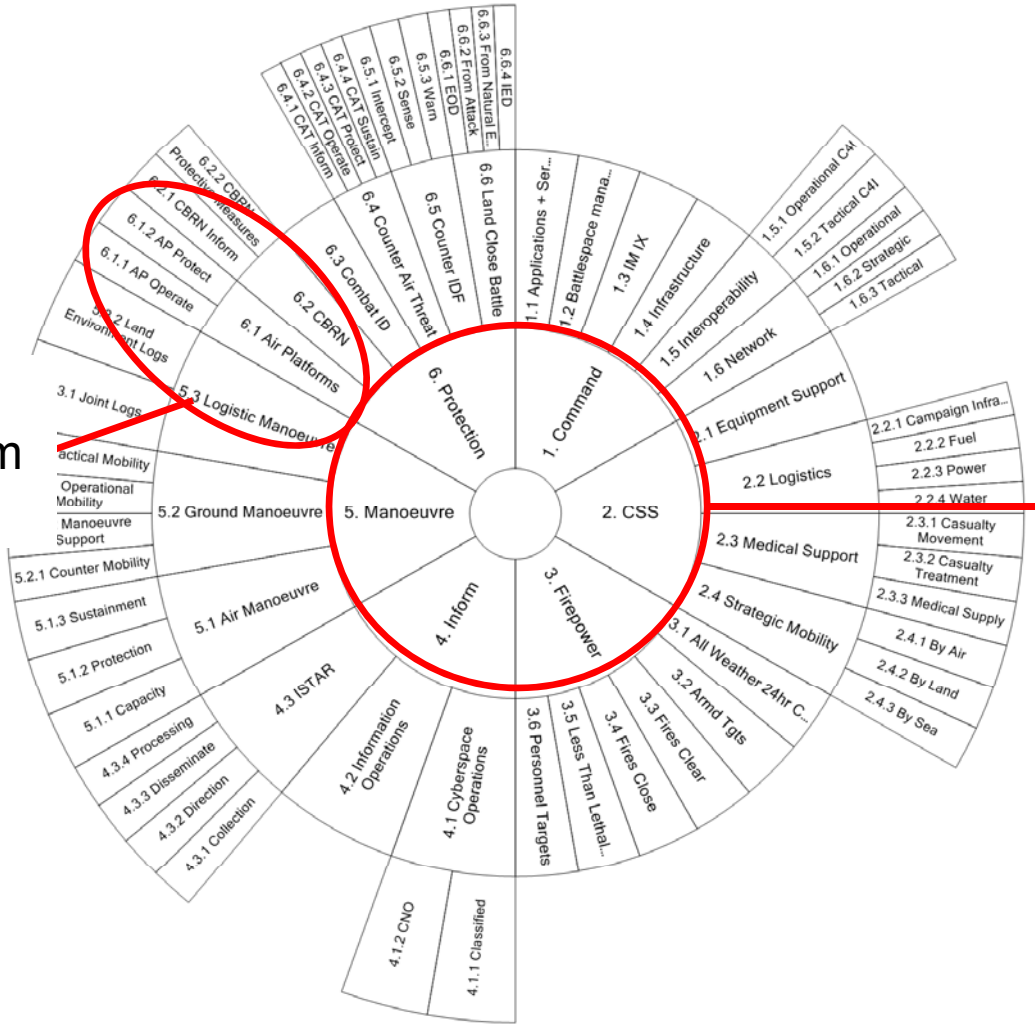
Concept - methodology



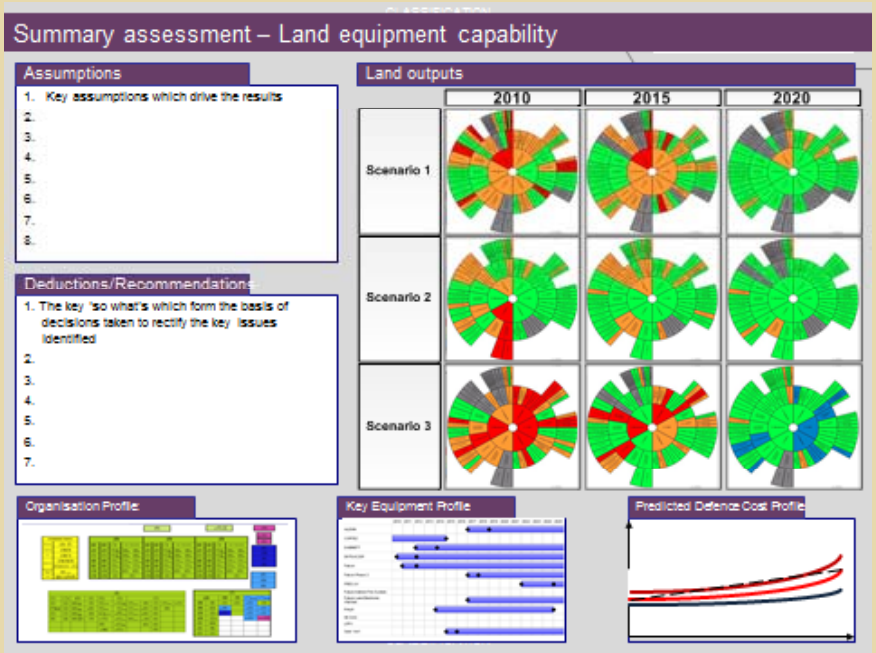
Concept - taxonomy

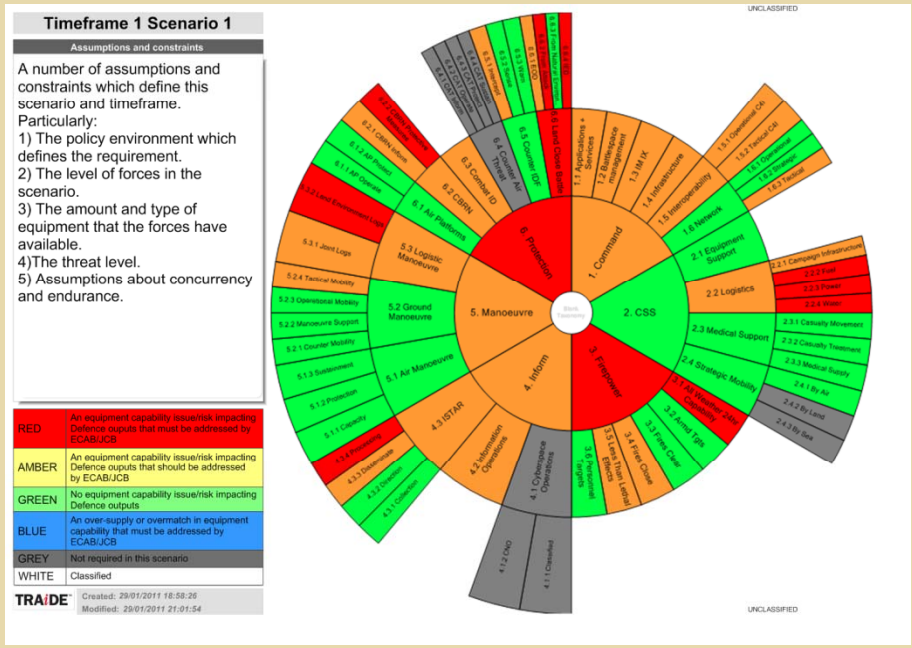
Elements with definitions from doctrine



Tactical Functions

The output – a preview





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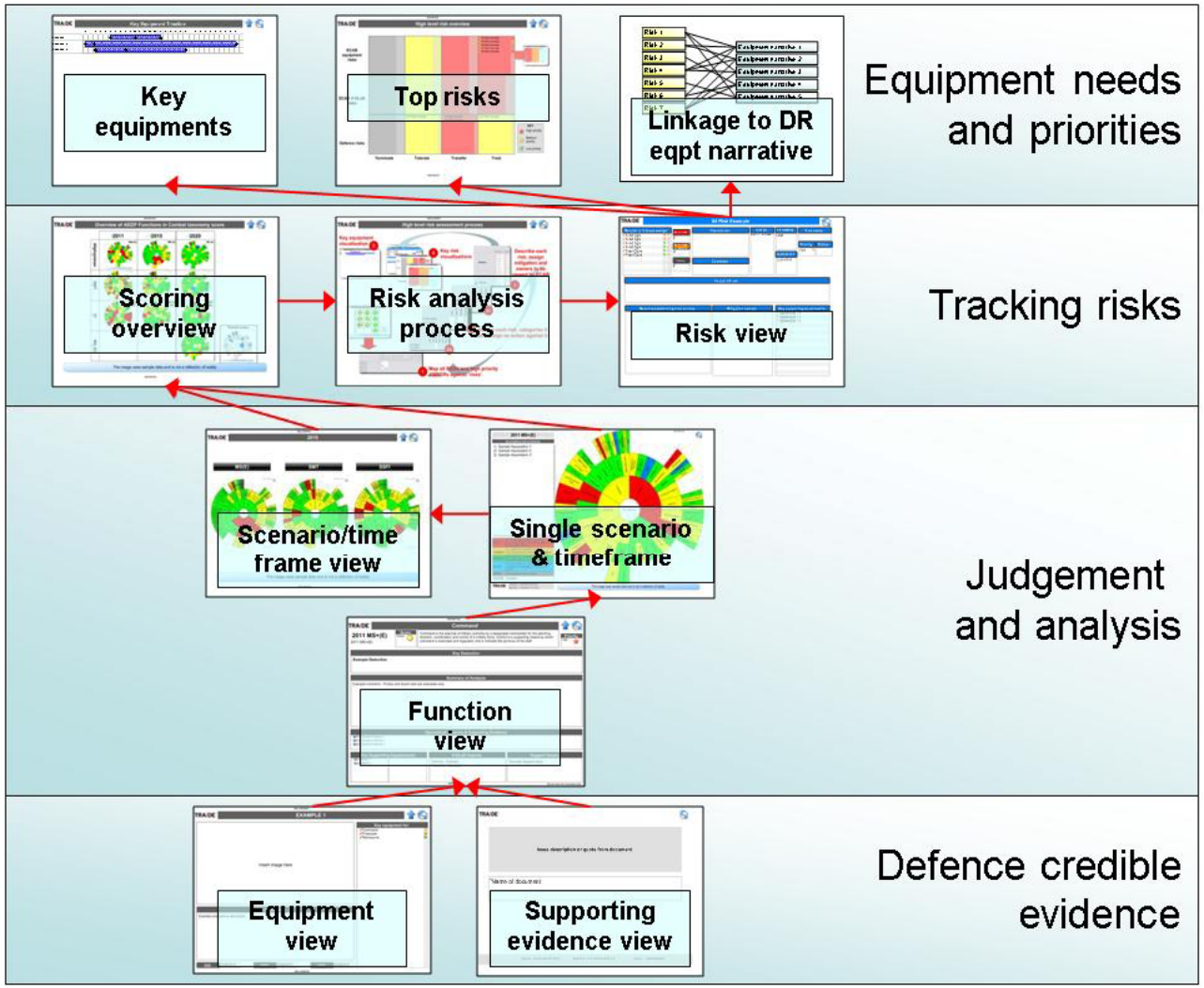
TRAiDE information environment



Summary assessment – Land equipment capability

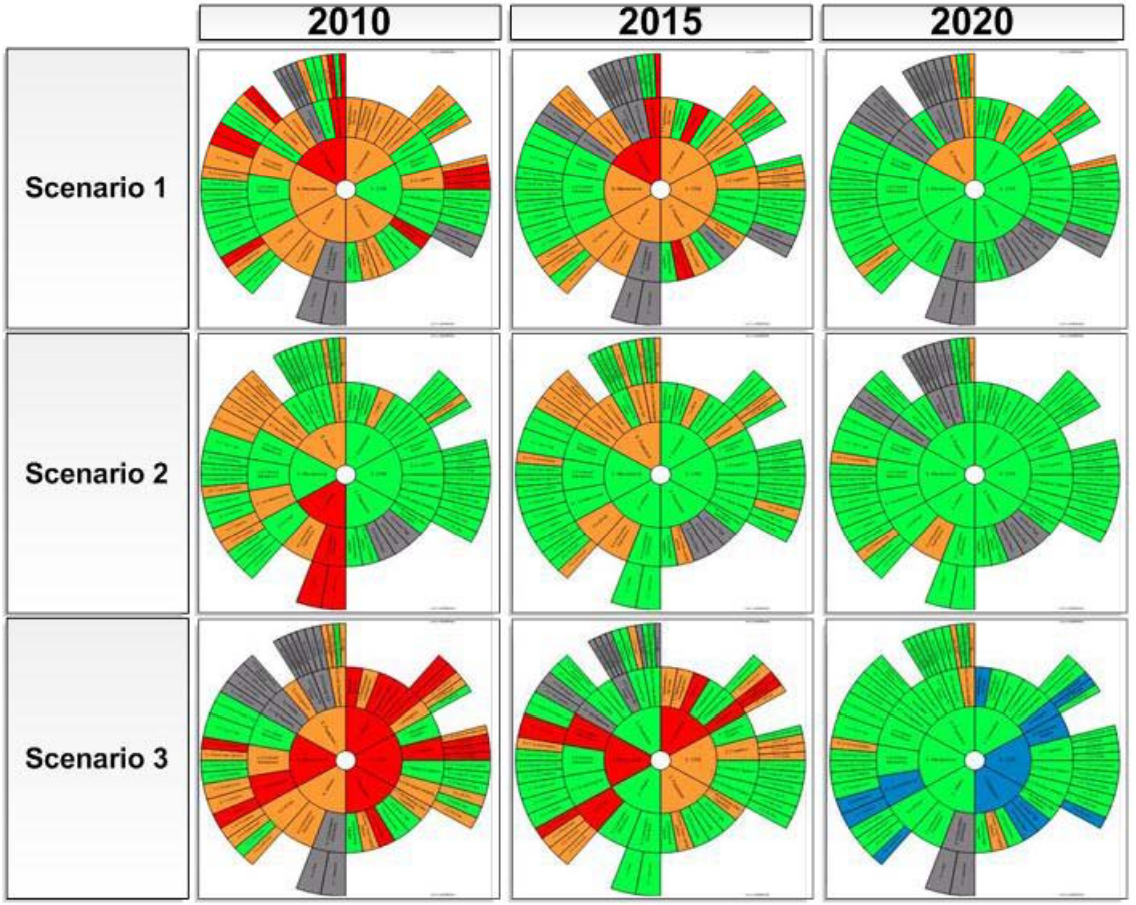
Assumptions

1. Key assumptions which drive the results
2.
3.
4.
5.
6.
7.
8.

Deductions/Recommendations

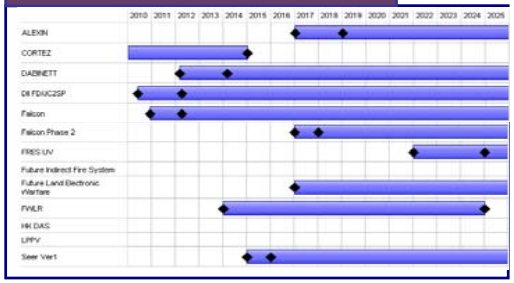
1. The key 'so what's which form the basis of decisions taken to rectify the key issues identified
2.
3.
4.
5.
6.
7.

Land outputs

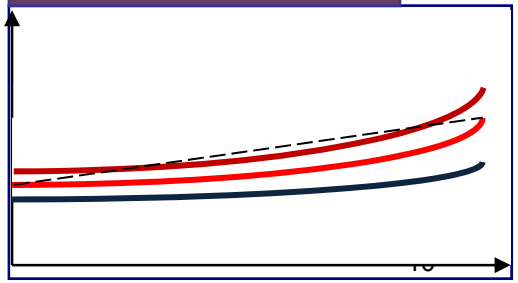


Organisation Profile:

Key Equipment Profile



Predicted Defence Cost Profile



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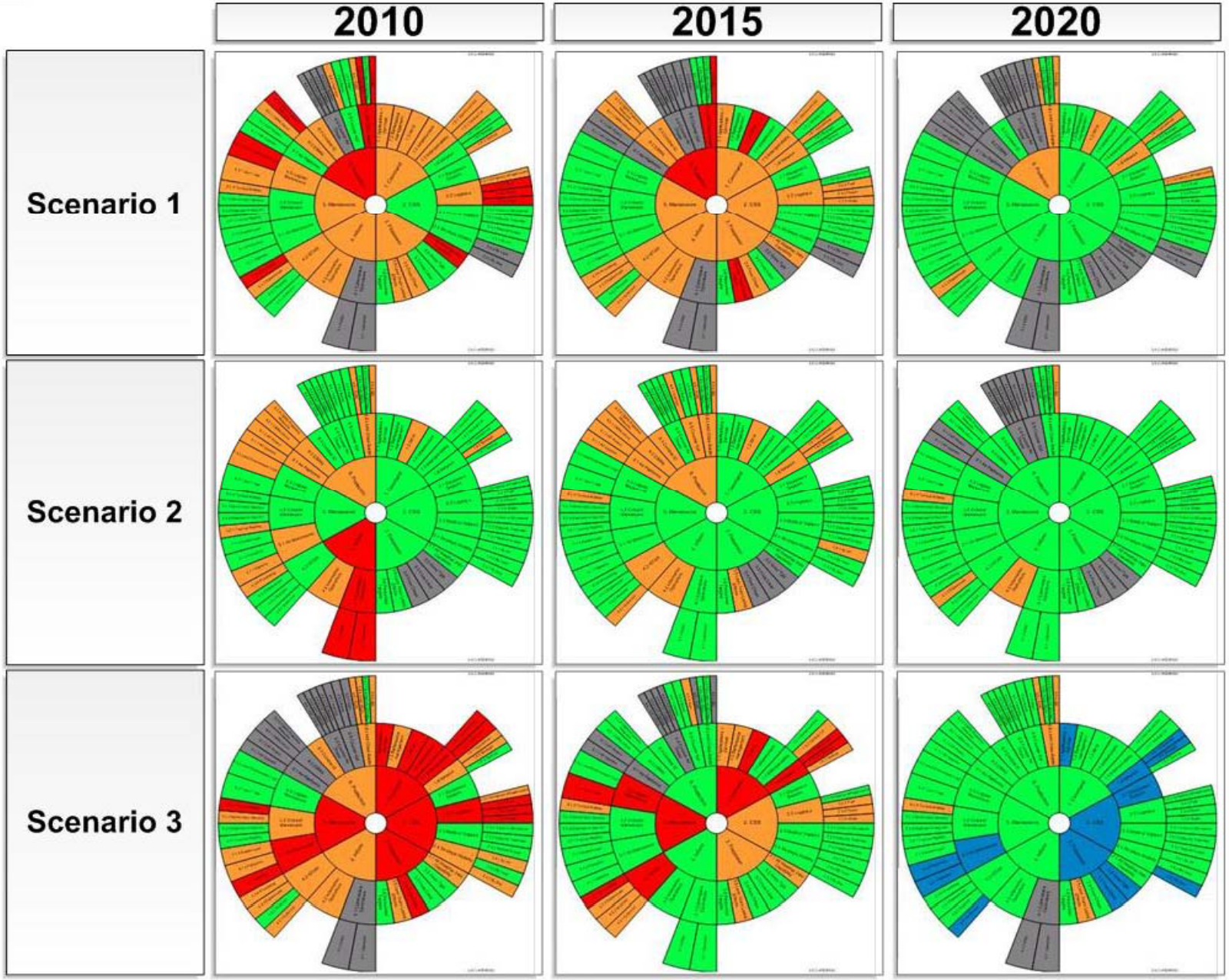
Summary assessment



Timeframe 1 Scenario 1

Assumptions and constraints

A number of assumptions and constraints which define this scenario and timeframe.
Particularly:
1) The policy environment which defines the requirement.
2) The level of forces in the scenario.
3) The amount and type of equipment that the forces have available.
4)The threat level.
5) Assumptions about concurrency and endurance.

RED	An equipment capability issue/risk impacting Defence ouputs that must be addressed by ECAB/JCB
AMBER	An equipment capability issue/risk impacting Defence ouputs that should be addressed by ECAB/JCB
GREEN	No equipment capability issue/risk impacting Defence outputs
BLUE	An over-supply or overmatch in equipment capability that must be addressed by ECAB/JCB
GREY	Not required in this scenario
WHITE	Classified

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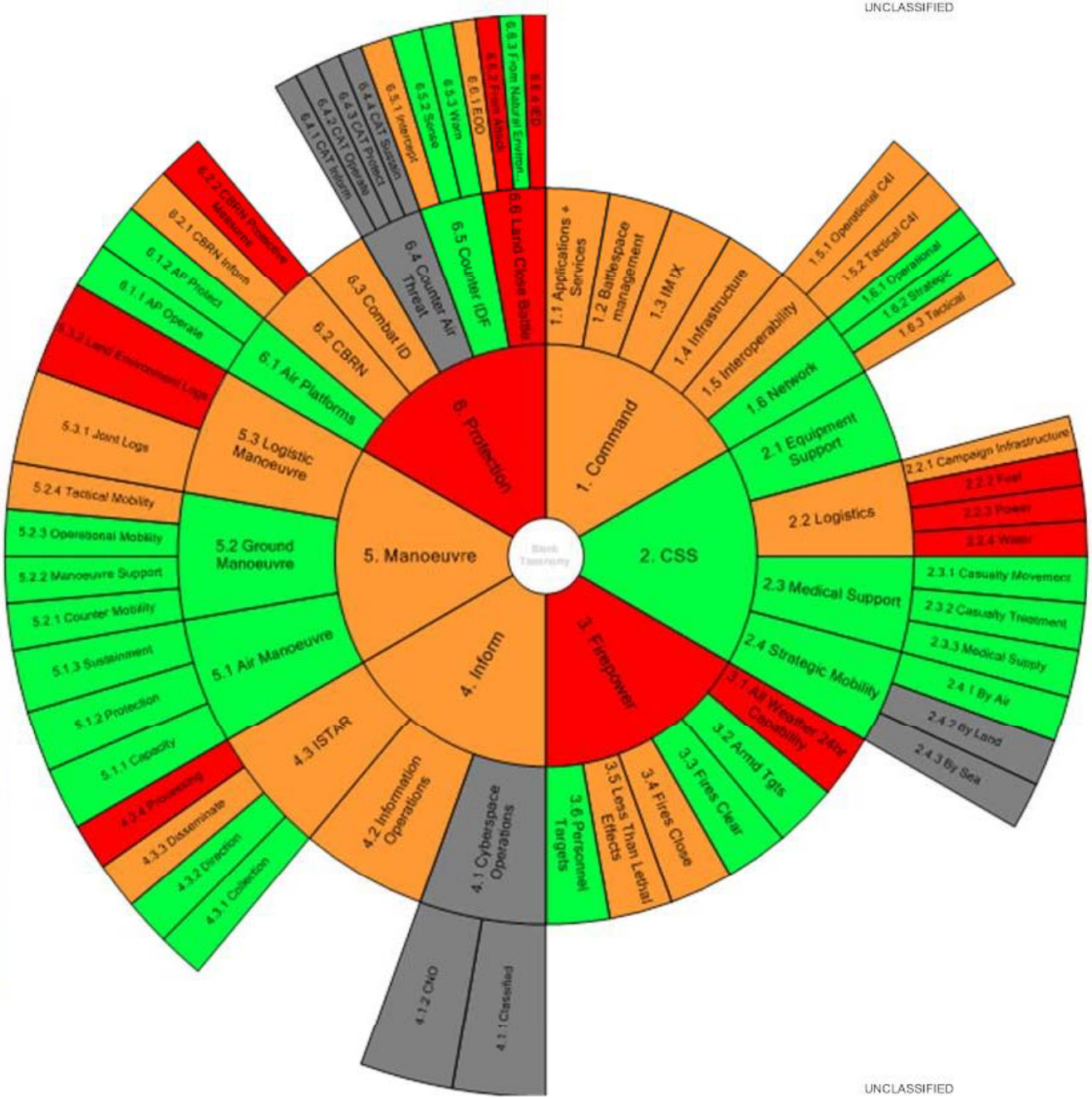

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5.3.2 Land Environment Logs

Timeframe 1
Scenario 1

Score	Description of the requirement for this particular element of the taxonomy, with metrics if konwn	Priority
		H

Key Deduction

The key 'so what' which summarises why the capability element has been rated as it is, making reference to key reference information if applicable.

Summary of Analysis

The analysis which supports the final scoring, including all discussions captured through MJPs, references from existing data sources, and including all information which is contrary to the final scoring. Important that individual roles and organisations are identified as holding particular views to ensure that a true consensus has been reached.

Operational Lessons & Supporting Evidence

Key pieces of information from operational lessons and other data sources. These are direct links to the information source on the information repository, such that in the web published version you can 'clickthrough' direct to the information

Key Supporting Equipment(s)	X-DLoD Impacts	Support Issues
Which equipment is supporting this element of Land capability	Cross DLoD impacts - such that the capability cannot be delivered without these other DLoD elements	Supportability information

Scroll down for truncated text

Summary

- Solution developed and built using Salamander's MooD (2008) within the BAE Systems TRAiDE environment, based on a MODAF architecture
- Output is web published onto DII(S) with a linked information source on Sharepoint so accessible to anyone over DII
- Managed and maintained by ES(A) staff directly to enable evolution as supporting information matures and changes
- The solution has successfully linked together evidence, judgement and analysis in order to generate coherent risks, needs and priorities
- Next steps
  - Refresh (SDSR/PR11)
  - Improve conceptualisation of risk
  - Sustain

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Summary – lessons learnt

- Immense immediate benefit to a complex problem, without an expensive or lengthy programme
- The power of visualisation – by having a clear, easily understandable output, the product was used and well liked
- Building on a strong architectural framework ensures onward re-use and internal coherence
- Ease of use is critical - it has to be simple enough for a desk officer to pick up with minimal training, otherwise it won't get used
- Keep the methodology simple and it ensures buy-in and reuse in other areas
- Provide a way to compare 'apples with apples' – provide a common perspective to enable the use of powerful human decision making in the most appropriate places
- Enable discussion, but force convergence
- The methodology and process is reusable in other capabilities and across domains – already proving beneficial in other projects

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