

Delivering Enhanced Military Capability

Pathfinders, lessons and insights

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The problem – delivering “capability”

- The UK MoD needs to change the way it acquires capability
 - this is well understood
- What is not understood is..... *how?*

- *UK MoD is not short of initiatives!*

- It does have a well formed *“immune system”* however!
- So clearly something different was needed.....

The “immune system”



“You cannot talk your way out of problems you have behaved yourself into....”
Stephen Covey

A word of clarification.....

- **“Capability”**, in general, is produced and projected through the combination of :
people, process, products, facilities and technology.
- There are two genuine ‘capabilities’ that are important:
 - Military Capability, i.e. the means to generate Military effect including its sustainment and enhancement as an enduring capability.
 - Business Capability, i.e. the ability to conceive, produce, deliver and sustain contributions to Military Capability, whilst enhancing shareholder value.
- NB: “Equipment” does not have ‘capability’; equipment only has **performance**
- There is now much emphasis on “Through Life Capability”.
In the context of “through life”
 - capability is “enduring”
 - products are “lived”
- Products therefore can have “Through Life Plans”
- A given Capability will have a “Capability Management Plan”
- The notion of a “Through Life Capability Management Plan” is therefore false, because Capability is enduring.

Through Life Capability Management – an explanation

– Military Capability – DCDS (EC) General Figgures' definition

Capability is a relative notion, in terms of the application of force.

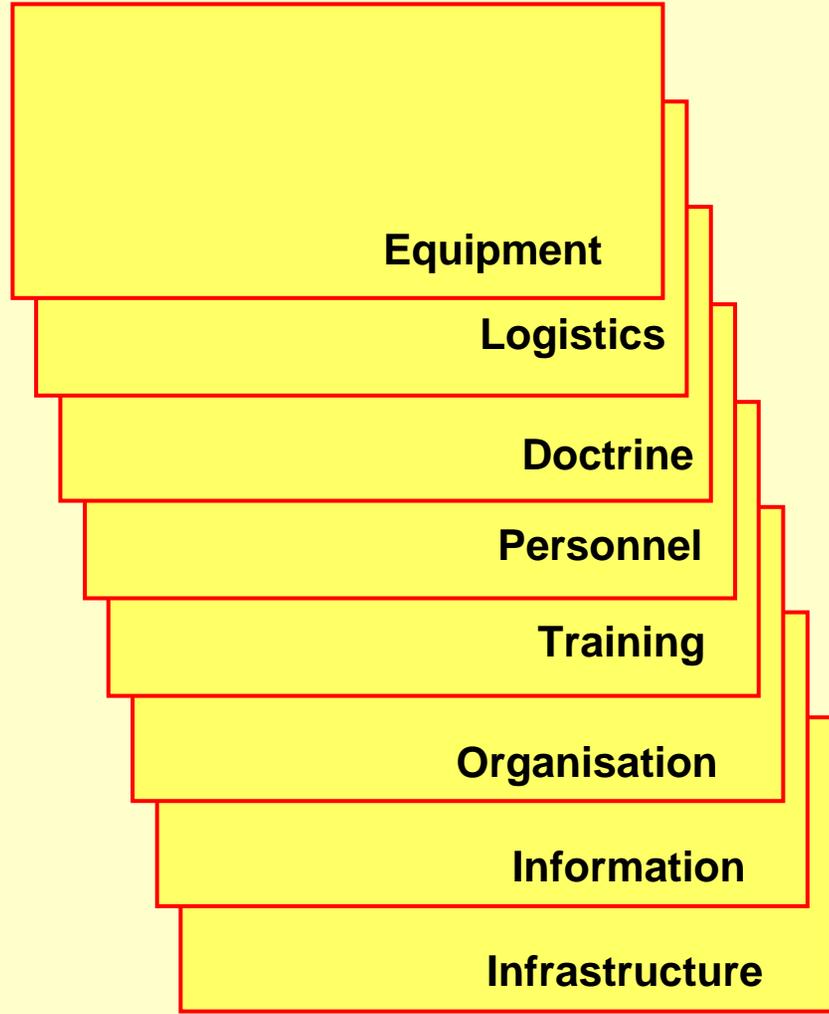
The threat is critical to its assessment. Confronted by a poorly trained, ill-equipped enemy lacking in motivation we might possess considerable capability, faced by a world-class opposition force we might have a rather more limited capability.”

*“so Military capability is the **ability to bring maritime, ground and air components into coherent joint forces** under unified command in order to deliver appropriately motivated, manned, trained and equipped force packages at the required level of readiness and with the necessary support, sustainability and deployability to achieve the full range of agreed military tasks.*

– TLCM - a definition

*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 (DLOD)** from cradle to grave.*

Delivering Military Capability

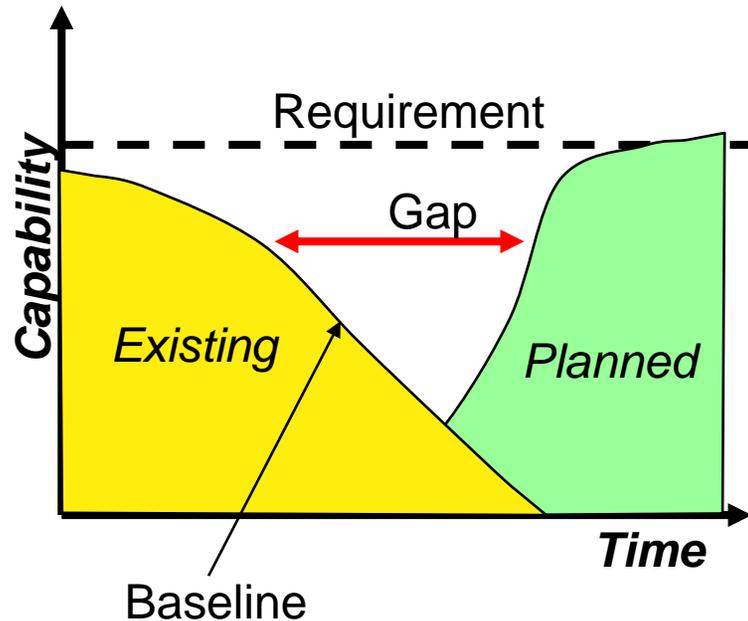


LoD Trades +
Integration



**A better offer?
From whose perspective?
Improved training = less platforms?**

The capability problem



Managing the capability through time, requires a holistic approach
too often a gap opens up – the “do nothing” syndrome
- huge hidden and increasing cost

Let's try something different!

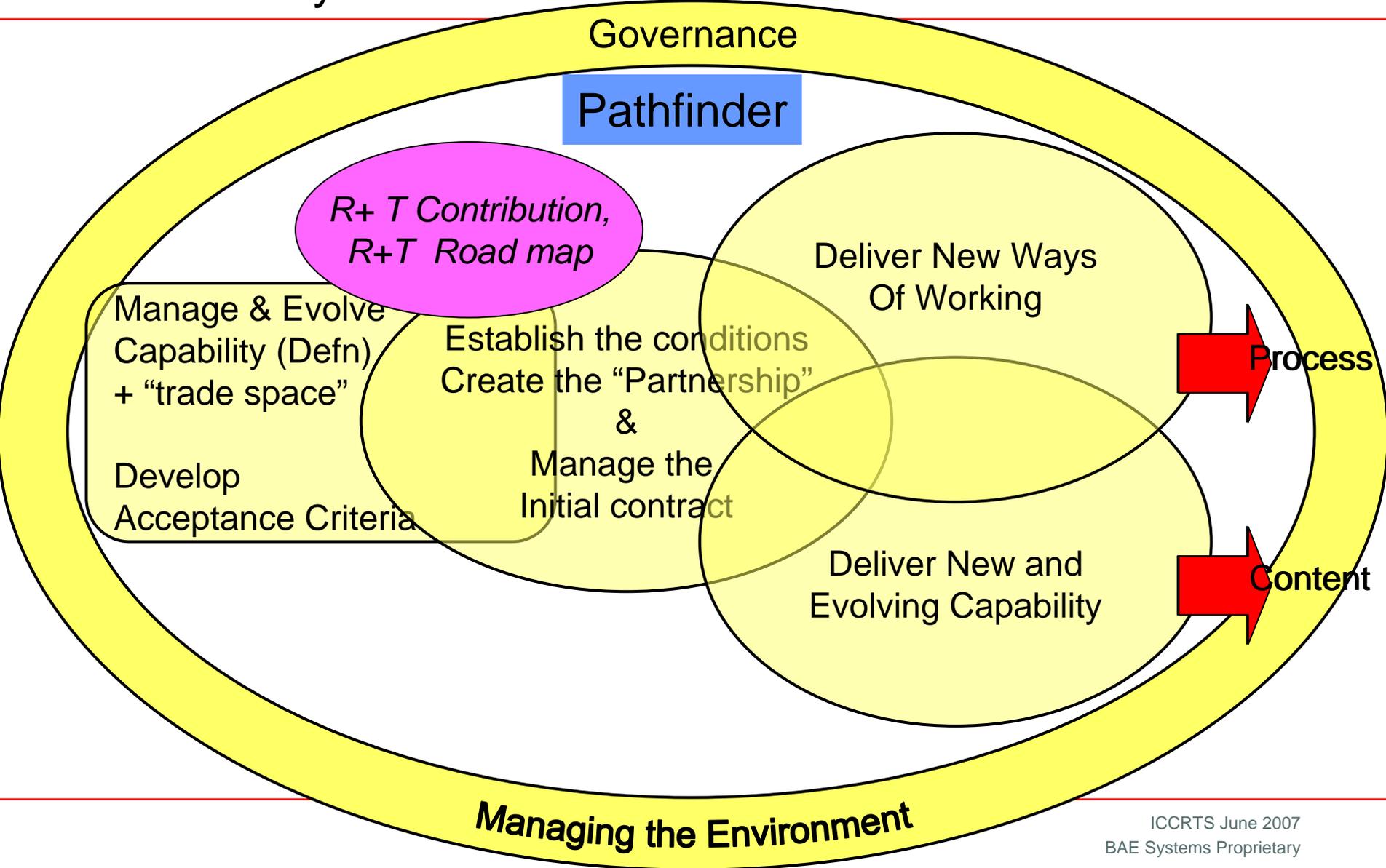
- Gather 80 MoD and Industry senior players, 3* - 1*, together
- Take two days to really understand the problem
- Propose a “new way” on a limited scale
- Not an initiative, a real programme, done differently
- Get Ministerial approval
- Set up a team to do it

Easy!!

.....18 months later.....the Pathfinders were born!!

Two programmes, real jobs, real deliverables,
run as joint MoD – Industry teams

What did they look like?



Outcomes

- Sustained Surface Combatant Coherence (S2C2)
Pathfinder

Industry Involvement with S2C2

- Industry team within S2C2:
 - BAE Systems x1
 - BMT x1
 - DMLx1
 - Qinetiq x1
 - Thales x1
 - VTx1
- Plus: MOD x9
- Part time SVGCx2
- Assistance from Frigates IPT, Fleet, DLoDs Future Business Group (FSC)
- Total =15; Industry 6 and MOD 9



“industry - the unique and defining characteristic”

S2C2 Overview - Scope

Surface Combatant

T22 Frigate

T23 Frigate

Future Surface Combatant

T42 Destroyer

T45 Destroyer

Mine Counter Measures

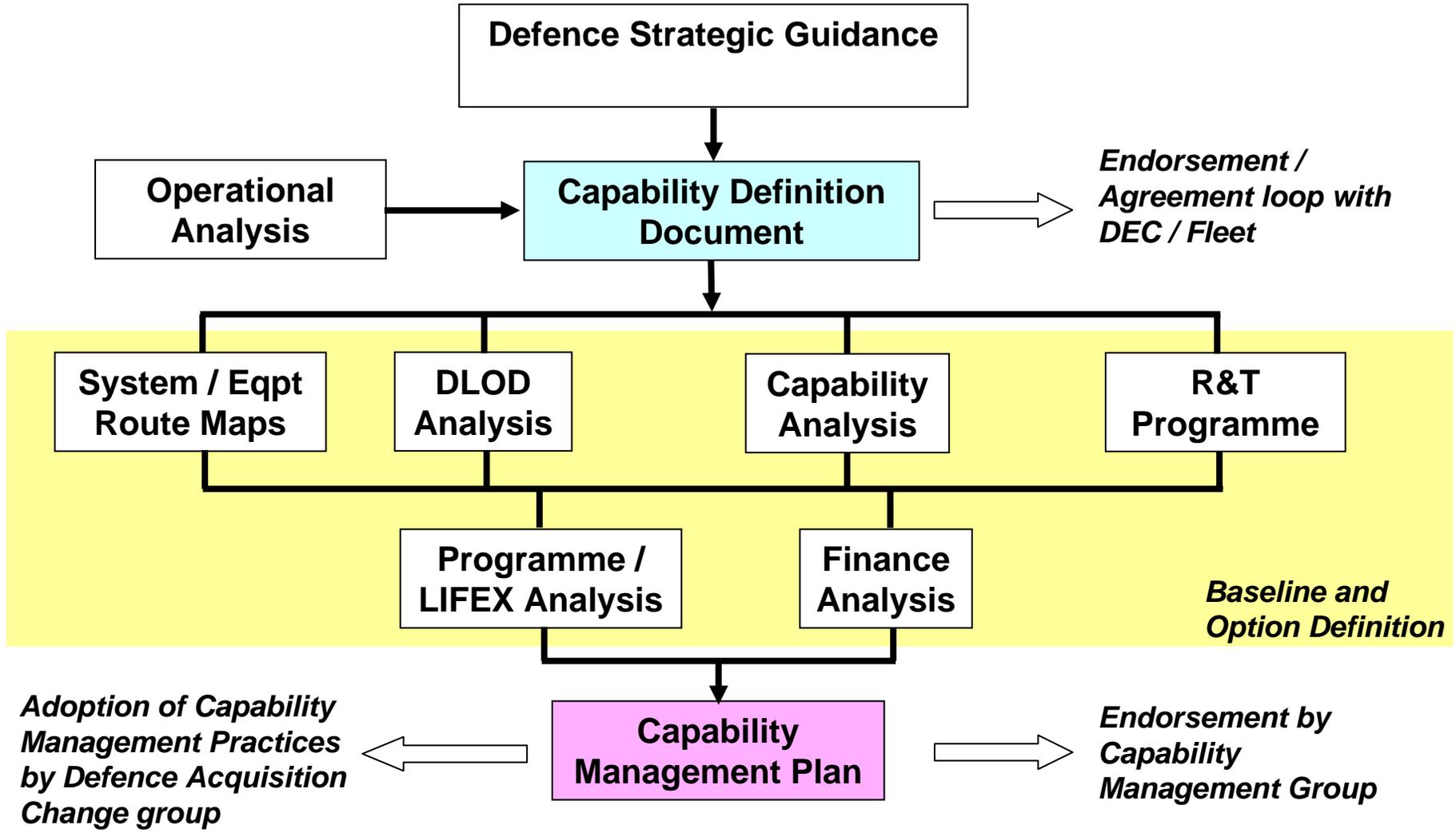
Oceanography

Hydrography

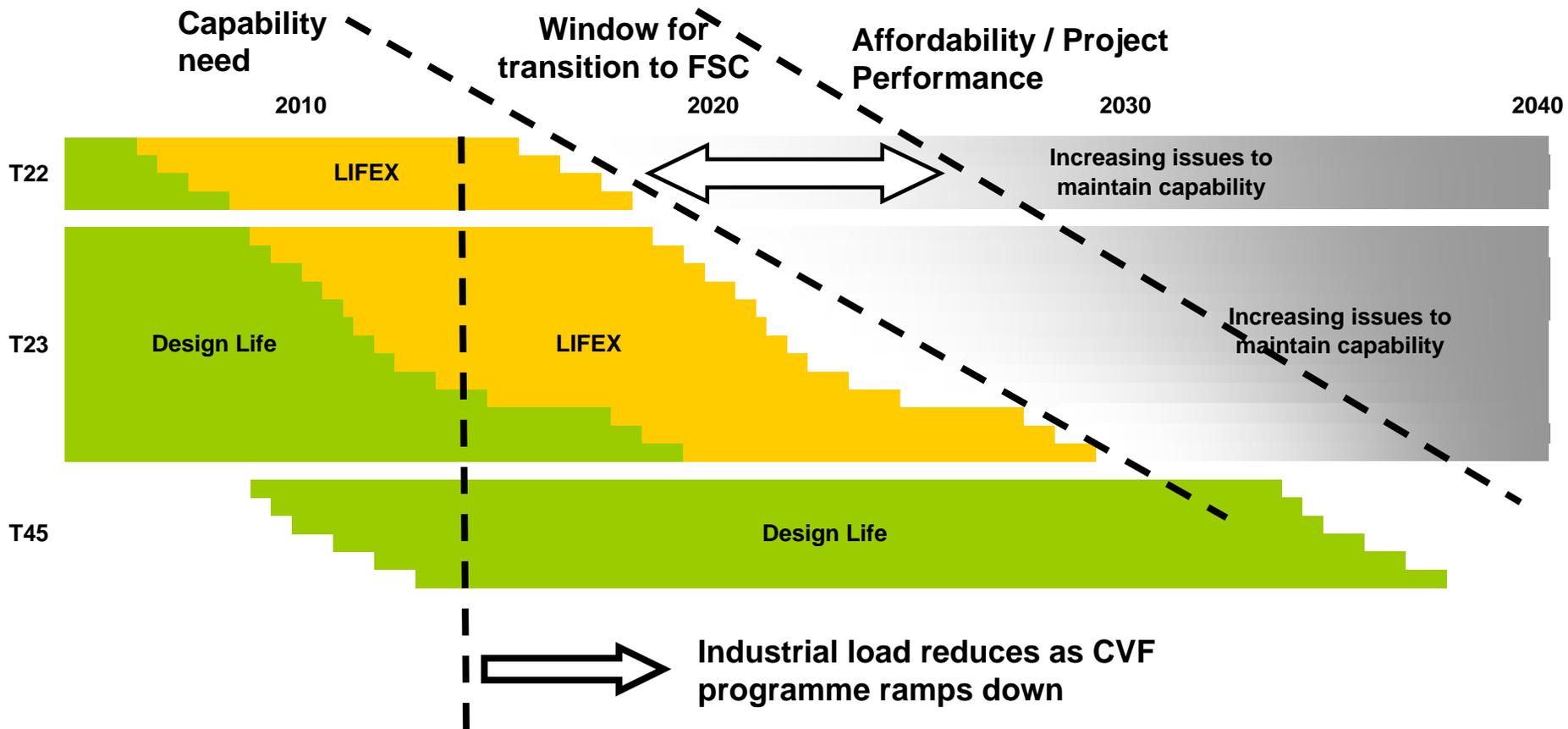
Patrol Vessel



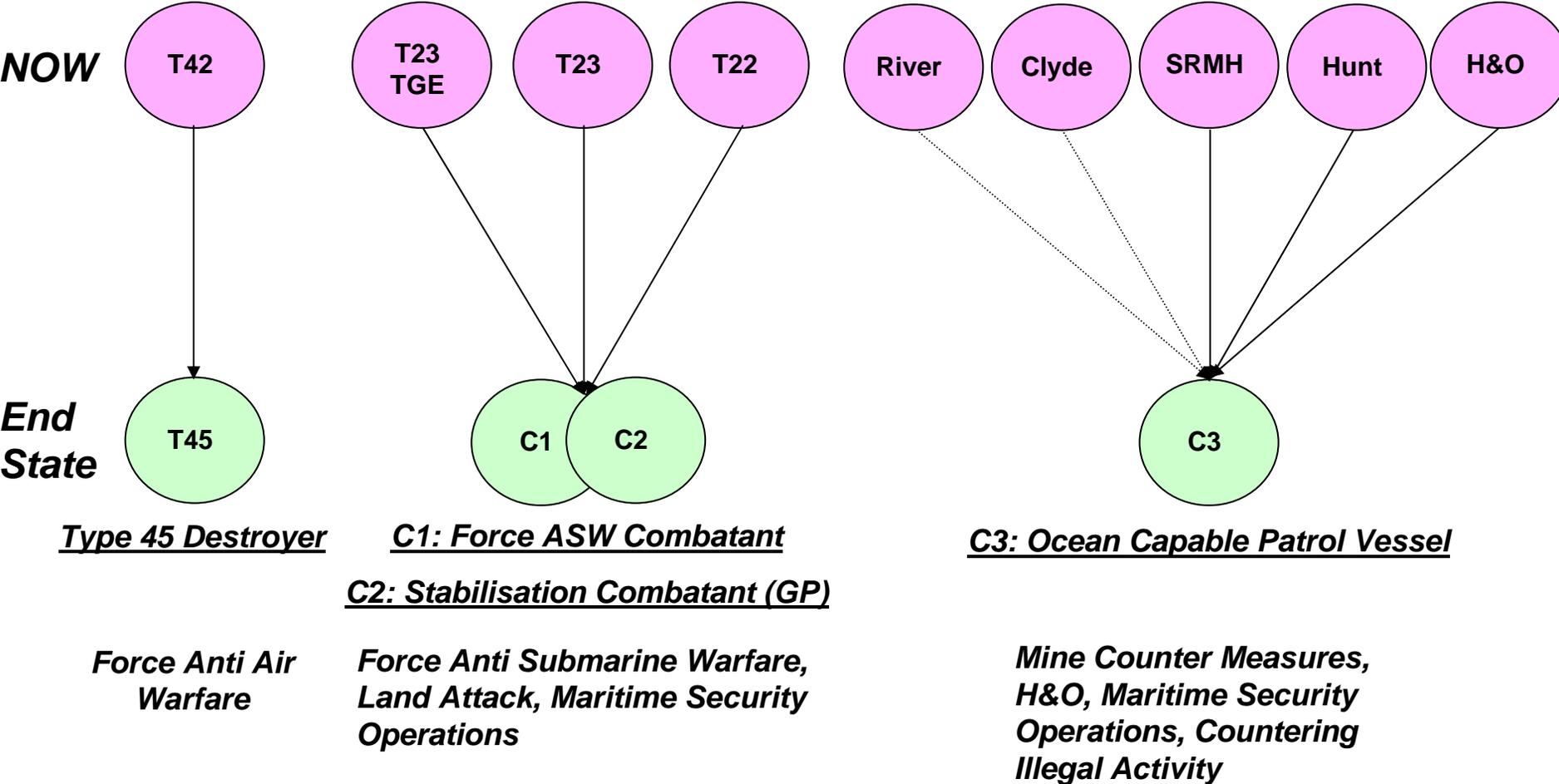
S2C2 Overview - Approach



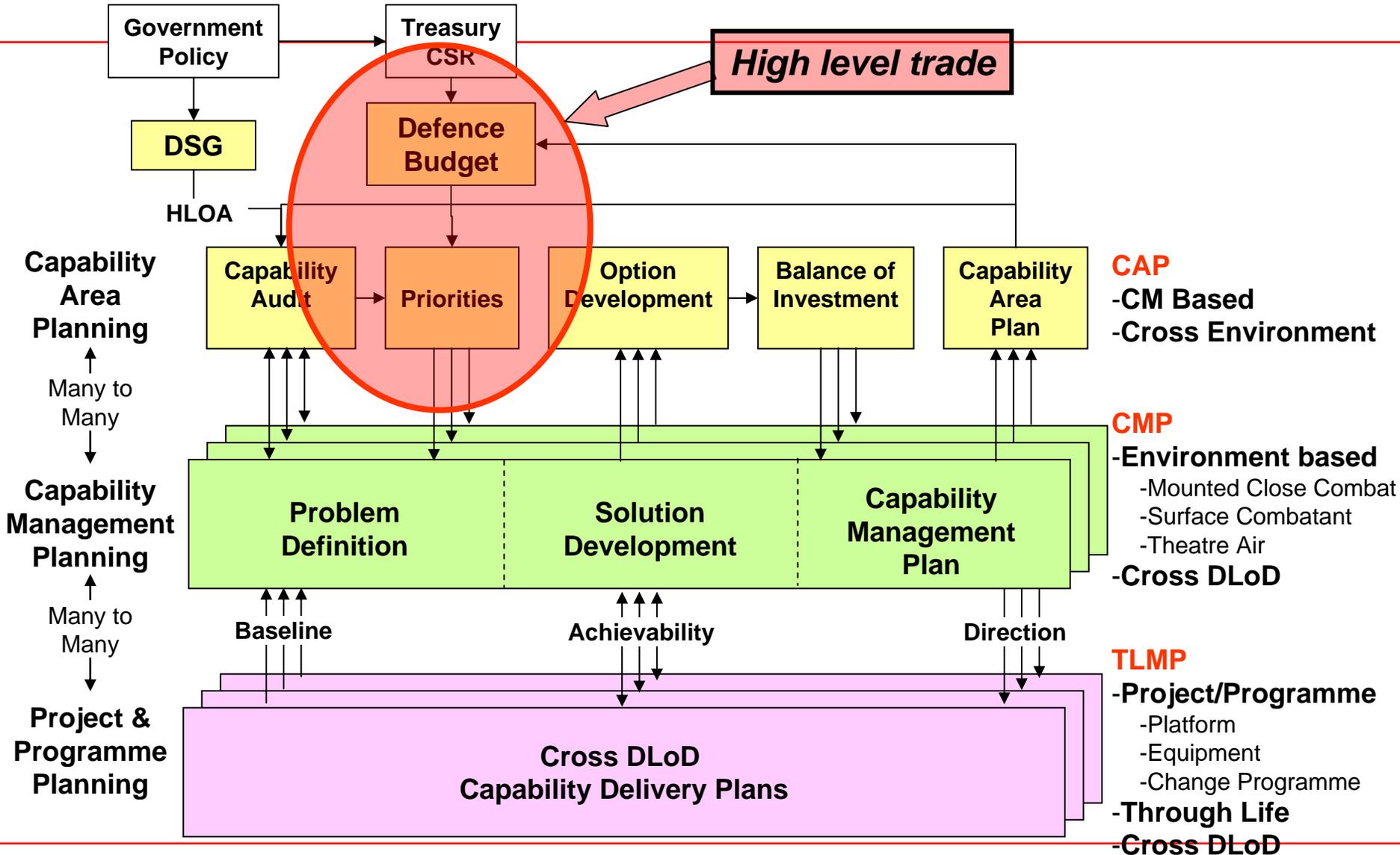
S2C2 Overview - Core Programme



S2C2 Overview - Vision

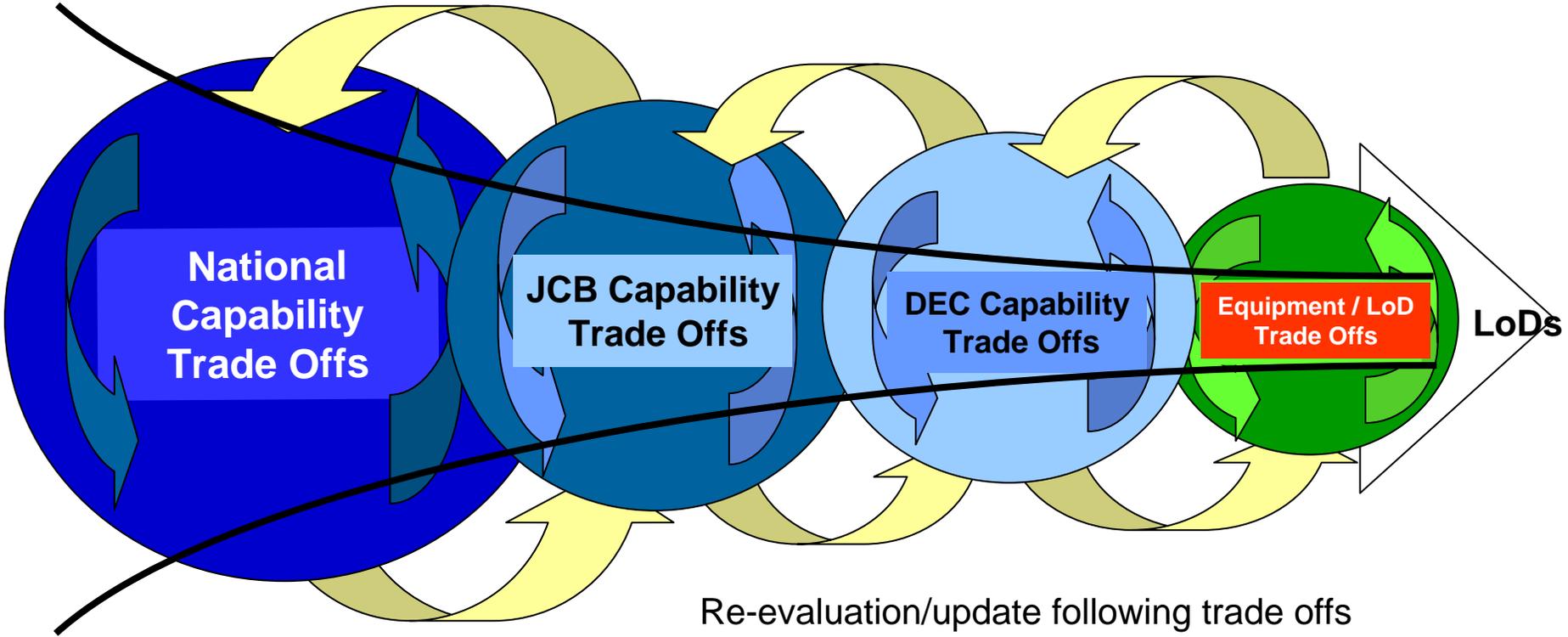


CM Relationship with MoD Departmental Process



Capability Trade Spaces (*replacement and upgrade*)

Re-definition / update of requirement following trade offs



Defence Policy and National requirements

Cross Capability Plan

Area Capability Plan

Through Life Mgt Plan

The learning - acceptance

Old Paradigms

Project Management
Systems Engineering
Optimising
Replacing
Social Integration
Certainty
Clarity
Risk
Requirements
Early concept

New Paradigms?

Coherent Programme Management
Capability Engineering
Balancing
Trading
Planned Integration
Accepting Change
Dealing with Ambiguity
Degrees of freedom
Acceptance
Continuous concept

- Pathfinders have shown the depth and scope of the changes needed
- But no complacency - the “immune system” is strong
- Behavioural change is tough!

What have the Romans ever done for us?

...apart from.....

- ..Showing the benefit of decisions made with high level coherence*
- ..Identifying serious “unseen” gaps in total capability*
- ..Ensuring decisions are made in context, across boundaries (risk, cost...)*
- ..Getting Industry into the options debate earlier*
- ..Practically evolving the TLCM process*
- ..Co-ordinating across LoDs through life for the first time*
- ..Delivering a coherent baseline and future capability definition*
- ..Identifying issues/options on affordability, commercial models early*
- ..Balancing old vs new options, expenditure in a timely, considered way*
- ..Demonstrating the basis of a Capability Programme function*
- ..Identifying key competencies for TLCM management*
- ..Showing the cost of NOT doing something*

Lessons learned and tips for success

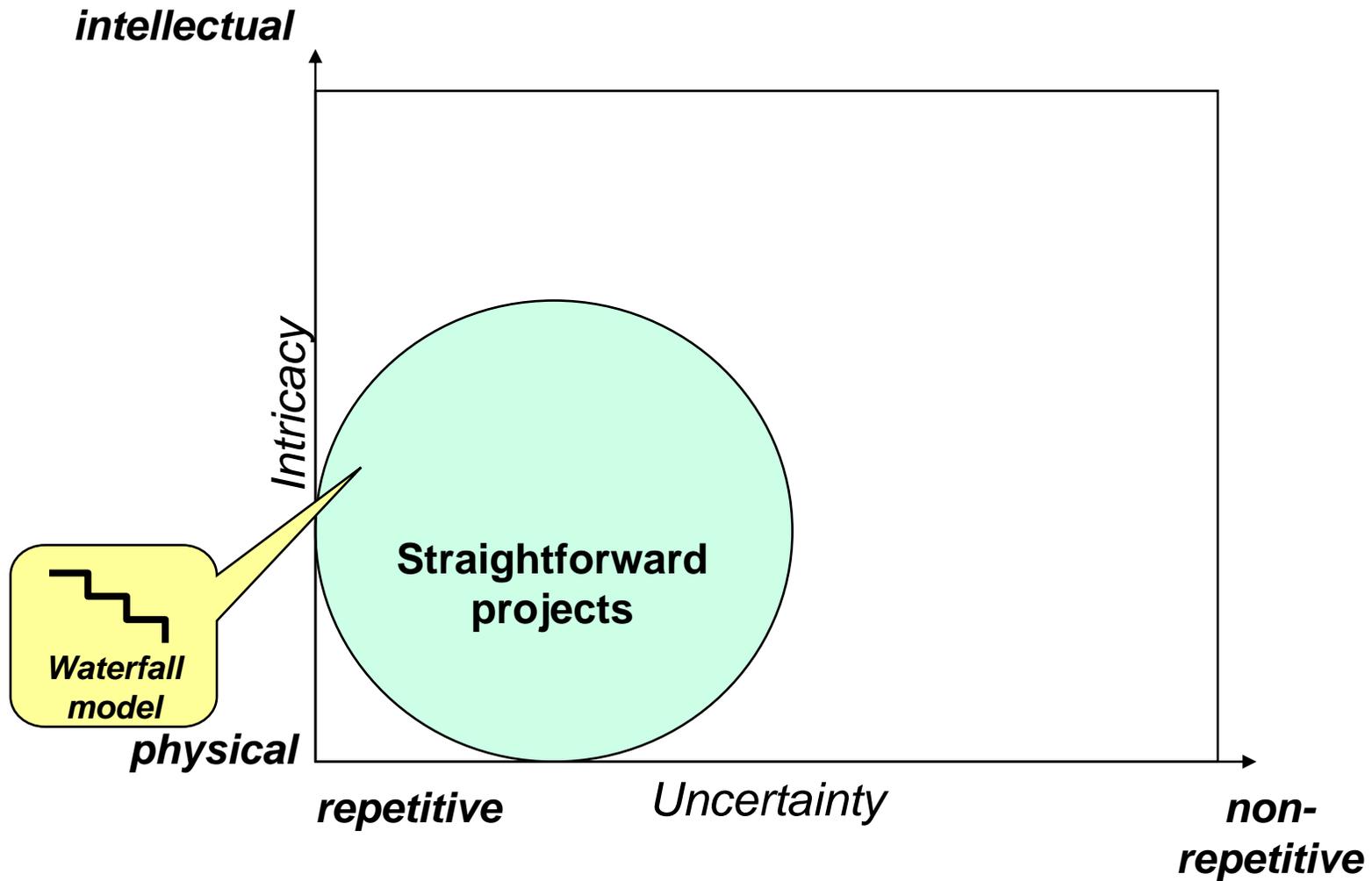
- A few distilled lessons from applying through life capability management in practice:
 - *Current thinking (in MoD and industry) is predominantly based around platforms*
 - Develop a clear and agreed capability based requirement – based on military effects
 - Develop an agreed baseline – for existing capability and potential sustainment activities it is relative
 - Agree measures for capability – for example, force elements @ readiness, sustainment
 - Identify tools and processes to deal with the significant complexity in trading off sustainment with new equipment options

... before starting to develop
through life capability based plans

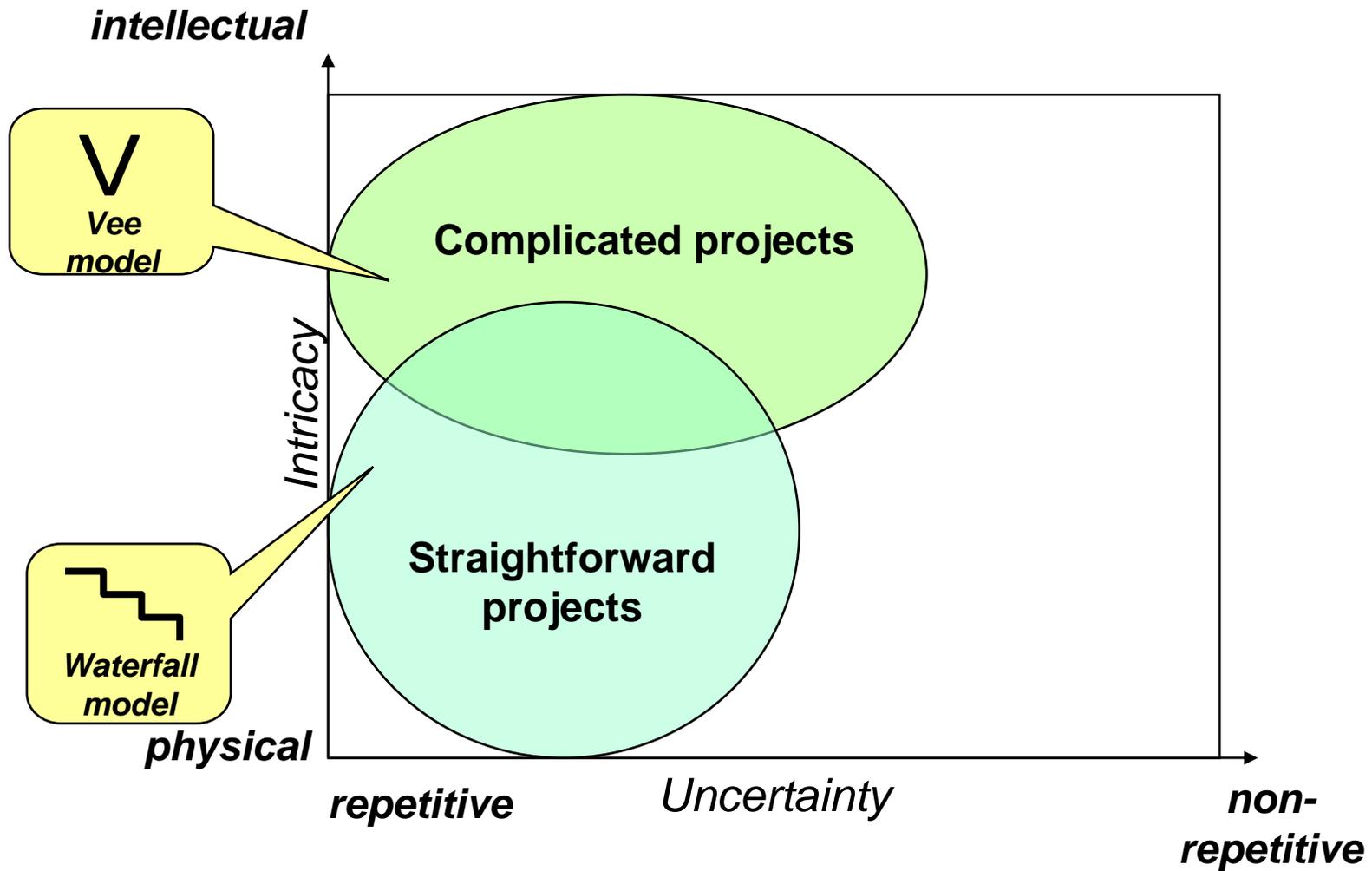
What is the impact of managing at the capability level?

Retraining needed?

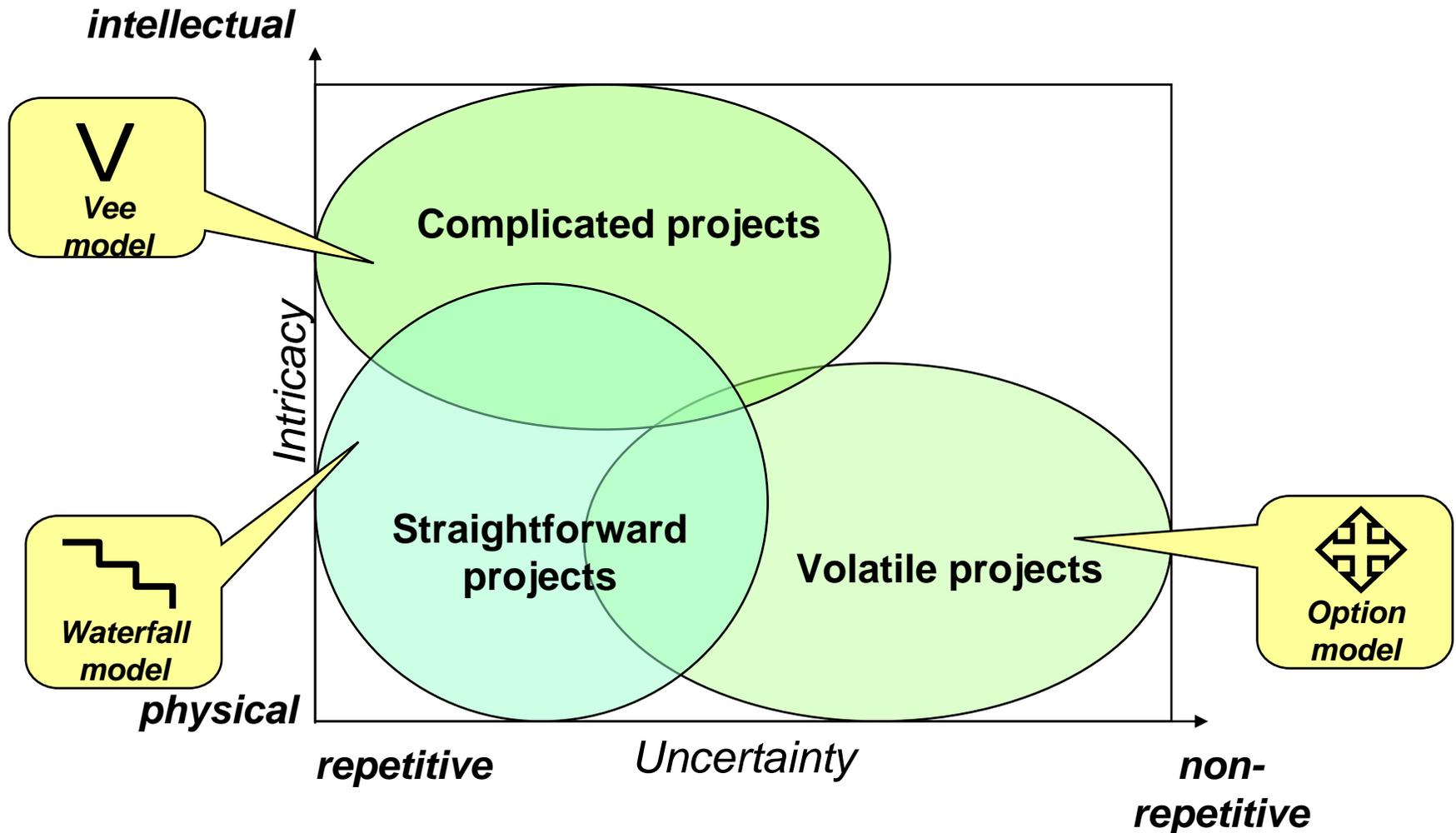
Just a question of training.....



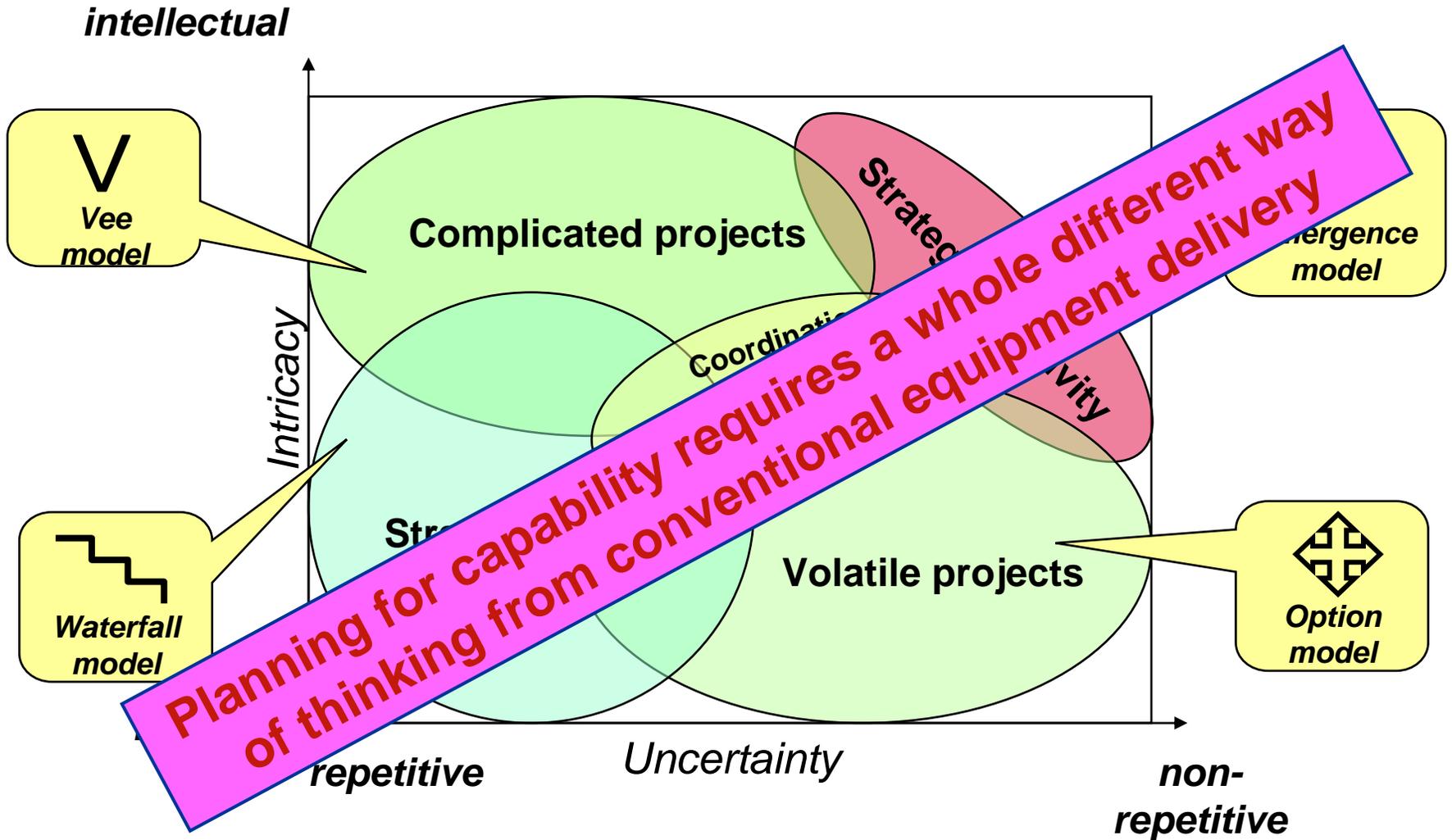
Just a question of training.....



Just a question of training.....



Just a question of training.....??



A parting thought...

The pathfinders were all about coherence

*TLCM in Command and Control demands coherence
But can it be achieved top-down only?*

*In the commercial world coherence is achieved differently
.....the key here lies not in total top down design
but developing means for low level coherence*

Our mindsets force us to concentrate exclusively on
high level coherence

Examples of low level coherence

Industry examples that have improved through life management and cost of ownership

- **Banking cards and PIN and migration to Chip and PIN**
 - The move to establishing the necessary levels of security, compatibility
- **The Internet threading mechanisms, the URL and the Global Highway**
 - The steps to using the powers of instant information and trade
- **The SMS channel on a Mobile phone**
 - The journey from data used for engineering purposes to simple to use data driven services and solutions.
- **Car engine management systems**
 - The revolution in reliable simple diagnostics, personal “Butler” services

Low level coherence Applied to Command and Control

MOD needs to improve through-life management and cost of ownership

Industry needs to develop simple mechanisms to deliver an underpinning capability

- Commanders Control of the Capability mix
- Flexible, secure access to the information world at the point of need
- Effective management of assets and delivery of military capability services at the point of delivery
- Ability to build on the Industry base to provide a 21st century e-services and support organisation

Planning versus integration

- If we try really hard we can drive high level architectures and systems convergence – *integration by scientific management*
- But in C4I this means we will always be in catch – up
- We also need mechanisms which are *organic*
- We need to break out of the stovepipes and bespoke systems
- We should also examine *low level coherence mechanisms*
- Those elements which will drive organic integration
.....and let the systems start to join up naturally.....

....and on that note....*any questions?*

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Appendix: The immune system!

Making change happen - a model of the organisation

