Embracing and working the Lines of Development –
Trades and options for effective delivery of military capability through-life

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BAE Systems and Salamander

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Presentation Structure

- Background and Context
- The (Organisational) Structure
- The Information Challenge
- Case studies
- Conclusions and Observations

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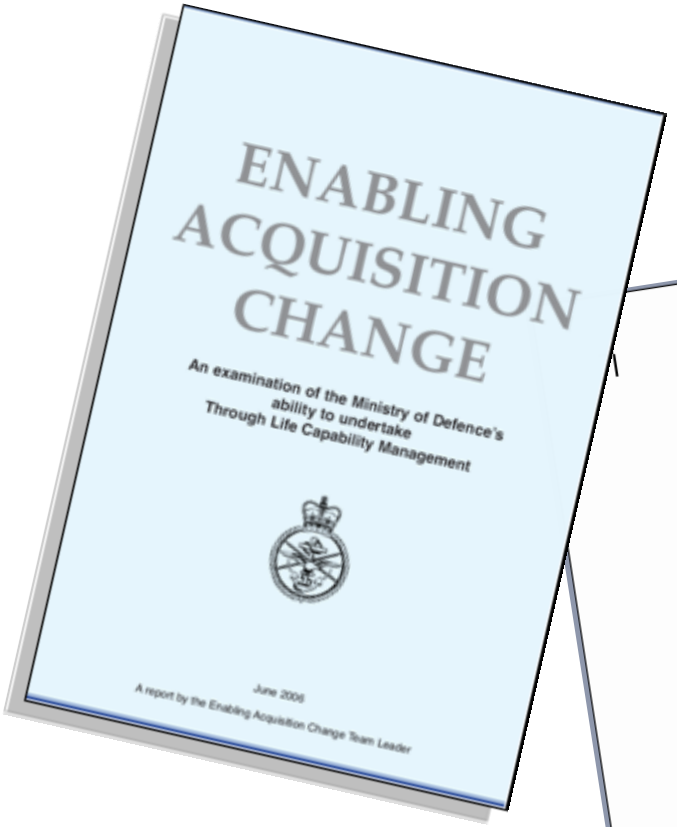
TLCM - Enabling Acquisition Change



TLCM is.. *" an approach which translates the requirements of Defence Policy into an approved programme that delivers the required capabilities, through life, across all Defence Lines of Development (DLODs)… "*

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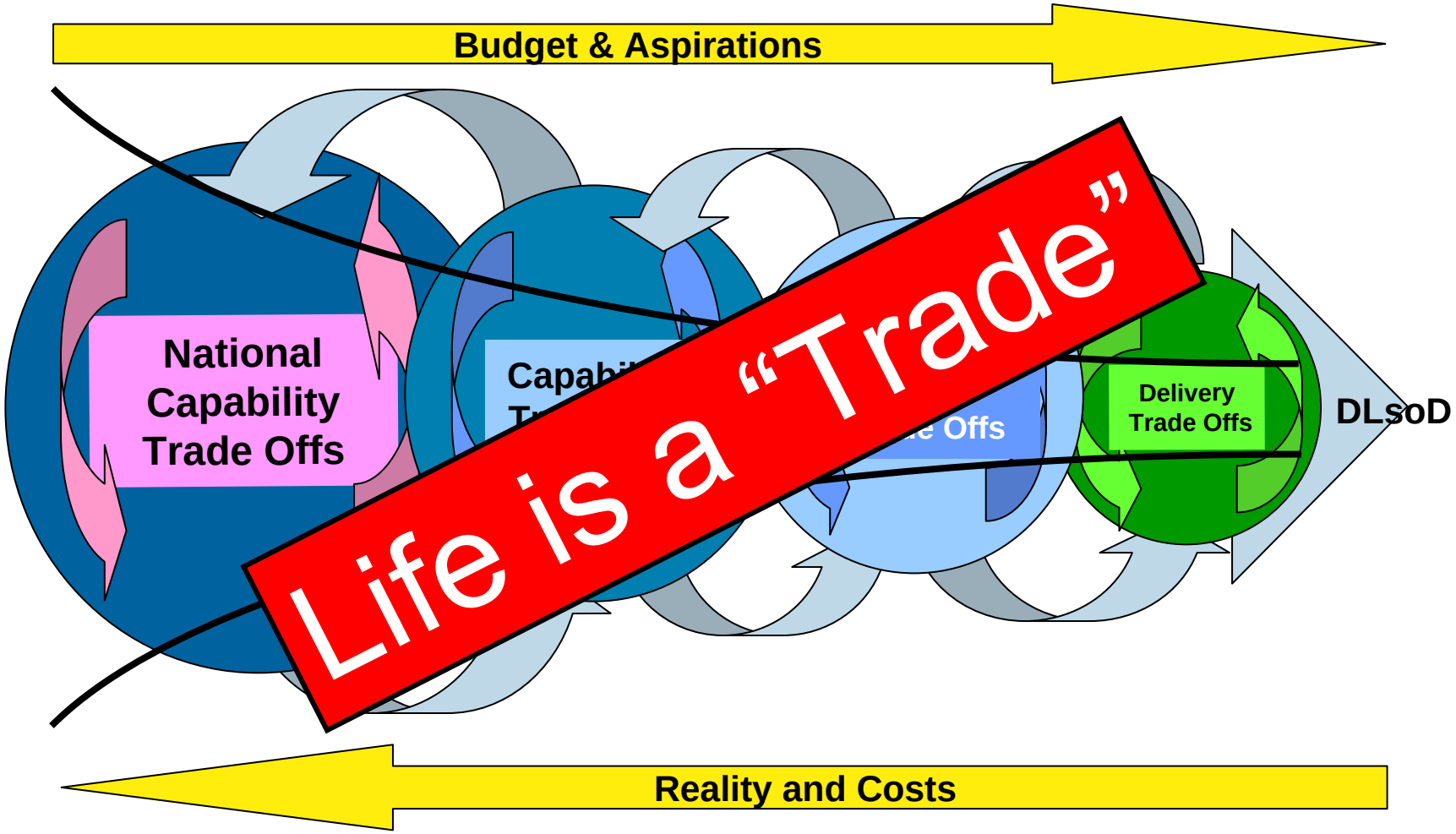
The Decision Space for Defence Acquisition



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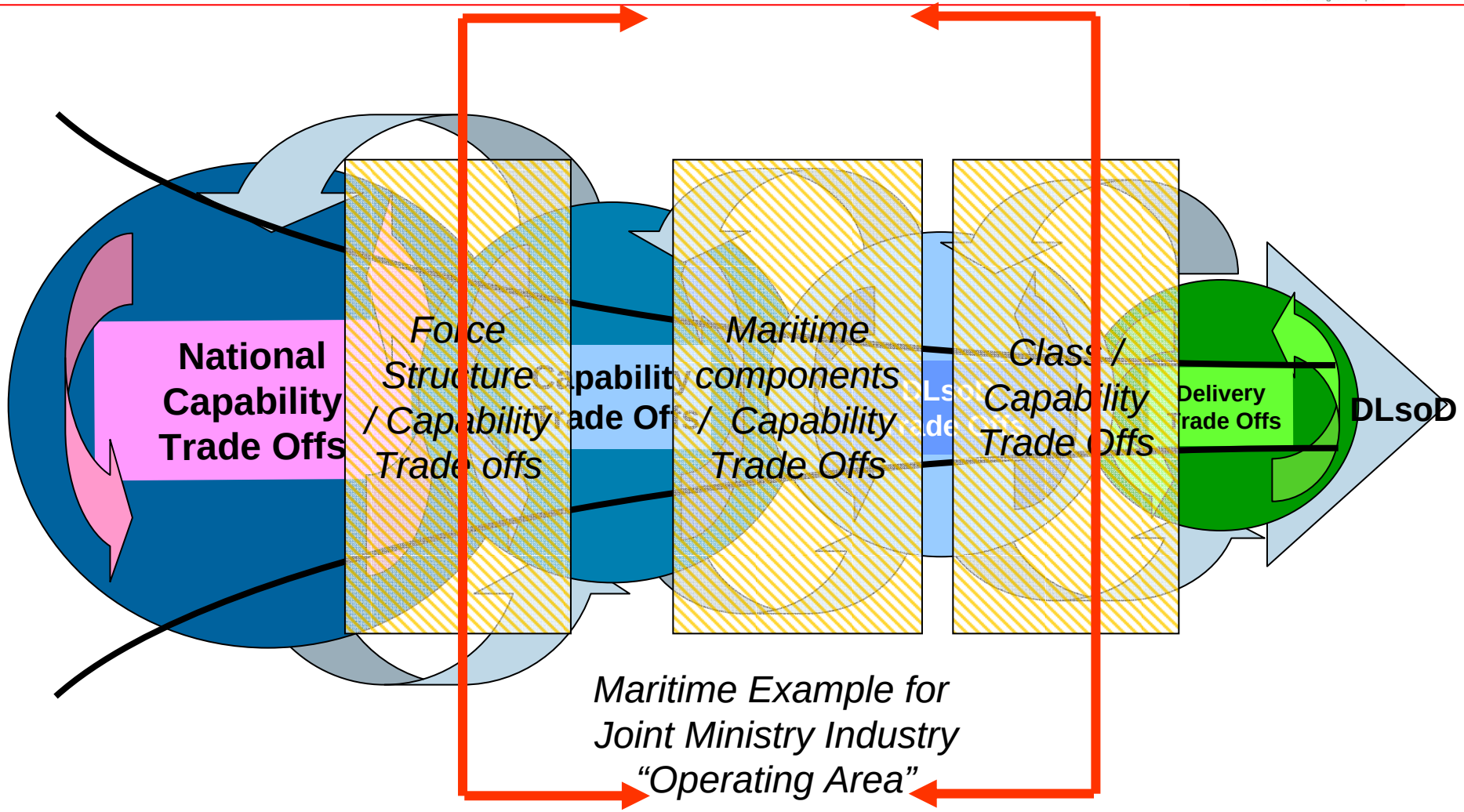
The Scope in context of the Capability "Value Chain"



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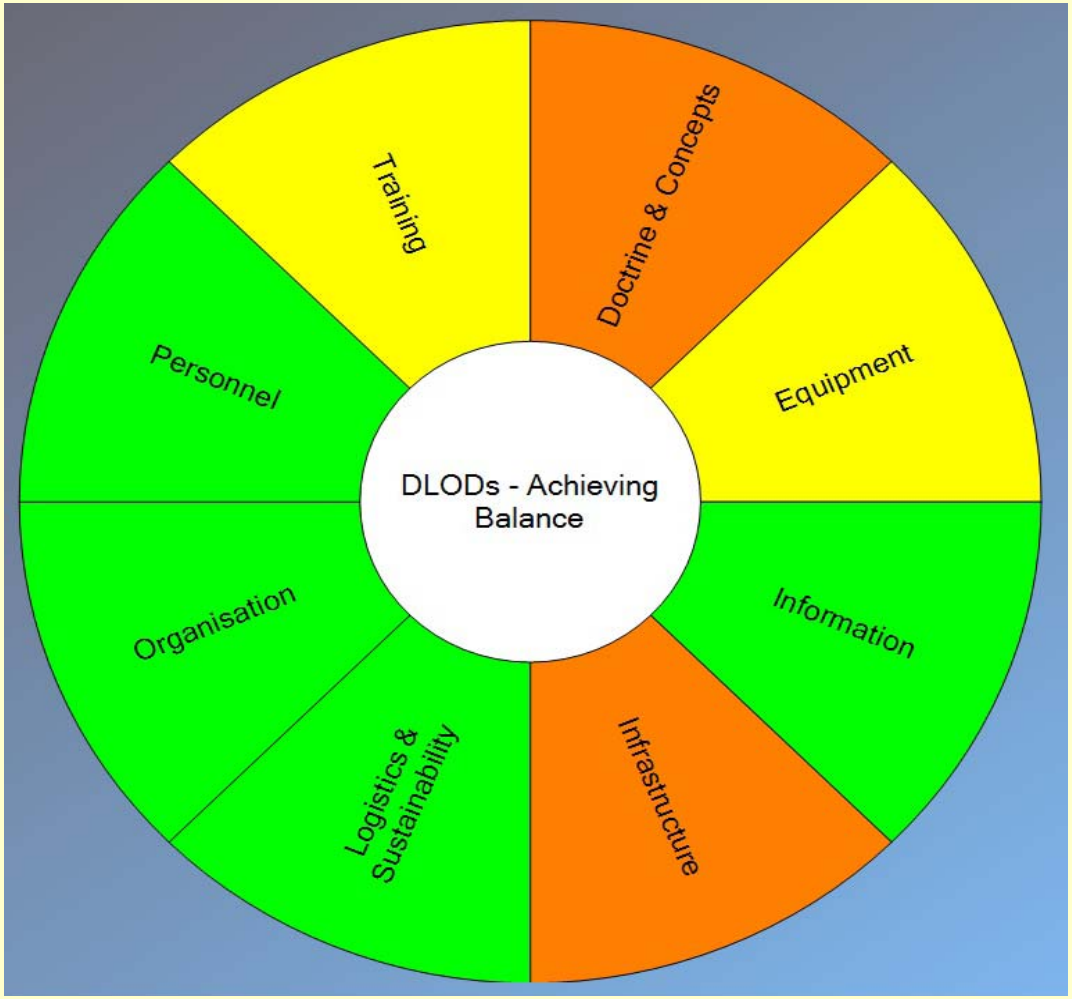
There are many elements to trade

The Defence Lines of Development (DLoDs) are interdependent



Understanding how the DLoDs Interact enables **trading** to deliver Military Capability - but they have traditionally been largely independent!

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Decision Support through Information Management – understanding and reacting to change

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The Need for better Information management

- Complex organisations need to make confident decisions around investment in capability
- These decisions are influenced by the range of factors in play
- An approach is needed which exploits these factors:
  - which makes connections, informs and guides decision making

The potential of Decision Support

- Decision Support helps manage complexity….

……in such a way that decision makers at any level can both understand and interpret the situation….. ….and explore the decision space in such a way that clear value can be added……..

Co – working with MoD/partners to develop ***TRAiDE***

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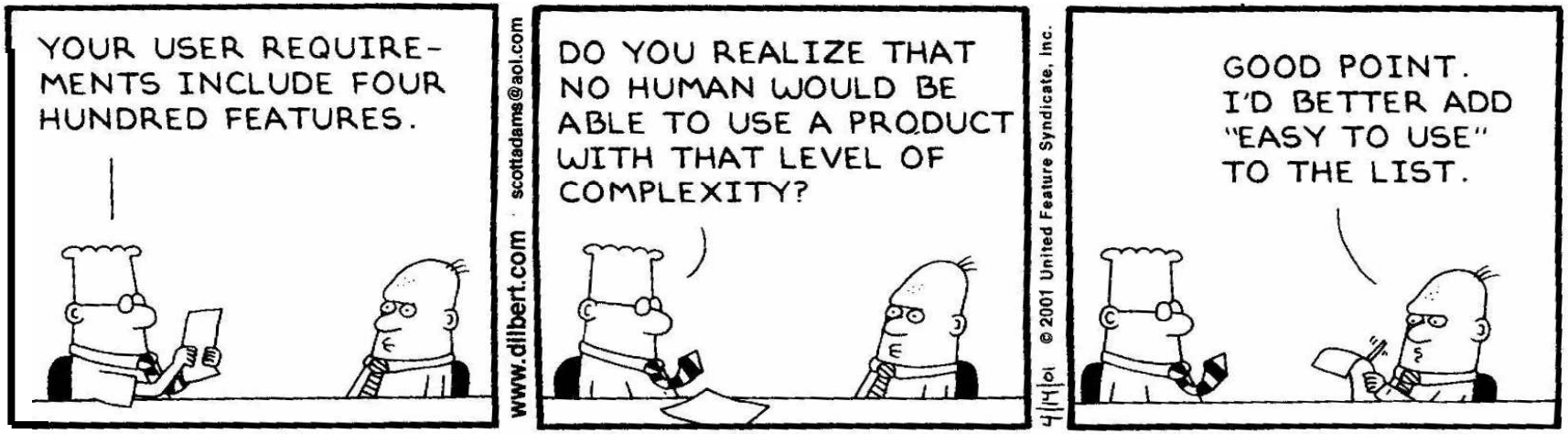
Chasing the certainty – *agility = degrees of freedom!!*



Mindset change needed

- Too much detail makes the whole process unnecessarily complex!

…….but there is a lot of information to handle and trades to be managed

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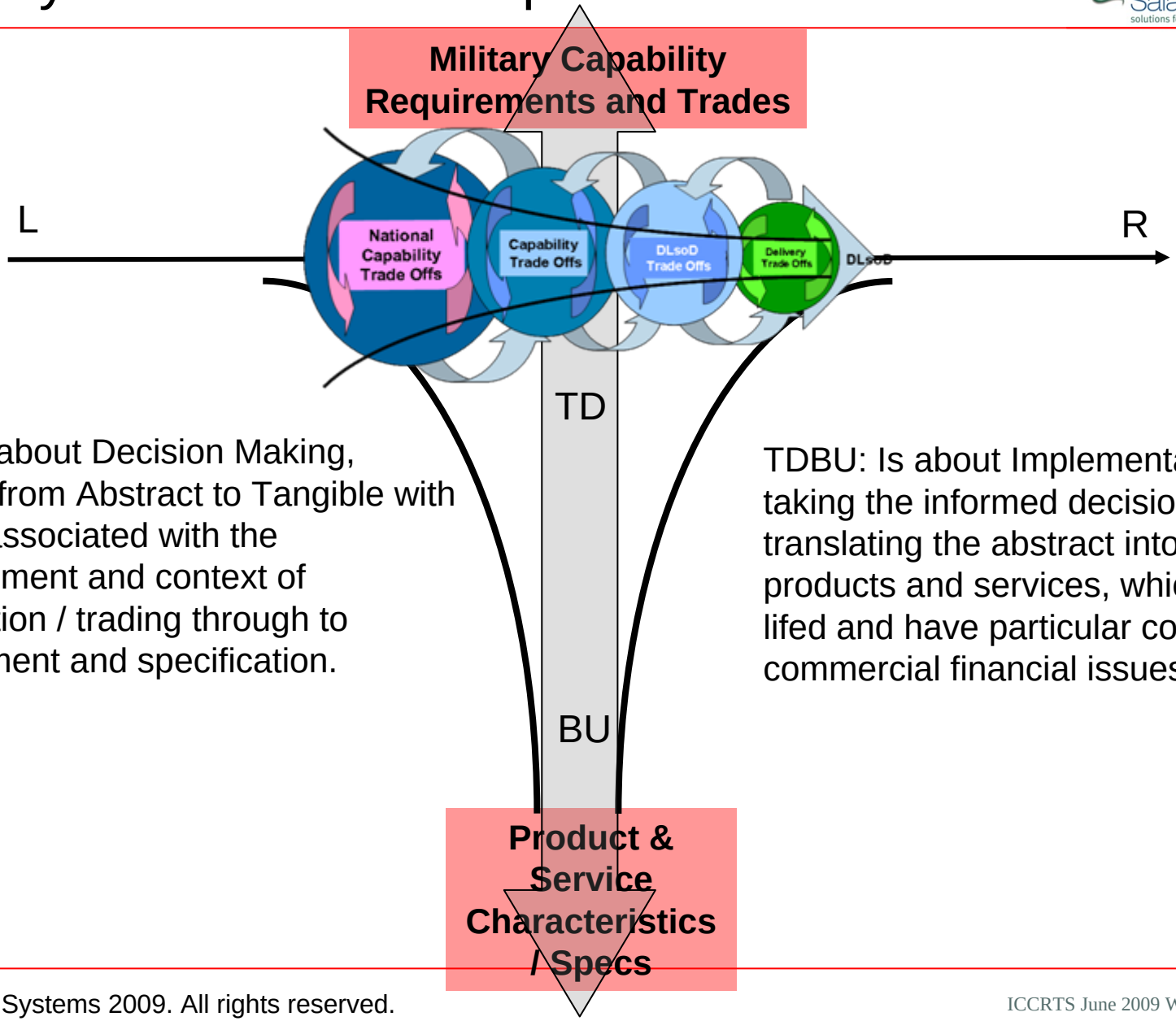
Capability Value Chain Perspectives



L2R: Is about Decision Making, moving from Abstract to Tangible with issues associated with the management and context of information / trading through to requirement and specification.

TDBU: Is about Implementation, taking the informed decisions and translating the abstract into tangible products and services, which are lifed and have particular contractual commercial financial issues.

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Required Characteristics of Working Environment

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- Consistency of Information
- Congruency of Process
- Familiarity of Output
- Commonality of Understanding / Language
- Usefulness of Representation
- Incremental nature of Development
- Inclusive Nature of Community and Acceptance

….. an environment and community that supports trades and trading

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TLCM Decision Support – *"TRAiDE"*

- TLCM is about balanced decision making
- A means of coping with the complexity is needed
- We are developing an intuitive *Decision Support Environment (DSE)*
- *This DSE needs to build on what tools are currently in use*

- *"TRAiDE"* - inclusive – extant and emerging tools - SME partners
- Based on sound information* management, consistent visualisations

** Information = data in context*

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Introducing *TRAiDE*

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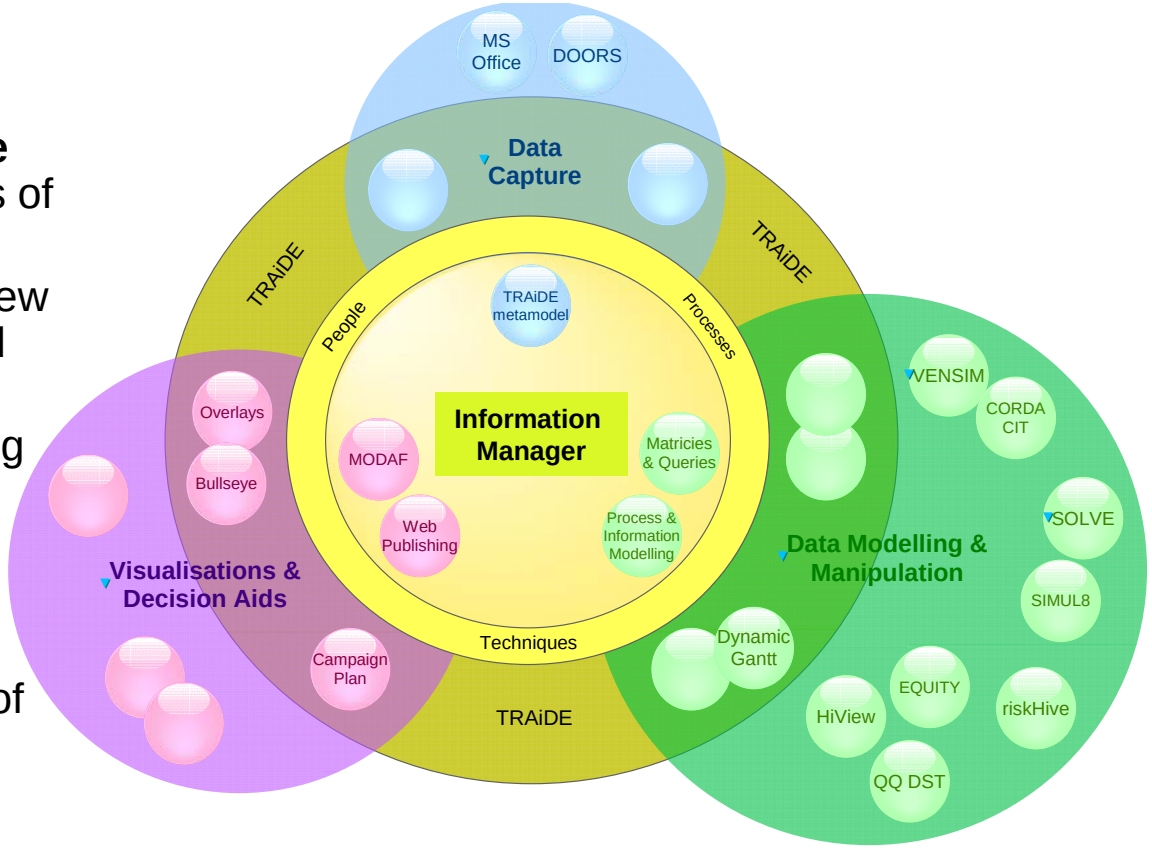
TLCM **R**obust **A**cquisition **i**nclusive **D**ecision-making **E**nvironment

Principles of the ***TRAiDE*** environment

- **Open approach** – enabling utilisation of disparate sources of data
- Information flows through a **single information manager**, regardless of source/destination
- **Inclusivity** - designed to utilise new and extant mechanisms, tools and their providers
- **Intuitive visualisations** – enabling simpler interpretation of results
- **Evolutionary** – incremental and pragmatic development based on user feedback
- **Scalable** – enabling aggregation of information at all levels
- **Timeliness and quality** – appropriate outputs, matched to customer need and decisions



Underpinning ***TRAiDE*** is a meta-model

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Case Studies:

Programme Board Information Environment (PBIE)

Mine Counter Measures Capability Investigation (MCMCI)

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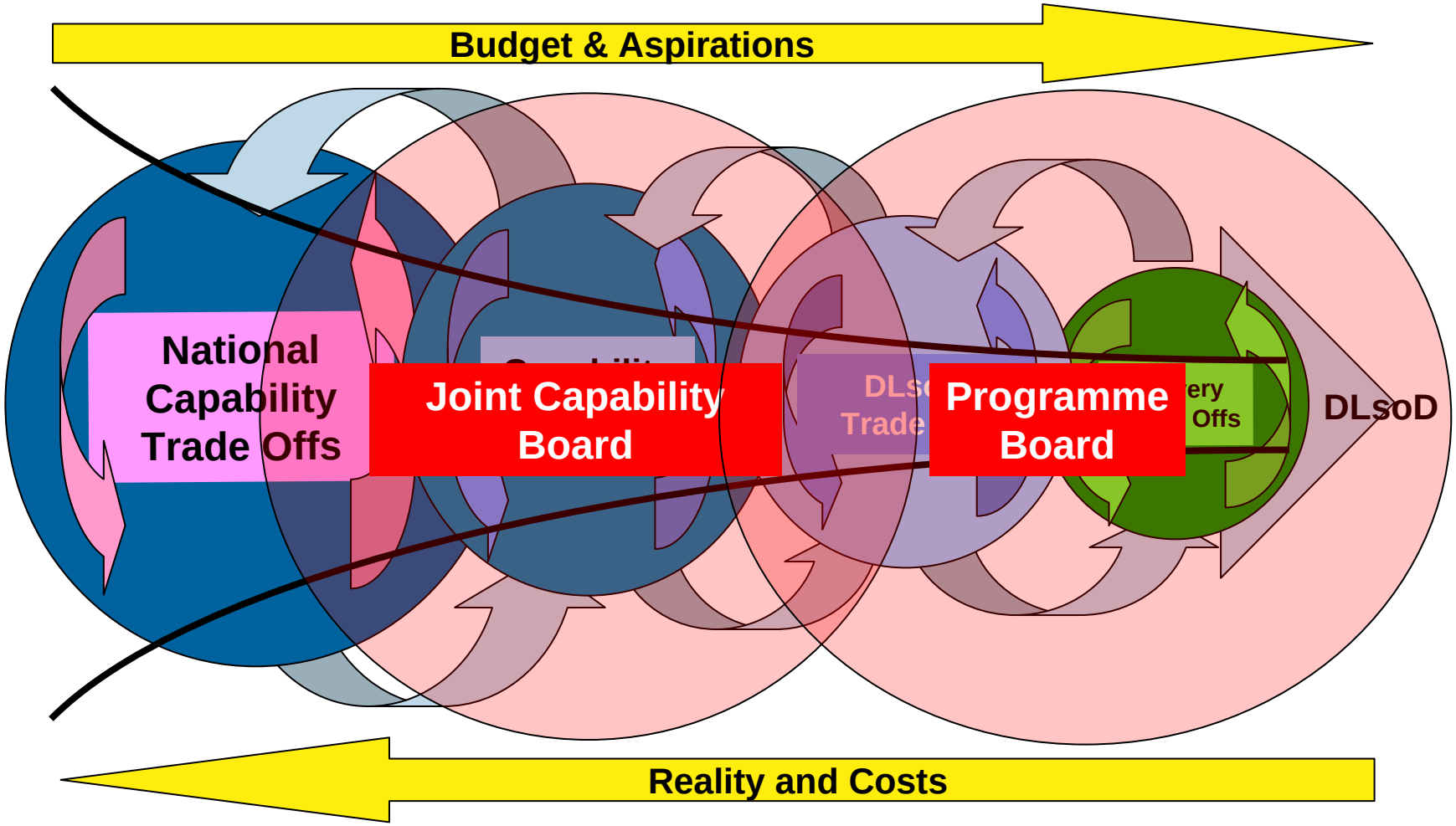
The Decision Space for Defence Acquisition



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09 TRAiDE Metamodel Example

Development of a Metamodel from a question set

I want to be able to show the capability that I am responsible for delivering

I want to be able to show how the projects and milestones deliver the capability for which I am responsible for

I'd like to be able to show the status of the projects

I would like to be able to show the owners of the projects

TRAiDE Metamodel - the data requirement

TRAiDE Metamodel - the reference links

The meta-model is driven by **MODAF**

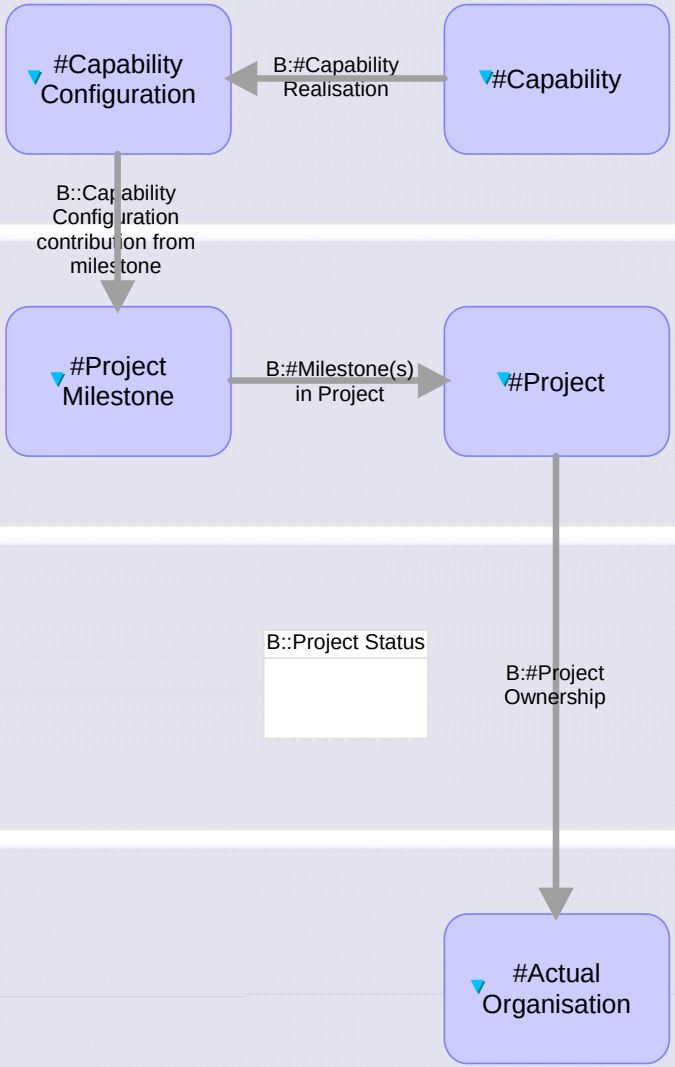
TRAiDE Metamodel - the reference links

I want to be able to show the capability that I am responsible for delivering

I want to be able to show how the projects and milestones deliver the capability for which I am responsible for

I'd like to be able to show the status of the projects

I would like to be able to show the owners of the projects



Current position – information across organisation

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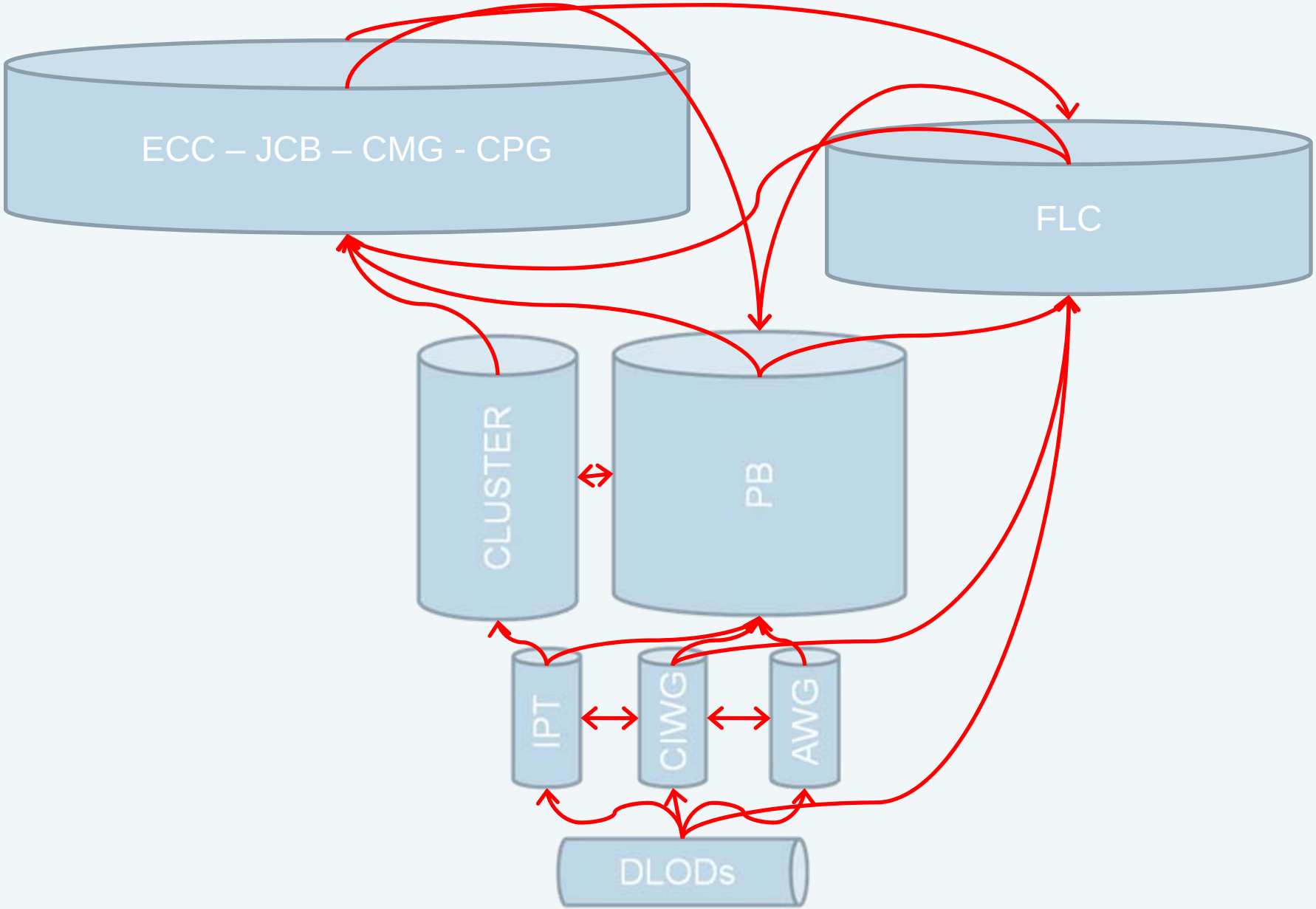

Managing the process

What are the questions the Programme Board and its Programme Support Function are going to need to answer?

- Data
  - *What data is required to answer the questions?*
  - *Where is that data currently held?*
- Analysis
  - *What analysis needs to be done on the data to answer the questions?*
  - *How will data need to be combined from multiple sources to answer the questions?*
- Visualisations
  - *What visualisations will be required to support answering the questions?*
  - *How can the data and analysis best be displayed to support effective decision making?*

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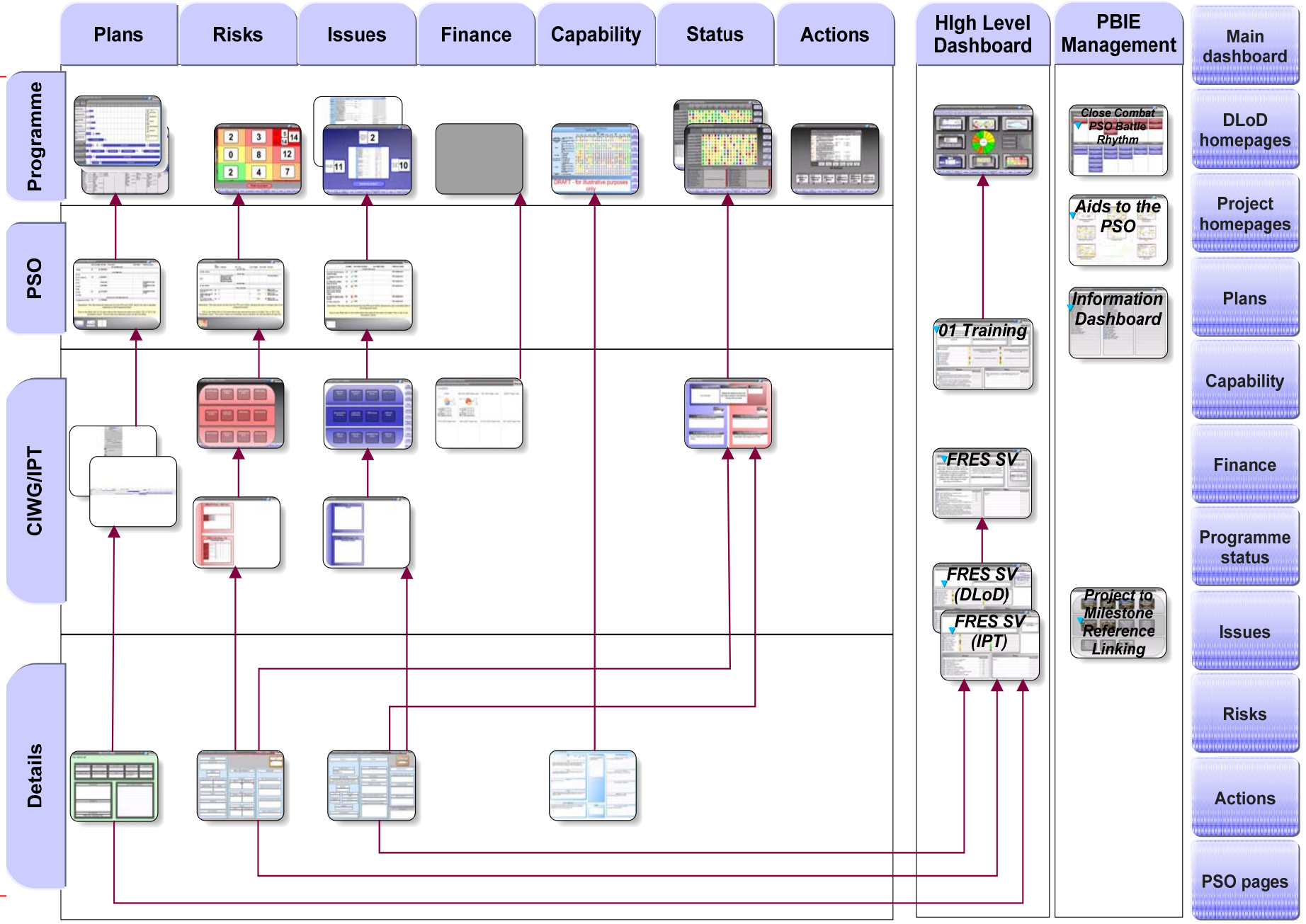
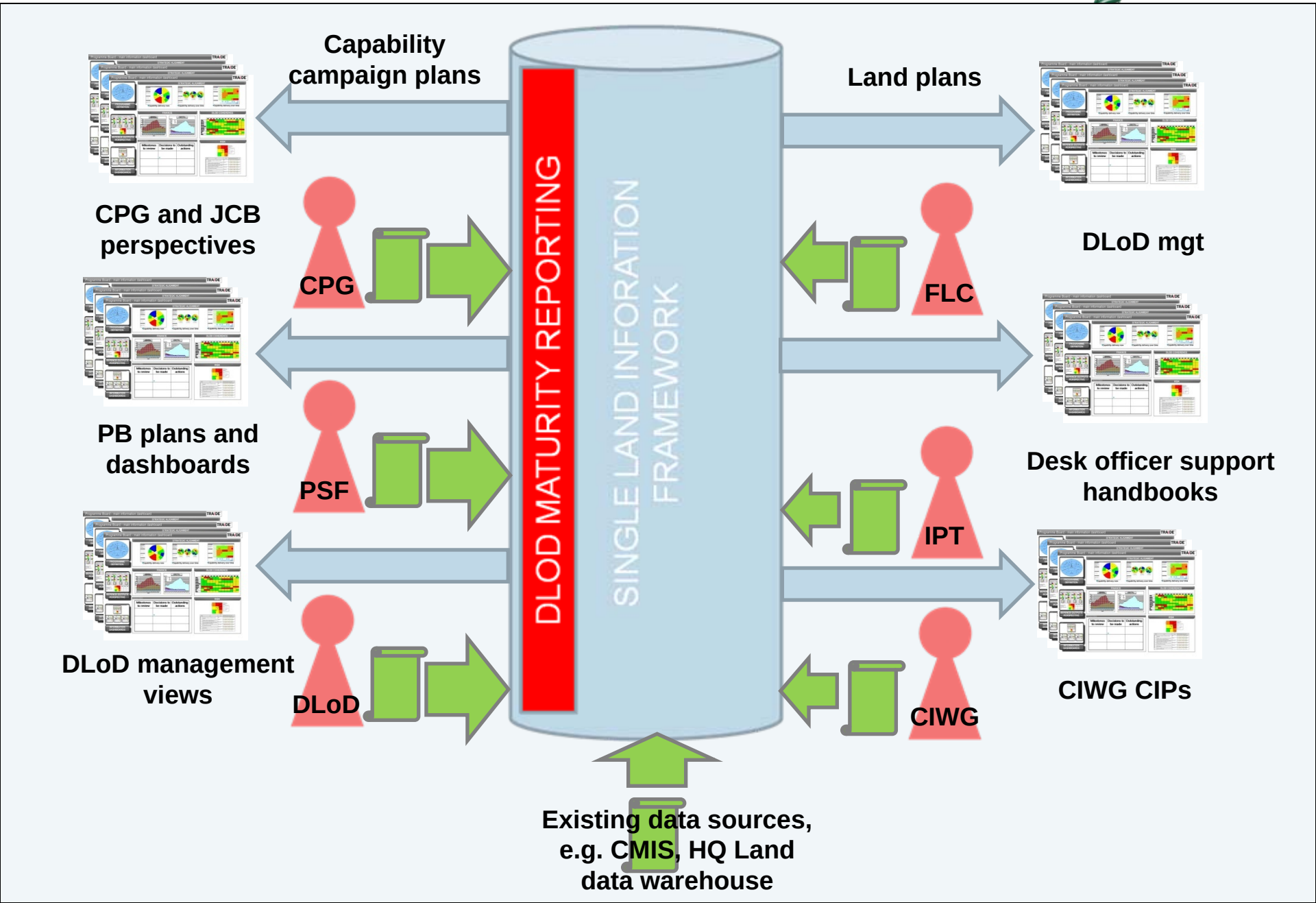

TRAiDE
Plans
Risks
Issues
Finance
Capability
Status
Actions
HIgh Level Dashboard
PBIE Management
Programme
PSO
CIWG/IPT
Details
Close Combat PSO Battle Rhythm
Aids to the PSO
Information Dashboard
01 Training
FRES SV
FRES SV (DLoD)
FRES SV (IPT)
Project to Milestone Reference Linking
Main dashboard
DLoD homepages
Project homepages
Plans
Capability
Finance
Programme status
Issues
Risks
Actions
PSO pages

Vision – information and visualisations

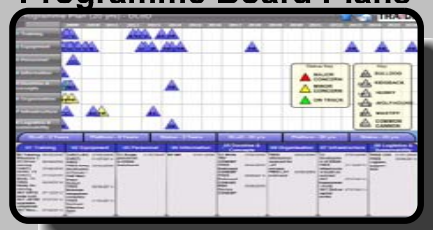


TRAiDE for Programme Board support - PBIE

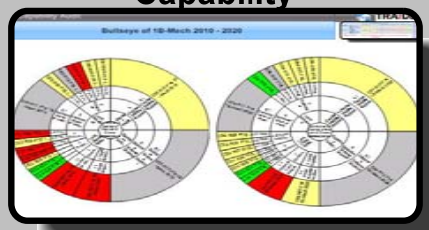
Medium/Heavy Forces Programme Board - Main Dashboard

The Medium/Heavy Programme Board vision is for the coherent long-term provision for, and delivery of, the appropriate balanced medium and heavy force structure within allocated resources capable of sustained, expeditionary full spectrum operations in the land close battlespace with a minimal logistic footprint, in joint and combined contexts, under both direct and indirect fire, through life.

Programme Board Plans

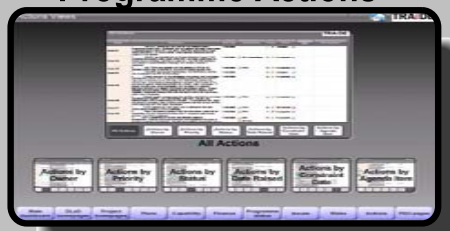


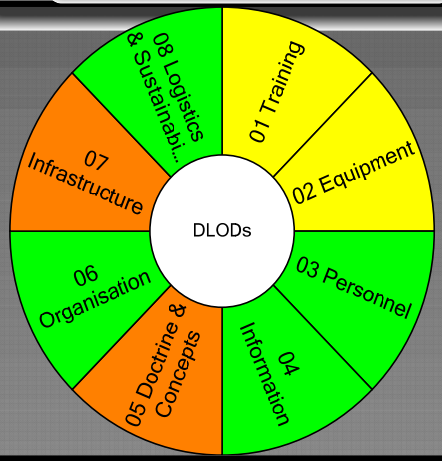
Capability



Programme Finances

Programme Actions



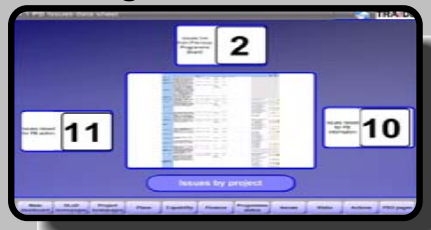


Upcoming Events

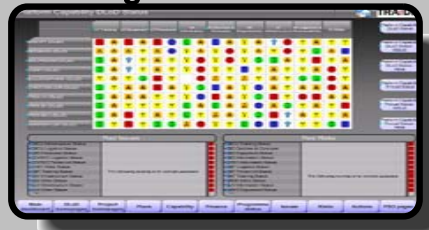
- Next M/H PB: 23/08/09
- Input Required: 23/07/09
- Meeting with CIWG Chairs: 01/08/09

BULLDOG/FV430	
CVR(T) EM UOR	
FRES BCU	
FRES SV	
FRES UV	
HUSKY	
MASTIFF	
RIDGBACK	
WARRIOR CSP	
WOLFHOUND	

Programme Issues



Programme Status



Programme Risks

Main dashboard | DLoD homepages | Project homepages | Plans | Capability | Finance | Programme status | Issues | Risks | Actions | PSO pages

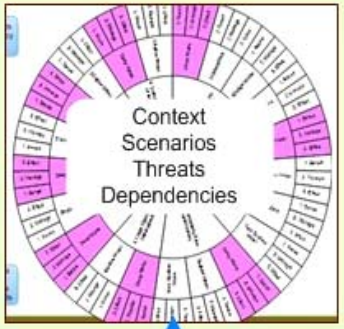
AV 1

MCM CI Capability Dashboard

Capability

Value
- Performance
- Benefits

Judgement
- Capability Shortfall
- Opps/Risks/Challenges



User DEC Dstl

Countering Mine Threats (DS CPG)

Risk Categories

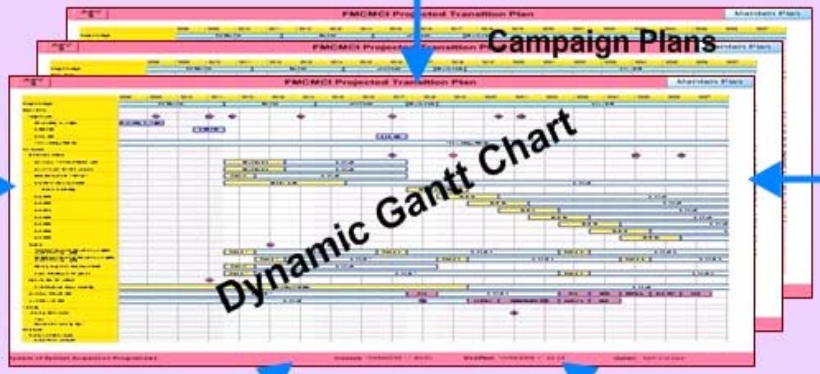
Military Campaign Risk

Defence Lines of Development

DES

Delivery

Time
-Programme
-Activity

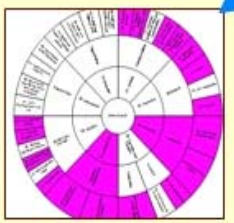


Costs

Cost Model

Programme Risk

Internal Delivery Organisations



?????????

Non-Equipment DLsoD

Commercial Terms

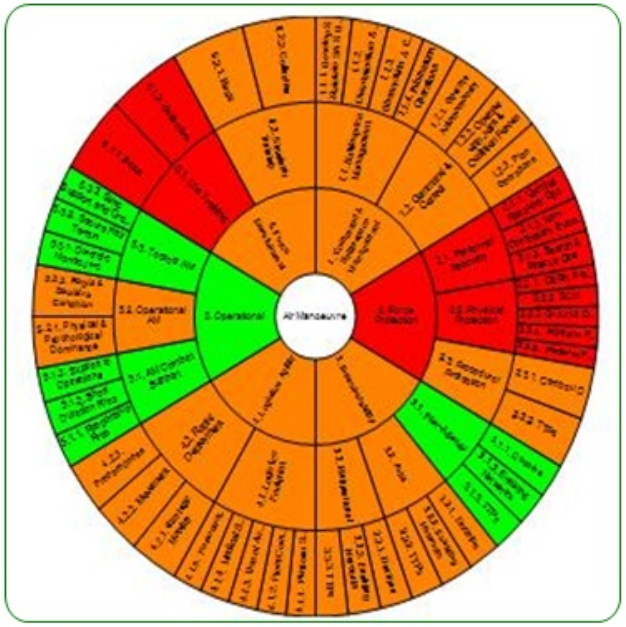
Industry

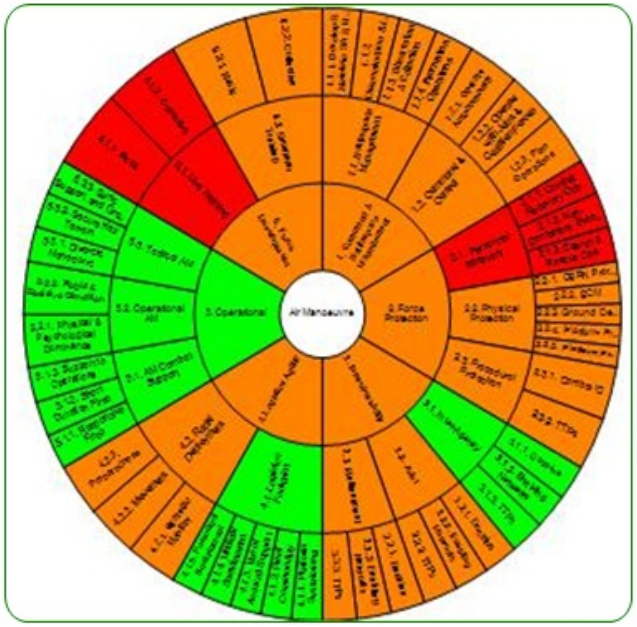
SLA's
Contractual Terms
Capacity/Time

Equipment Configuration

Commercial Risk

Intuitive Visualisation; Trend Analysis





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"Plan on a Page"

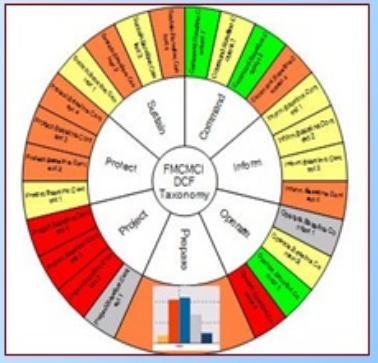
Baseline

DLsOD

Building Blocks

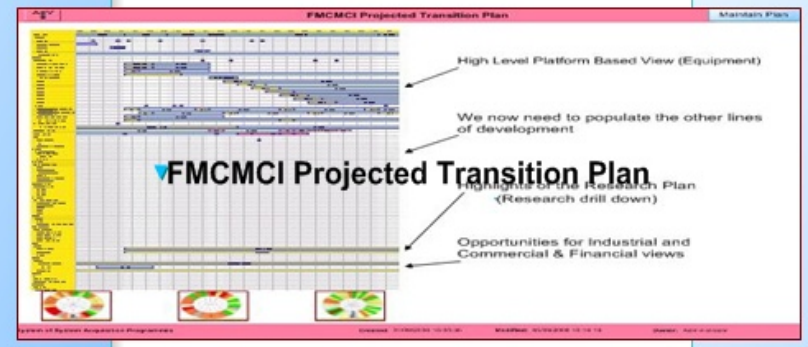
Coloured segments represent building blocks available & capability shortfalls for Baseline

DCF



FMCMCI DCF Taxonomy at Baseline

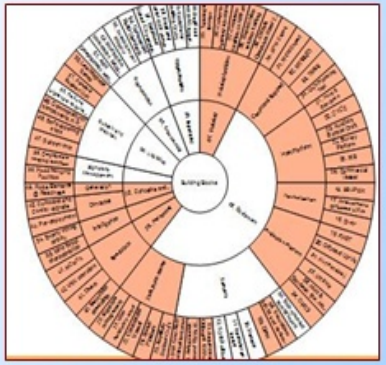
Costs



FMCMCI Projected Transition Plan

Benefits

Option A



Option A Building Blocks

Coloured segments represent represent building blocks required & capability shortfall at Option A

FMCMCI DCF Taxonomy at Option A

So what do users think?

……we have never been able to do this before- this is gold dust….

……its difficult to see how we can do without this sort of capability at the Programme level…….

…….a ground breaking methodology by which we can test various procurement options for applicability against endorsed MOD capability requirements. This will allow us to develop much more rigorous and compelling gap and overlap analysis……

…your support to CIWGs is the best thing I have seen in 10 years..

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Conclusions - impact of ***TRAiDE***

- Dynamic investigations of options
  - Ability to dynamically explore alternatives and visualise intuitively at all levels
  - Ability to test procurement options.

- Data, Information Management
  - Input once, use many times in different views
  - Drives commonality across communities re impact of options and investment decisions

- Structured Thinking
  - Evidenced based Decision making
  - Consistency & Coherence for whole community

- Interfaces with existing toolsets
  - Incremental development and population
  - Consistent and Intuitive Visualisations

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