

The following presentation was given at:

Joint Workshop
“Affordability, Value for Money and
Decision Making”

Tuesday 18th November 2014

BAWA, Filton, Bristol

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16 December 2014

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Ministry
of Defence

The use of cost data in support of Whole Force Analysis



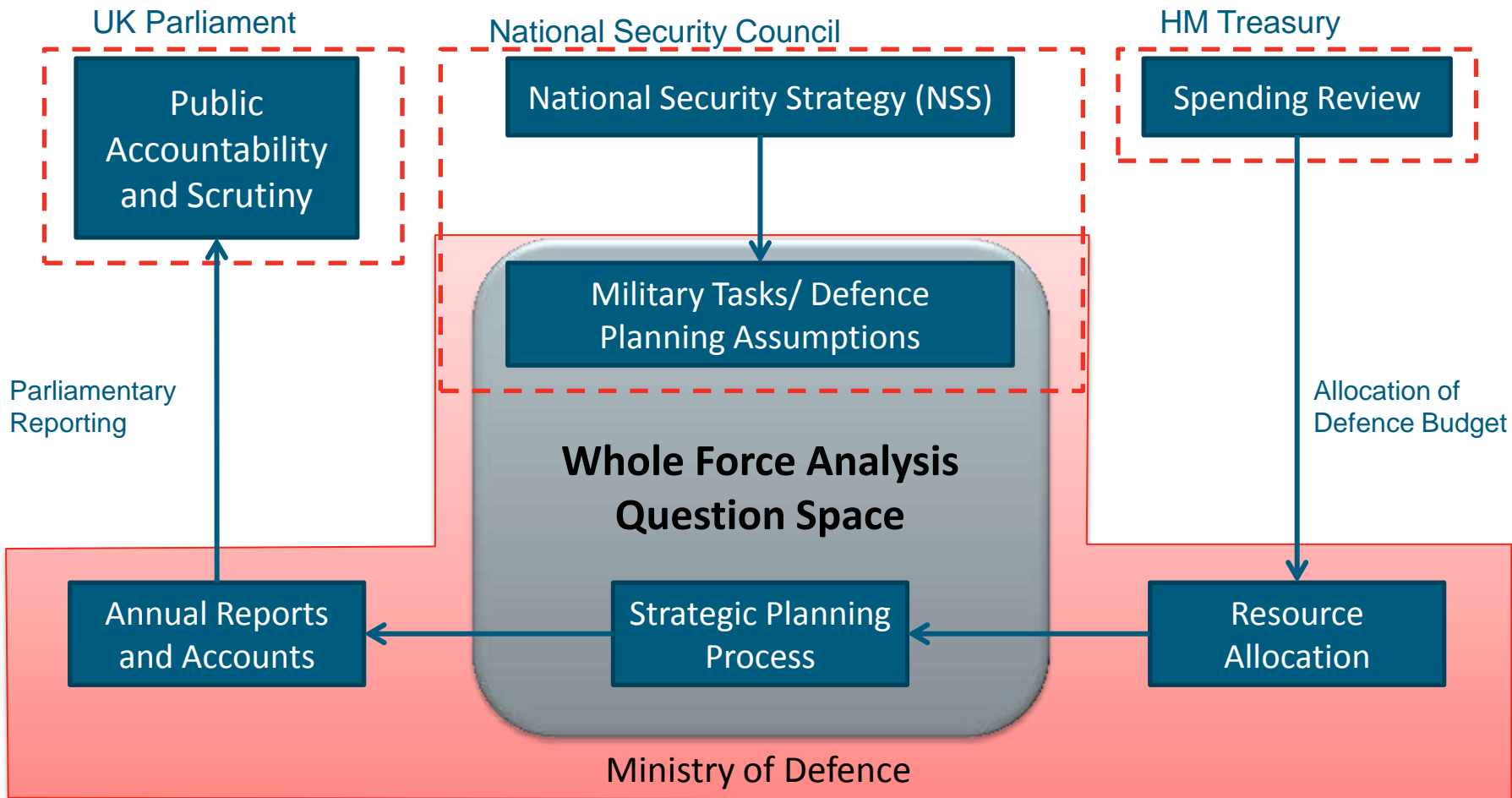
Arjun Madahar (Senior Analyst)

18th November 2014

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Defence in a Government Context

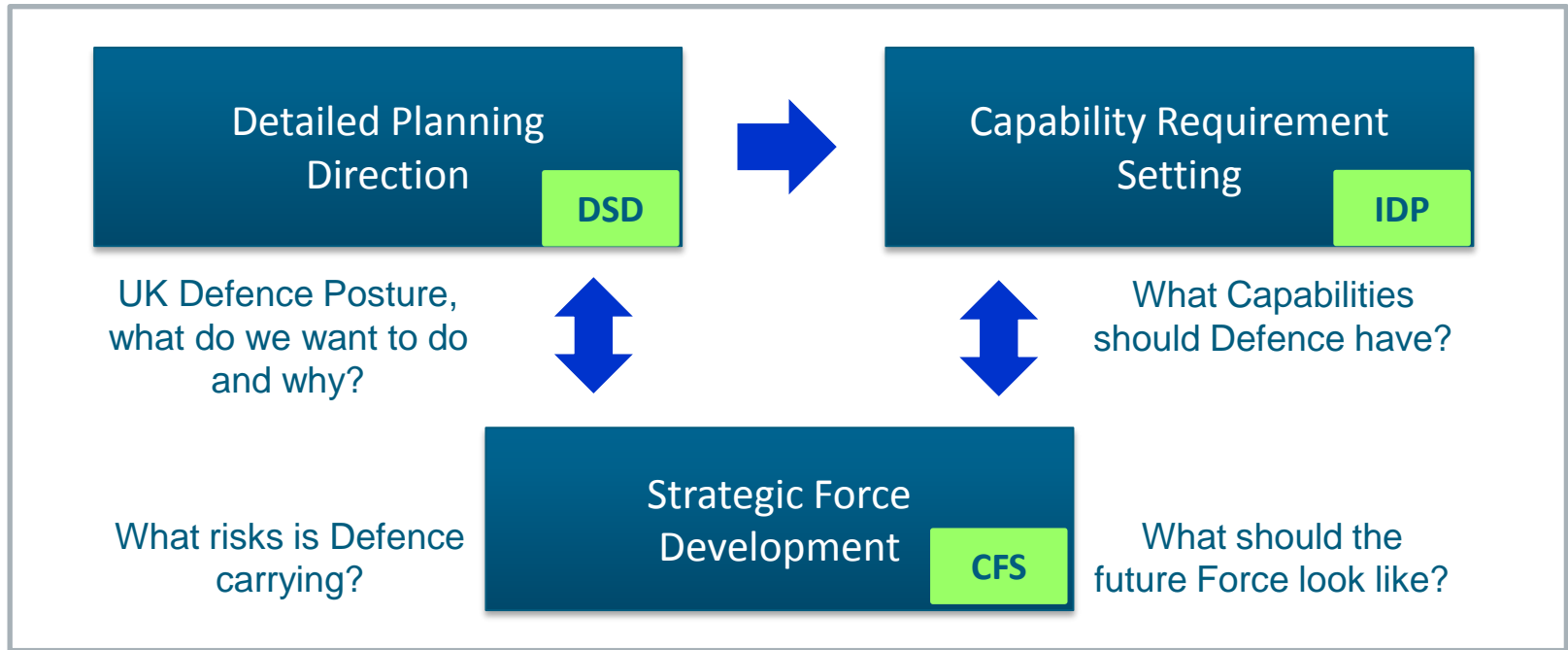


Whole Force Analysis Question Space

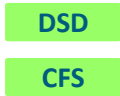
Government Policy and Strategy (NSS)



Whole Force Analysis Question Space



Key
Outputs:



Defence Strategic Direction
Candidate Force Structures



Initial Defence Plan

The Issue

- During and between Strategic Defence and Security Reviews (SDSRs) senior Defence staff need to understand



Given what the UK wants to do...

What does the future Force Structure look like?

What "risk" are we taking in a planned Force Structure?

What is the most cost effective mix of capabilities required?

- The are

taken

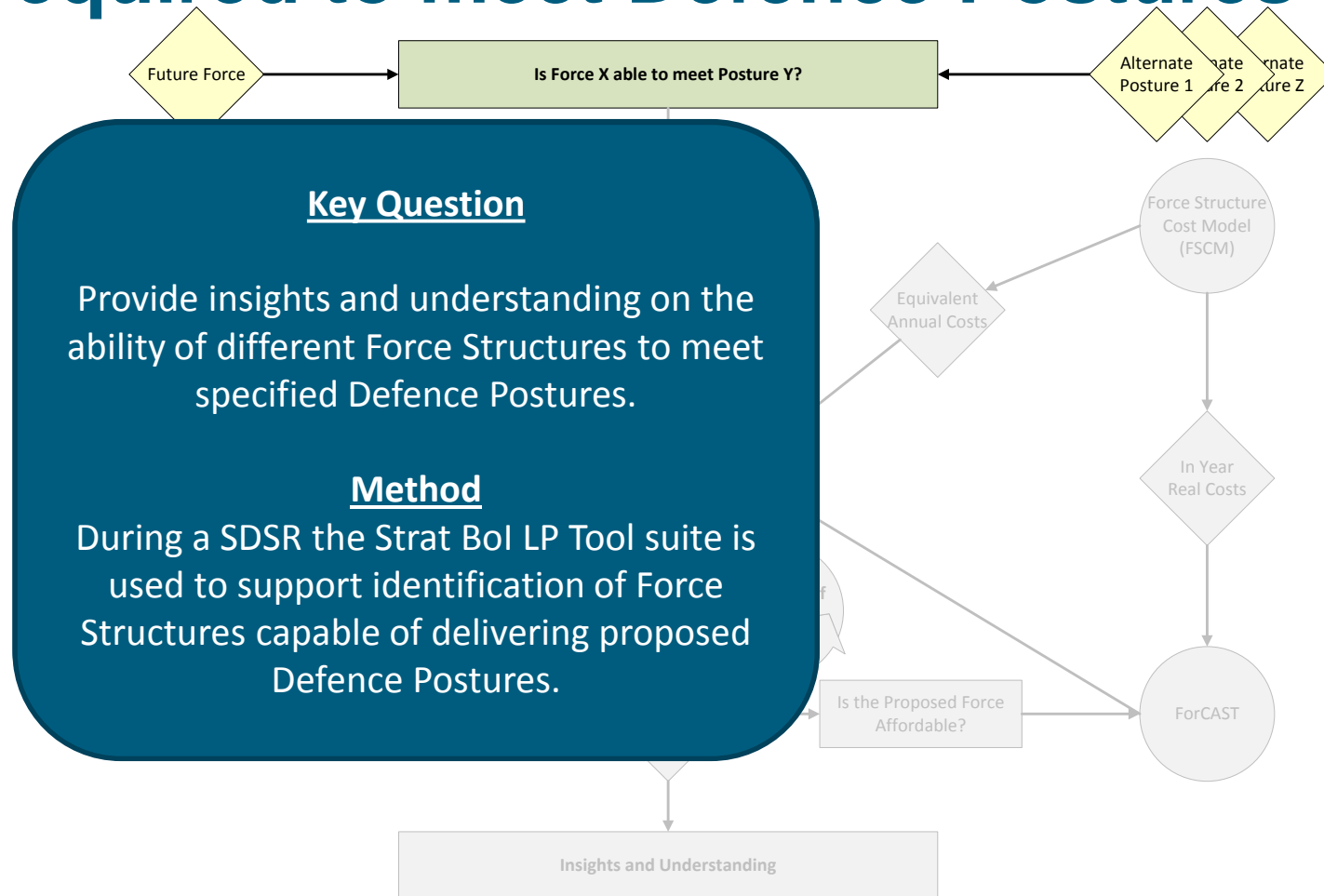
other

- Including Equipment, Training, Infrastructure, Manpower and Support

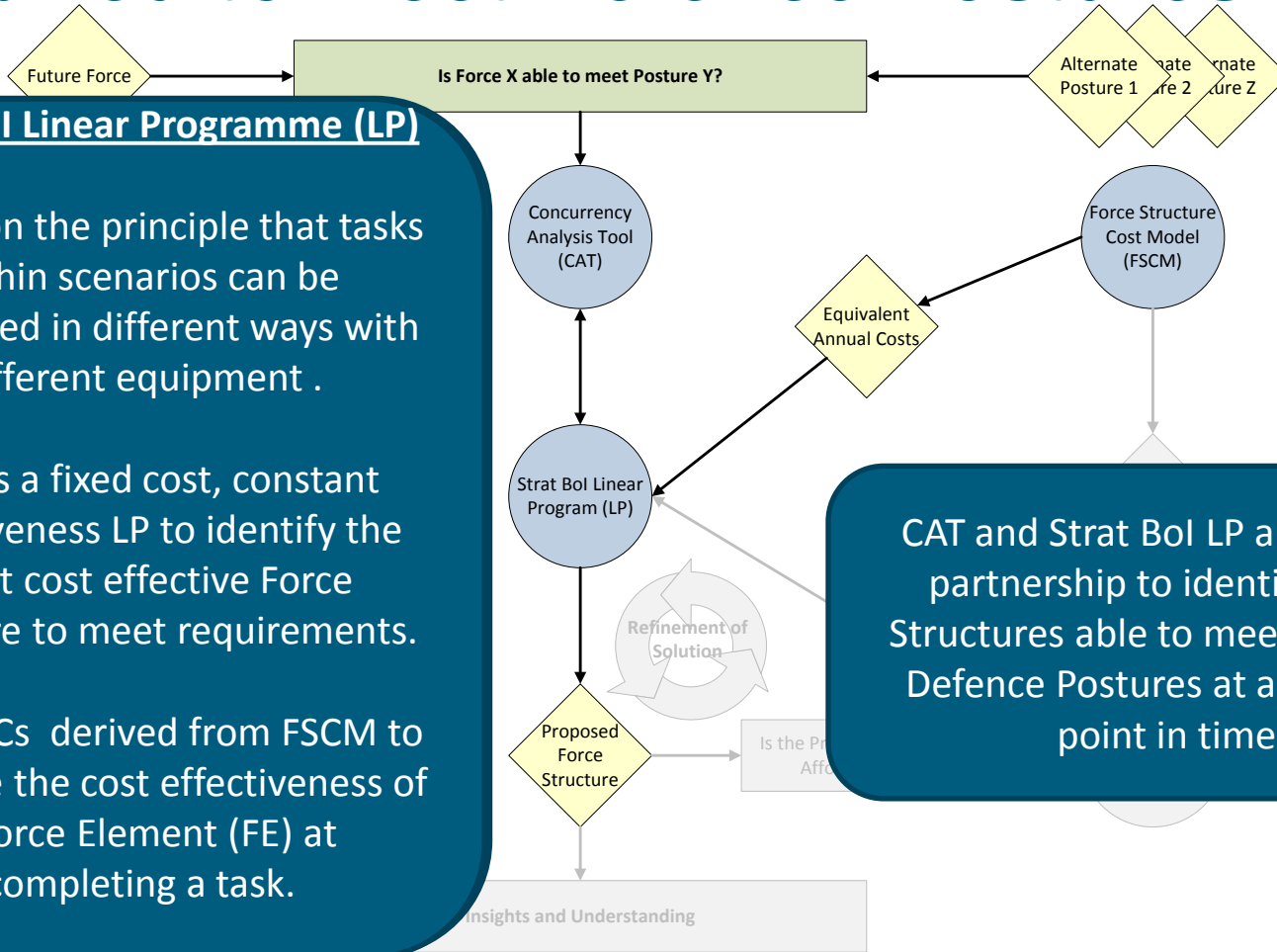
Strategic Balance of Investment (Strat Bol) Tool Suite

- To provide insights and understanding on required Force Structures to meet defined Defence Postures the Strat Bol Tool Suite is utilised:
 - Strat Bol Linear Programme (LP)
 - Concurrency Analysis Tool (CAT)
 - Force Cost Affordability Simulation Tool (ForCAST) (*managed outside of the project*)
 - Force Structure Cost Model (FSCM) (*managed outside of the project*)
- *Overviews of FSCM and the Affordability Tool are provided and how they are used with the Strat Bol LP and CAT.*

Process to identify Force Structures required to meet Defence Postures



Process to identify Force Structure required to meet Defence Postures



Strat Bol Linear Programme (LP)

Is built on the principle that tasks within scenarios can be conducted in different ways with different equipment .

It uses a fixed cost, constant effectiveness LP to identify the most cost effective Force Structure to meet requirements.

Uses EACs derived from FSCM to compare the cost effectiveness of a Force Element (FE) at completing a task.

CAT and Strat Bol LP are used in partnership to identify Force Structures able to meet specified Defence Postures at a specified point in time.

Scope of Force Structure Cost Model (FSCM)

Defence Programme



Shared costs allocated to force elements for analysis, as these represent the full cost



What the FSCM includes

Non Deployable costs

Cost of core functions such as headquarters and procurement agencies
Costs are not allocated to force elements

Shared (supporting) Costs

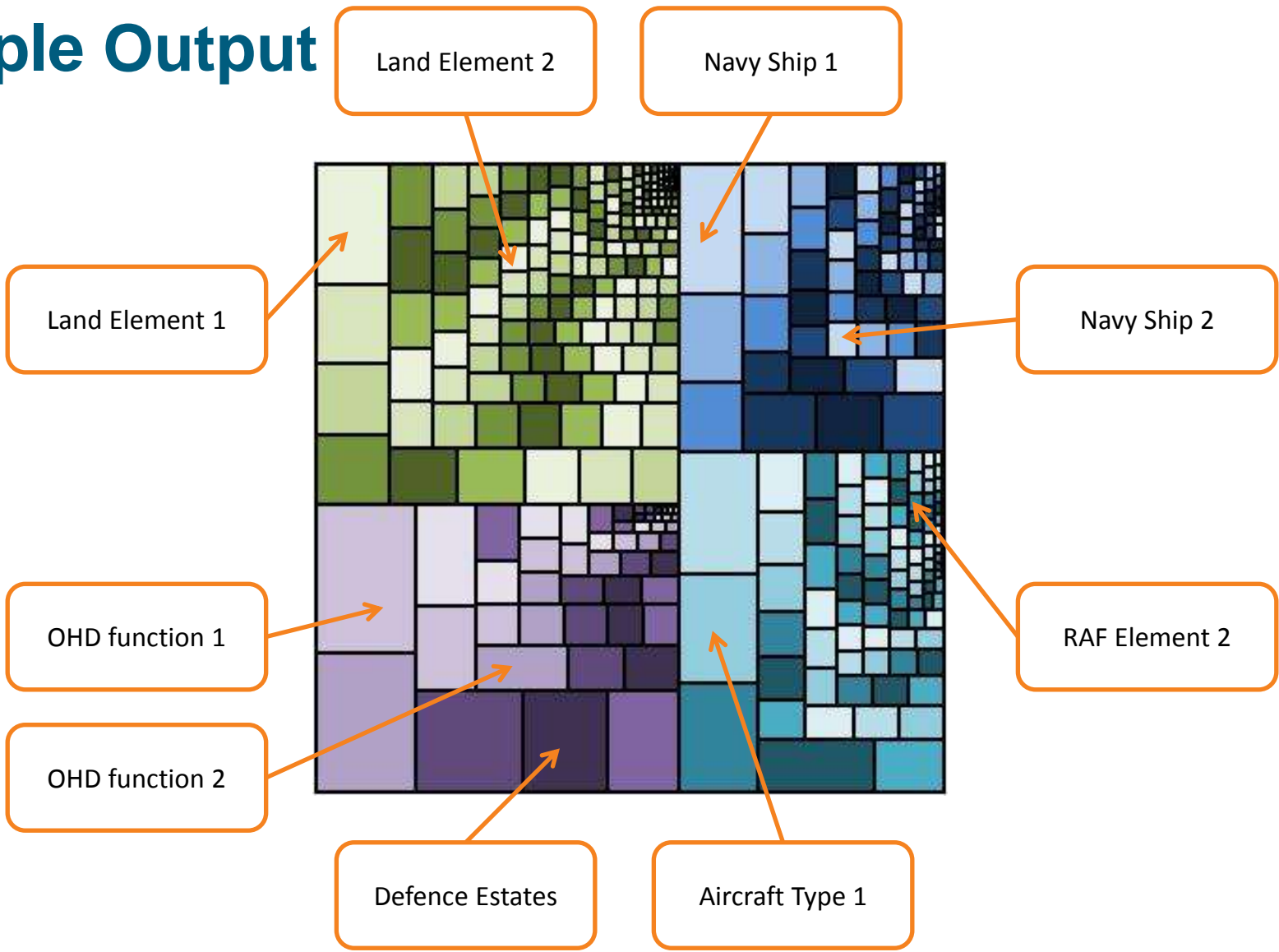
Elements that directly support force elements, e.g. Training and barracks

Force elements

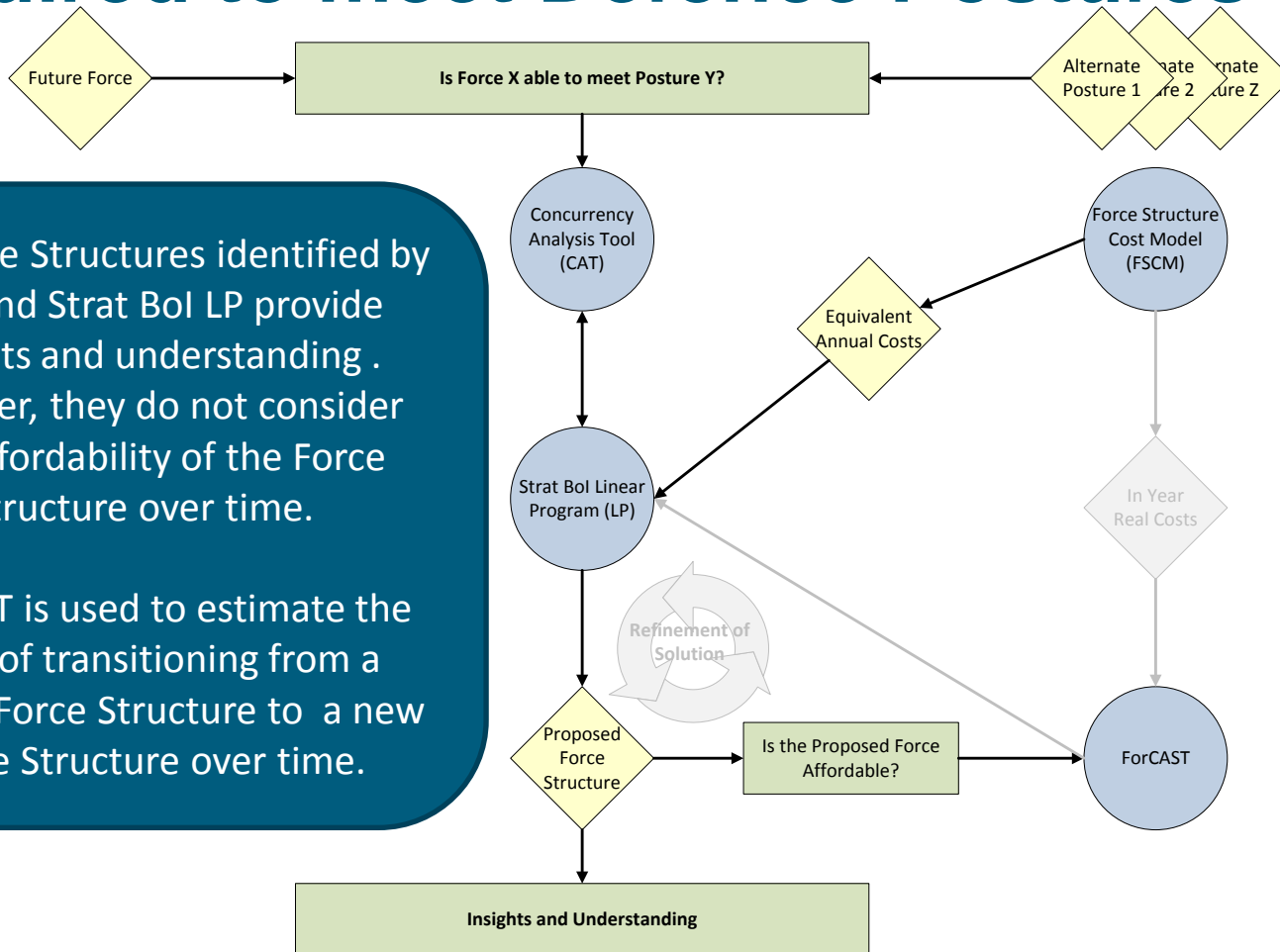
Current and Future (out to 50 years)

Whole Life Cost including:
Manpower
Equipment Development and Procurement
Equipment Support

Example Output FSCM



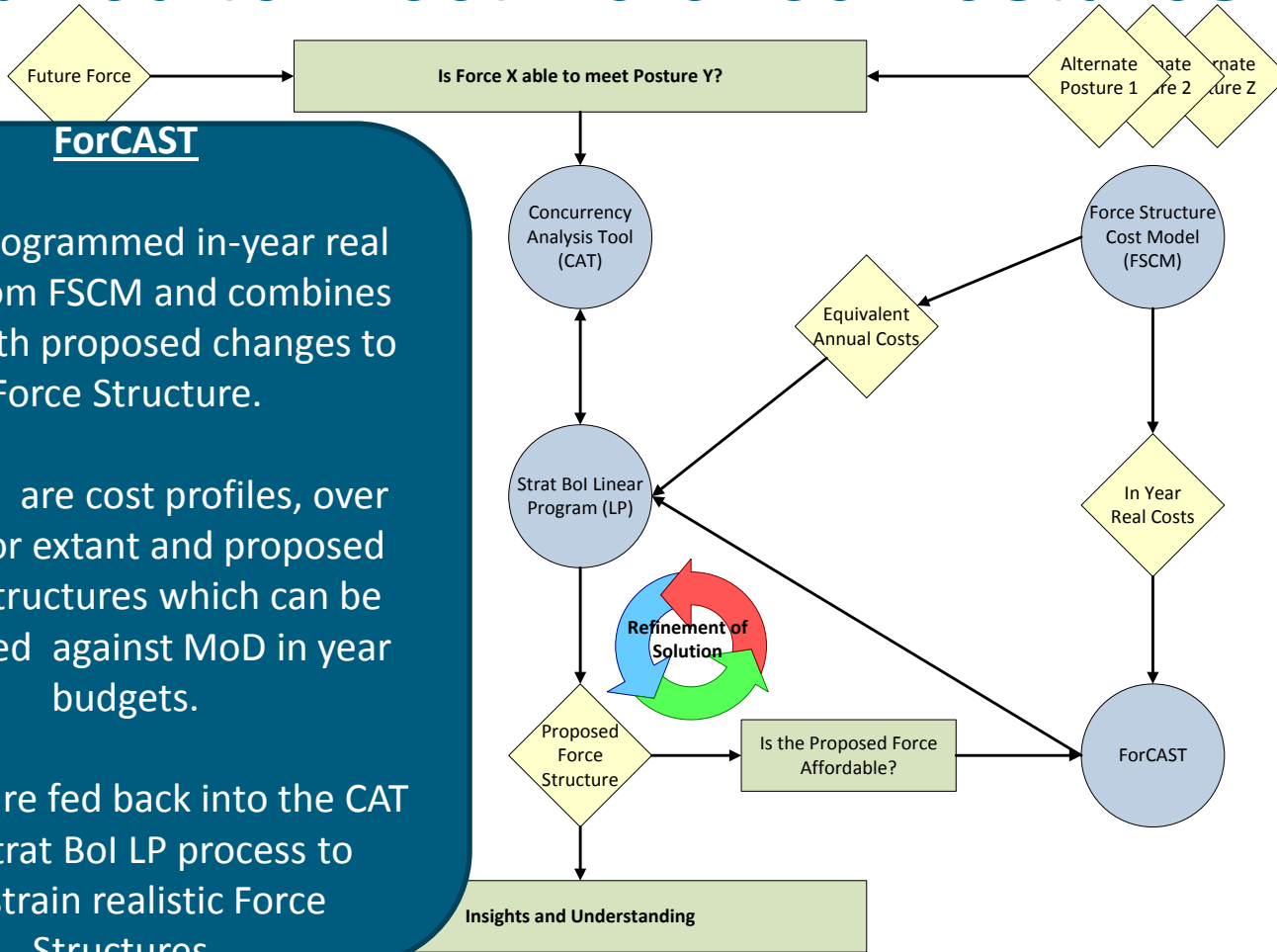
Process to identify Force Structure required to meet Defence Postures



The Force Structures identified by CAT and Strat Bol LP provide insights and understanding. However, they do not consider the affordability of the Force Structure over time.

ForCAST is used to estimate the costs of transitioning from a current Force Structure to a new Force Structure over time.

Process to identify Force Structure required to meet Defence Postures



ForCAST

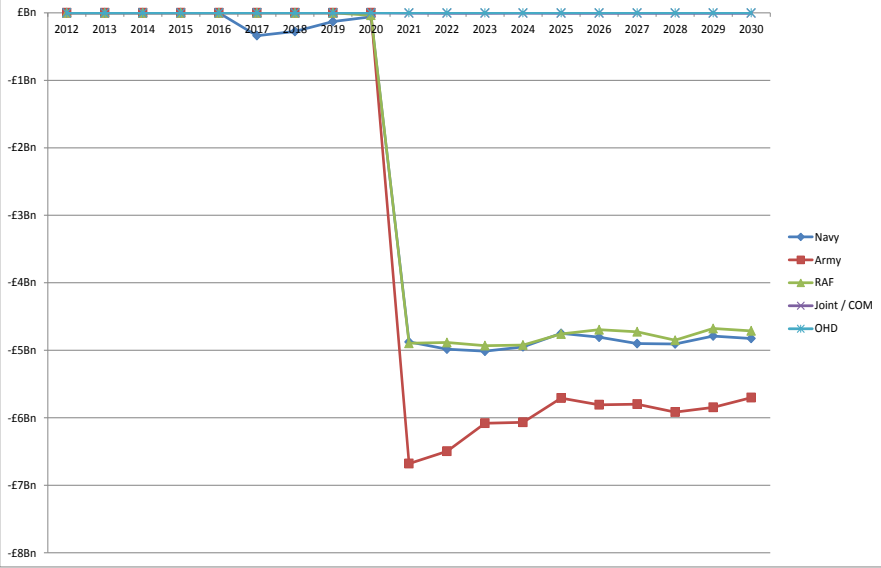
Takes programmed in-year real costs from FSCM and combines them with proposed changes to Force Structure.

Outputs are cost profiles, over time, for extant and proposed Force Structures which can be compared against MoD in year budgets.

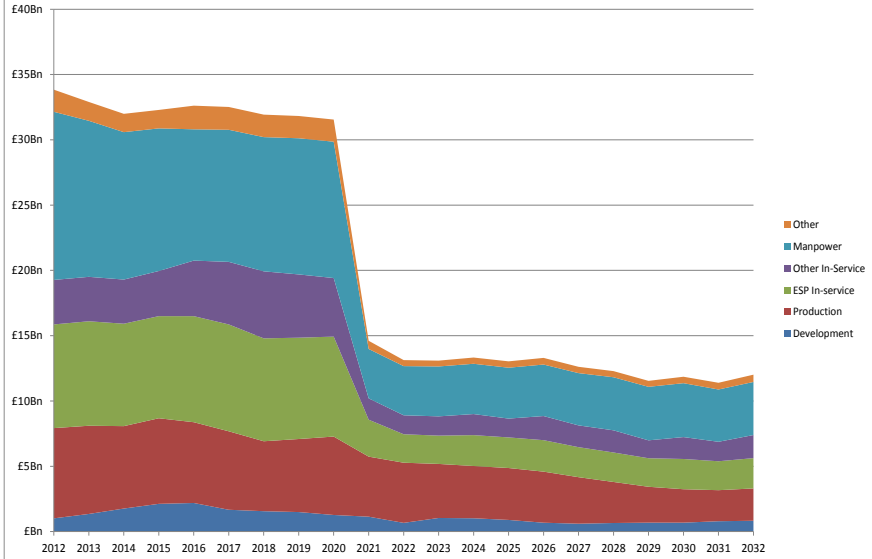
Insights are fed back into the CAT and Strat Bol LP process to constrain realistic Force Structures.

ForCAST - Example outputs

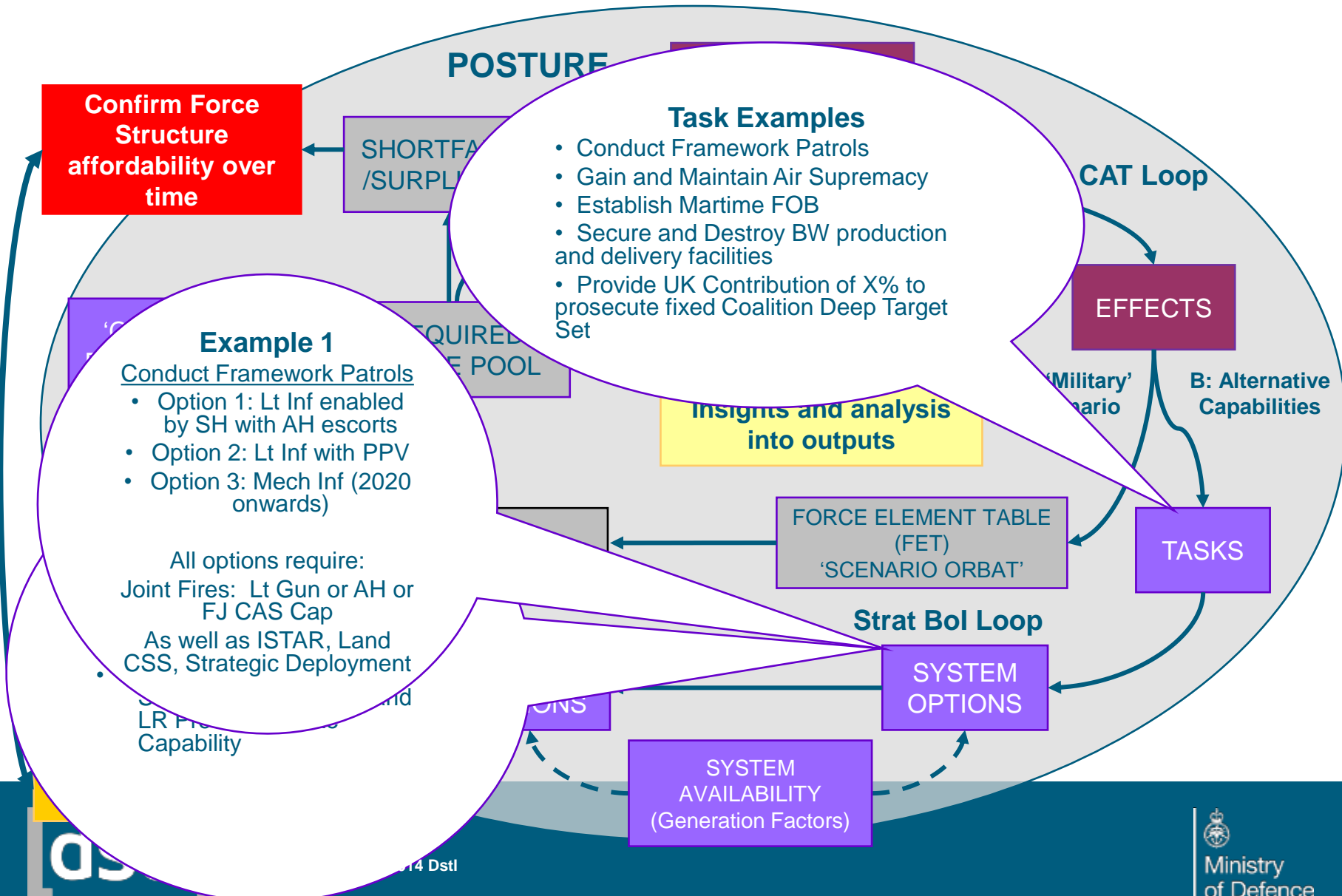
Cost Difference by Service



New Cost profile by Cost Type



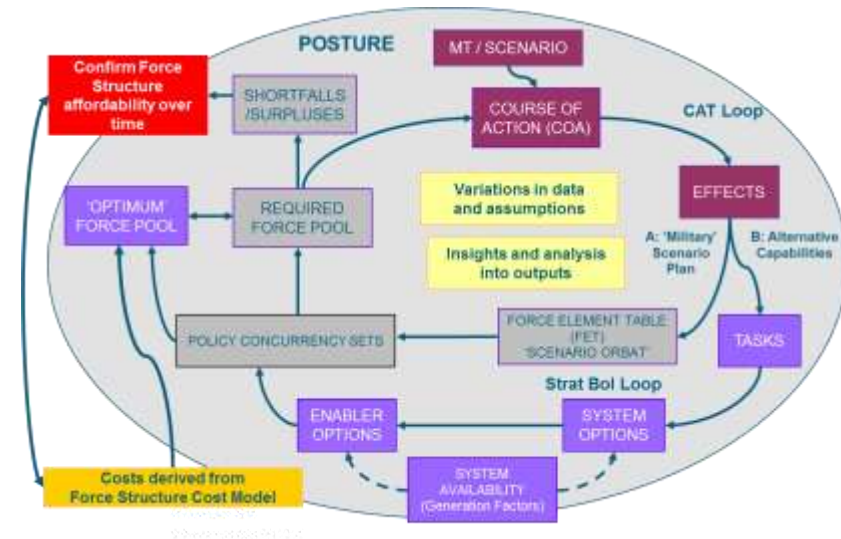
Strat Bol Tool Suite analysis process



Analysis - Variables

Variations in data and assumptions

- Alternate Postures
 - Concurrency Assumptions
 - Inclusion and Exclusion of types of Operation or areas of the World
- Scenarios
 - Different Courses of Action
 - Coalition Assumptions
- Capabilities
 - Changes to the capabilities of Force Elements
 - Inclusion / Exclusion of Capabilities and/or Force Elements
- Sensitivities to Costs

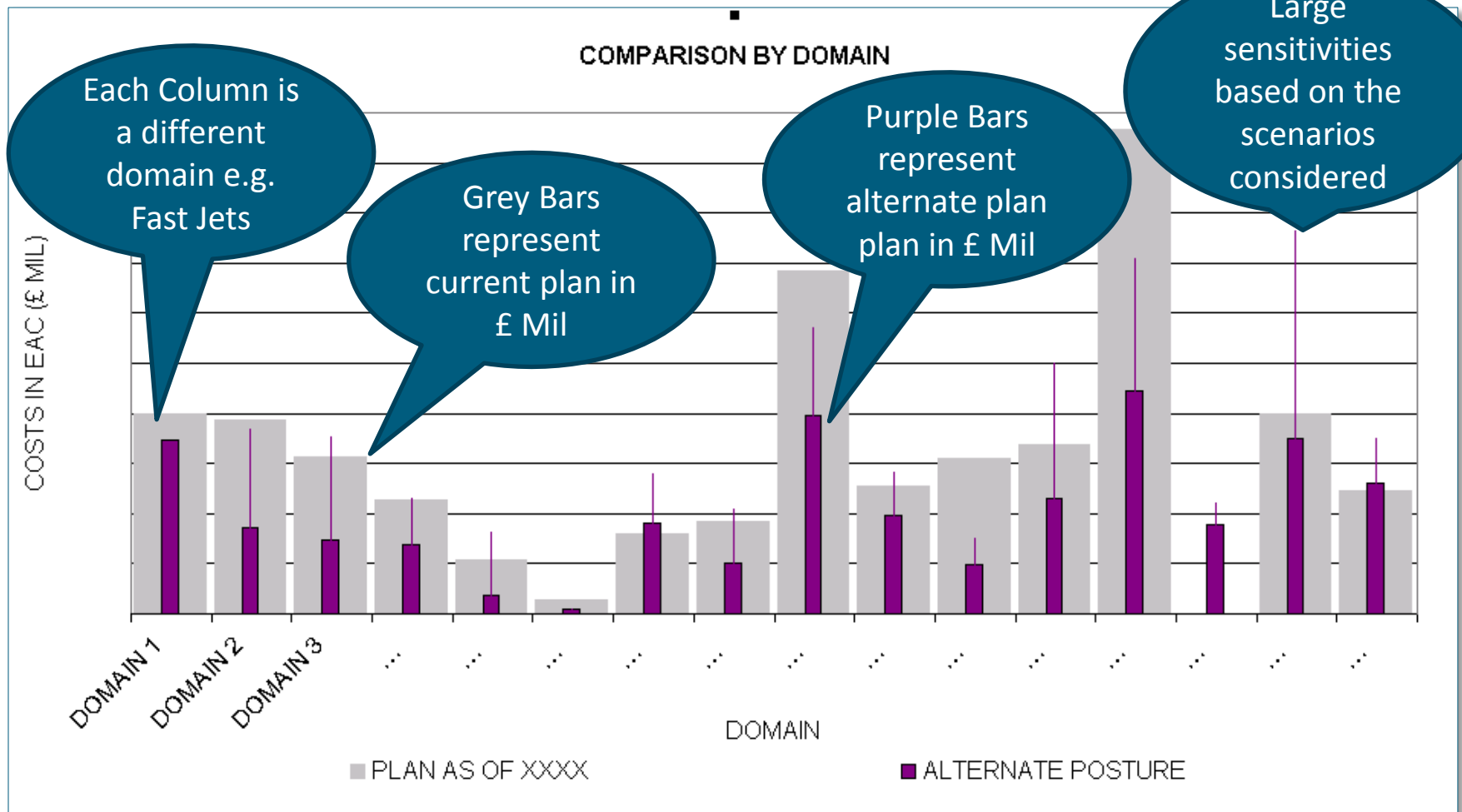


- Range of Timeframes
- Force Generation
 - Alternative Generation Ratios, Harmony

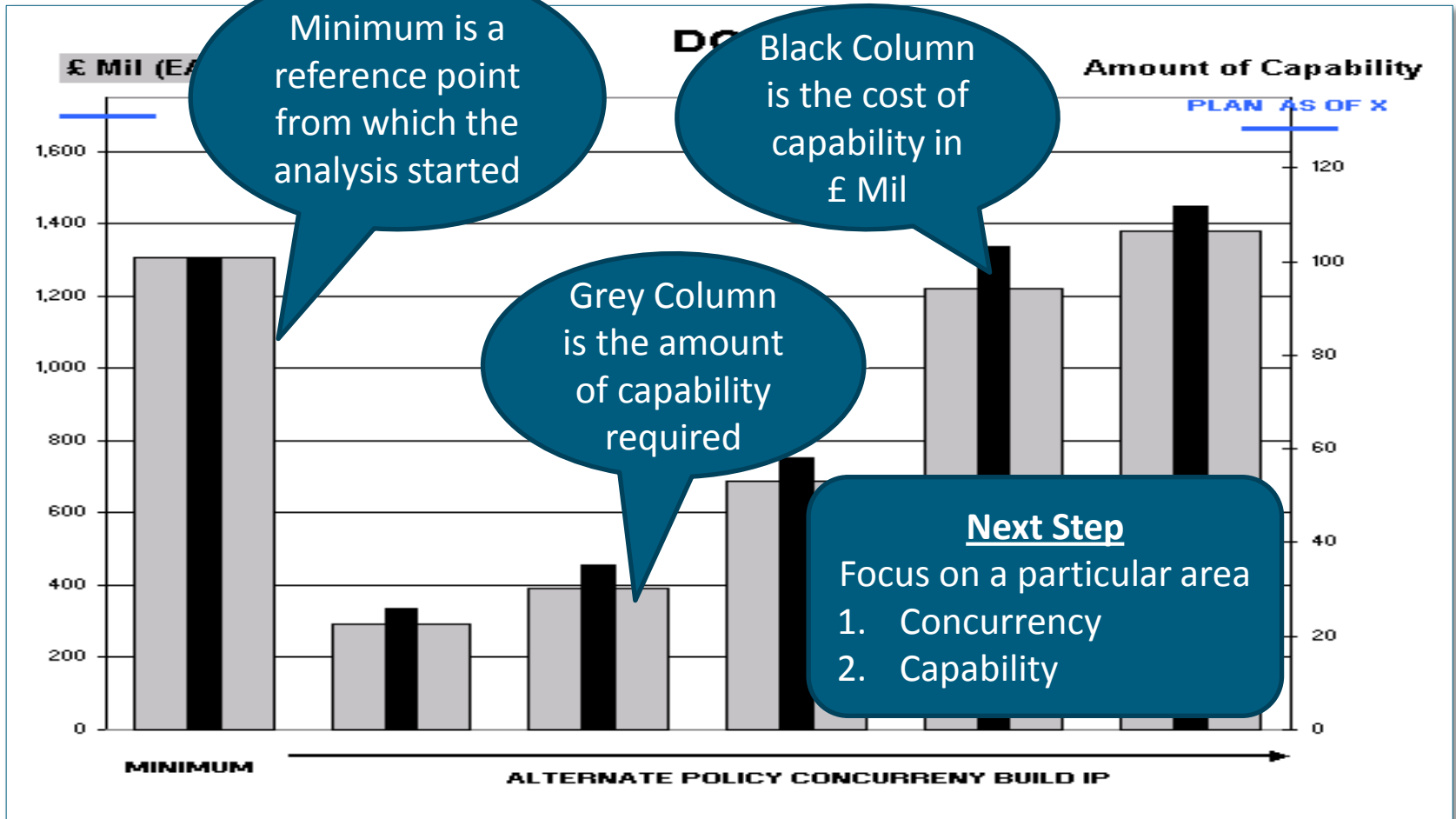
Example: Support/Output

- Starting Point
- Requirement to understand how emerging Posture options would effect the capability areas in terms of significant changes to investment, capability breakdown, and concurrency requirements
- Initial issue
 - Compare impact of different Postures on capability requirements and cost

Comparison by Defence Posture



Concurrency - Build by Domain

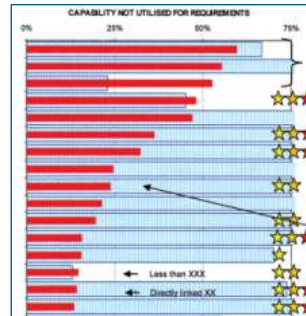


Range of Analysis & Presentations

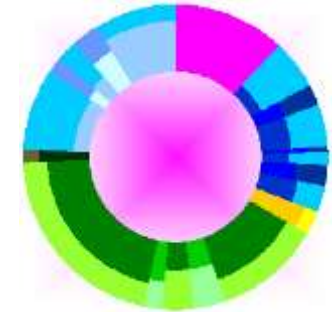
Shape of the Armed Forces



Balance of Military Capability



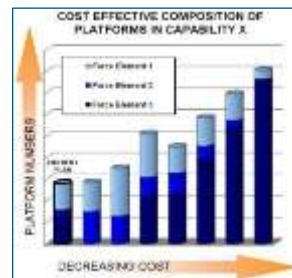
Cost breakdown of Defence



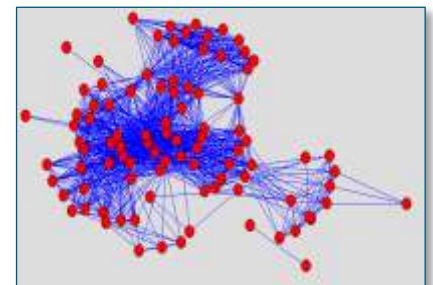
Risks

RISK	TIMEFRAME			
	2015	2020	2020	2025
OPERATIONAL				
Risk 1				N/R
Risk 2				
Risk 3				
Risk 4	N/R			
READINESS & HARMONY				
Risk 5				N/R

Performance & Cost parameters



Dependencies



Questions?

Arjun Madahar
Senior Analyst