



# How to prioritise spending in the Non Equipment Investment Plan?

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# The Non-Equipment Investment Plan

- Established in 2005
- “Provides a 10 year planning tool to show the costs and benefits of major infrastructure investment enabling prioritisation across the Department.”
- Governance
  - Owned by RP Centre (Resource & Plans)
  - Managed by the NEIP Advisory Group (1 stars)
    - D RP Centre, D EP, D Info, D Change, Dir PFU & DE D Finance
- Comprises all IAB Category A & B infrastructure, IS enabled business change and all Defence Modernisation Fund (DMF) projects.
- Typical Project Categories
  - Defence Estates
  - PFI and PPP projects
  - Information Systems
- Budget larger than the EP (approx £3Bn a year)
  - Only small proportion uncommitted (5% rising to 30% by 2015)

# The Problem

- MOD have a well established process to inform equipment investment decisions
  - Defence Strategic Guidance
  - Capability Audit
  - Balance Of Investment (BOI)
  - Through Life Capability Management & Defence Lines of Development
  - CADMID/CADMIT IG/MG
- NEIP decision making process is not so formally defined or rigorously applied
  - Especially BOI between widely differing project types

# Study Aim & Basic Principles

- Study Aim
  - To develop a process or methodology to increase the evidence base of the prioritisation decisions for the projects in the NEIP
- Principles
  - Simplicity
  - Consistency with Treasury and MoD Guidance
  - Acceptable to economists
  - Proven in other domains

# How to prioritise spend in the NEIP

- “Prioritise” = Optimisation = ‘Balance’ ?
- “Investment” or “Improvement”? “Plan” or “Programme”?
- Optimisation of NEIP itself?
- Optimisation of NEIP within the Defence Programme?
- Optimisation of the Defence Programme?
- What scope of time?
  - affordability year on year, and commitment that entails
  - however, discounting will make later years look unrealistically cheap
- What Objective Function? (Measure of Goodness)
- Linearity of OF?

# Exemplar NEIP Projects 1

- Airfield rationalisation
  - Centralised Air Transport & Air-to-Air Refuelling Assets
  - Develop centre of excellence
  - Strike/Defence Estates project
- Information Infrastructure
  - Computing & digital communication/networking infrastructure
  - Pan MOD/Defence
  - NEC enabler



# Exemplar NEIP Projects 2

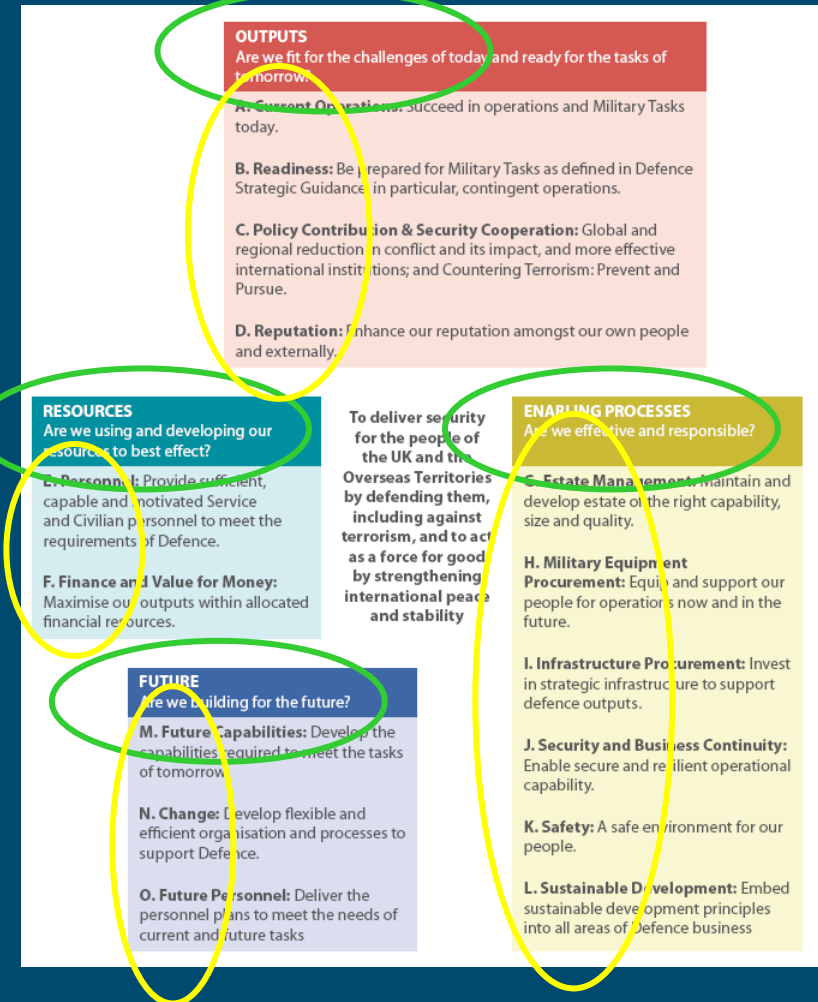
- Housing
  - Accommodation & Services
  - PFI approach

• How to compare effectiveness as well as costs of such disparate projects



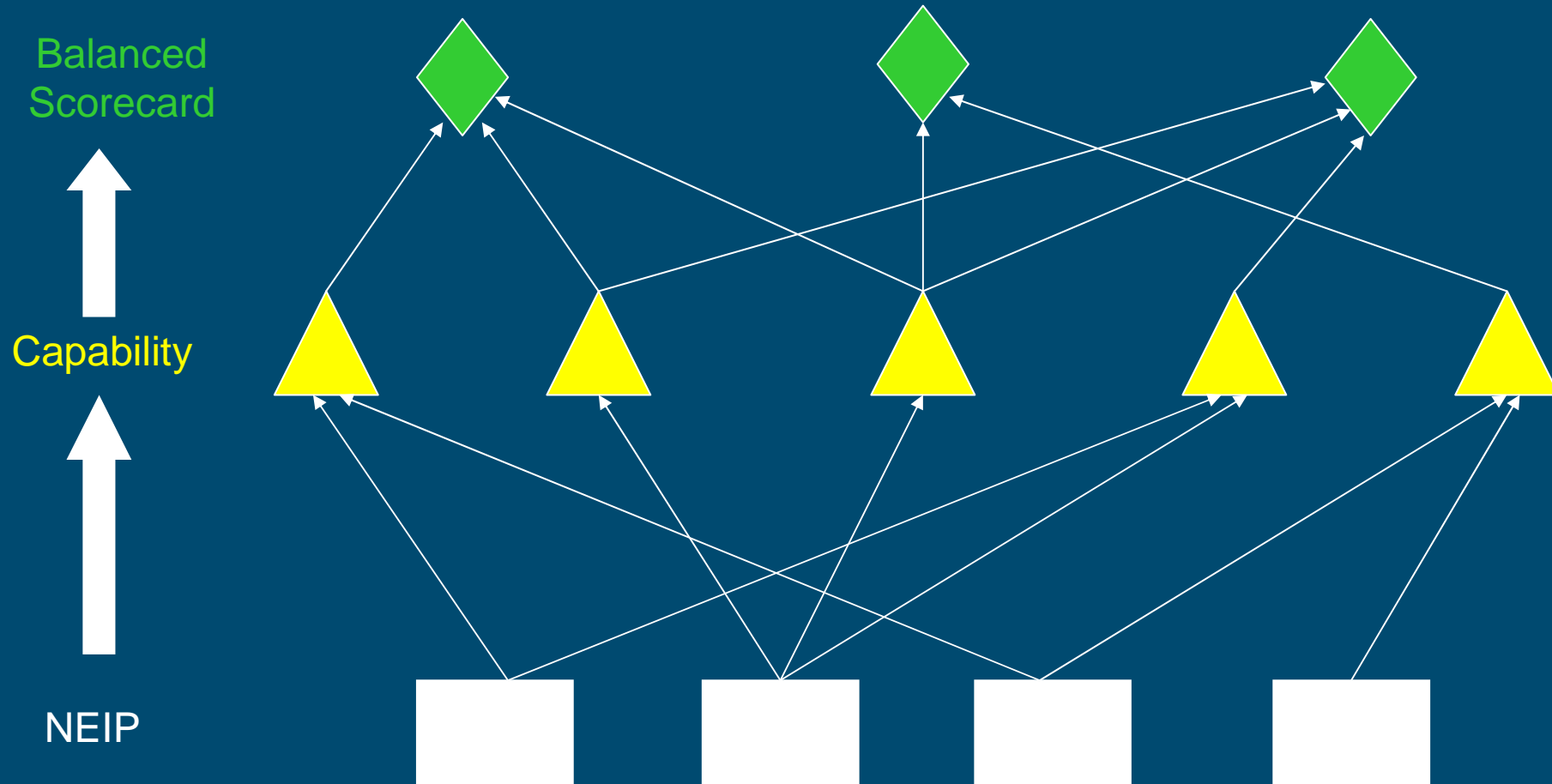
# Balanced Scorecard

- Scorecard defined in Defence Plans of 2008 & 2009
- Performance management tool
- MoD uses it to monitor its performance

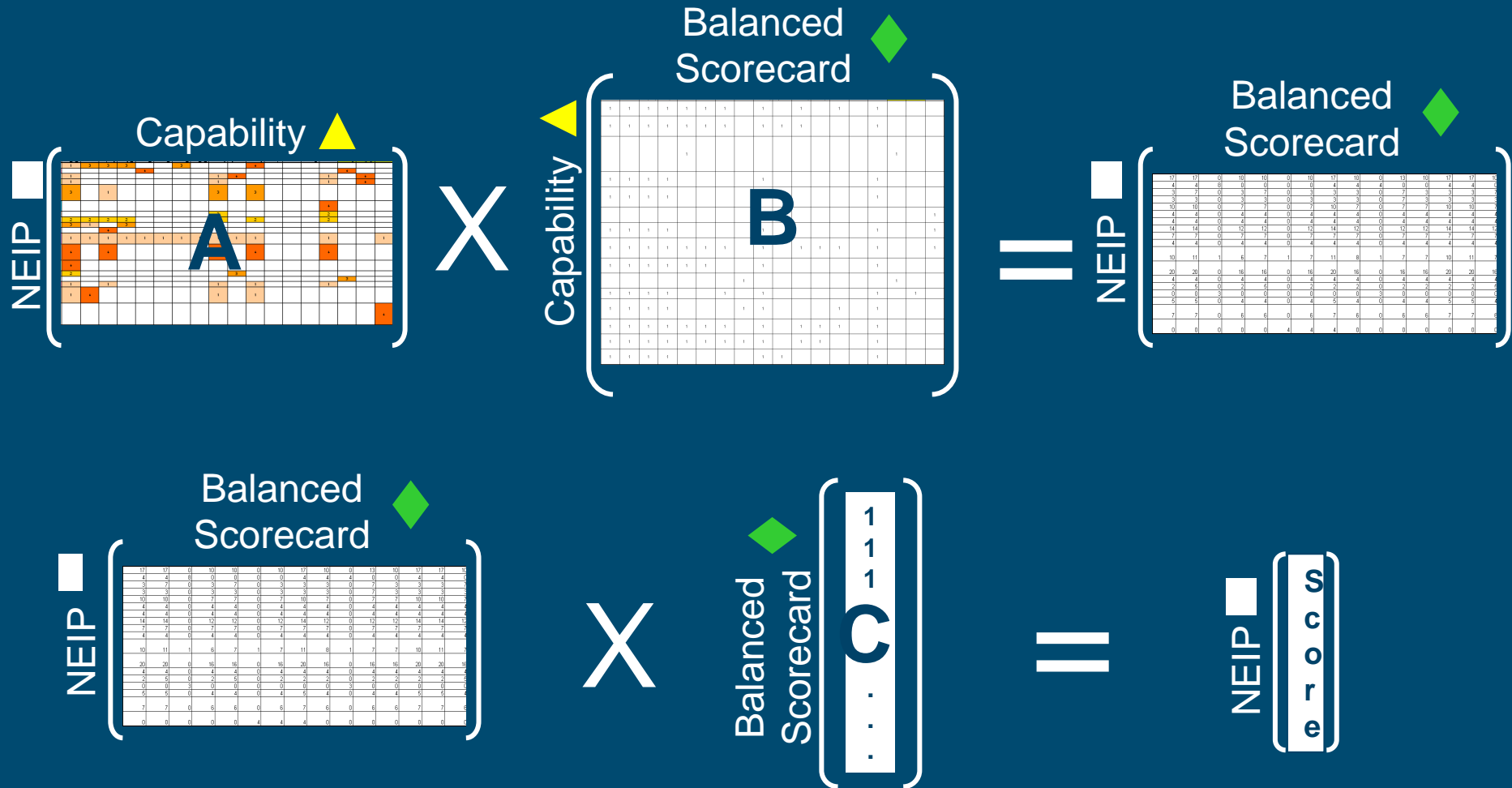




# Proposed methodology



# ... in matrix form



# Groupings of NEIP projects

| Project description                             | Project   |
|---|---|
| Project description of 2007... (text truncated) | 1 CATARA  |
| Project description of 2007... (text truncated) | 2 PRIDE   |
| Project description of 2007... (text truncated) | 3 Medical Training                                  |
| Project description of 2007... (text truncated) | 4 Medical records                                   |
| Project description of 2007... (text truncated) | 5 Property management contract                      |
| Project description of 2007... (text truncated) | 6 Submarine facilities                              |
| Project description of 2007... (text truncated) | 7 Decontamination                                   |
| Project description of 2007... (text truncated) | 8 Non-explosive and explosive storages              |
| Project description of 2007... (text truncated) | 9 BORONA  |
| Project description of 2007... (text truncated) | 10 BELVEDERE  |
| Project description of 2007... (text truncated) | 11 Main Building and HQ rationalisation             |
| Project description of 2007... (text truncated) | 12 Housing (SFA and SLA)                            |
| Project description of 2007... (text truncated) | 13 Army HQ and barracks                             |
| Project description of 2007... (text truncated) | 14 Training   |
| Project description of 2007... (text truncated) | 15 Defence Information Infrastructure (Future) - TS |
| Project description of 2007... (text truncated) | 16 Defence Fixed Telephone System                   |
| Project description of 2007... (text truncated) | 17 Logistics transformation management              |
| Project description of 2007... (text truncated) | 18 Defence Electronics Communications Server        |

- Currently ~70 projects
- Need to reduce the number for practicality of trial
- Grouped by type
- Trial conducted with D Scrutiny



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|                |    | CAPABILITIES          |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|----------------|----|-----------------------|-------------------------------------|------------------|----------------------------|-------------------------|------|---------------------------|------------------------|------------------|--|--------------------|---------------------|----------------|-----------------------------|---------------------------------|-----|-----------------------------------|------|
|                |    | Battlespace Manoeuvre |                                     |                  |                            | Information Superiority |      |                           |                        | Precision Attack |  |                    | Equipment Resources |                |                             |                                 |     |                                   |      |
|                |    | Ground Manoeuvre      | Expeditionary Logistics and Support | Theatre Airspace | Air and Littoral Manoeuvre | ISTAR                   | C2I2 | Special Projects and CBRN | Capability Improvement | Above Water      | Joint Training Evaluation and Simulation | Deep Target Attack | Technology          | Equipment Plan | Export Policy and Assurance | Deterrent and Underwater Effect | CDI | D/CDS(Health) and Surgeon General | DE&S |
| NEIP Groupings | 1  | 1                     | 3                                   | 3                | 3                          |                         |      | 3                         |                        |                  |  | 4                  |                     |                |                             |                                 |     |                                   |      |
|                | 2  |                       |                                     |                  |                            | 4                       |      |                           |                        |                  |  |                    |                     |                |                             |                                 | 4   |                                   |      |
|                | 3  | 1                     |                                     |                  |                            |                         |      |                           |                        | 1                | 4  |                    |                     |                |                             | 1                               |     | 4                                 |      |
|                | 4  | 1                     |                                     |                  |                            |                         |      |                           |                        | 1                |  |                    |                     |                |                             | 1                               |     | 4                                 |      |
|                | 5  | 3                     |                                     | 1                |                            |                         |      |                           |                        | 3                |  | 3                  |                     |                |                             |                                 |     |                                   |      |
|                | 6  |                       |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 7  |                       |                                     |                  |                            |                         |      |                           |                        | 2                |  |                    |                     |                |                             | 2                               |     |                                   |      |
|                | 8  | 2                     | 2                                   | 2                | 2                          |                         |      |                           |                        |                  |  |                    |                     |                |                             | 2                               |     |                                   |      |
|                | 9  | 3                     | 1                                   |                  | 3                          |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 10 |                       |                                     | 4                |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 11 | 1                     | 1                                   | 1                | 1                          |                         |      |                           |                        |                  |  |                    |                     |                |                             | 1                               |     |                                   | 1    |
|                | 12 | 4                     |                                     | 4                |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 13 | 4                     |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 14 | 2                     |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 15 |                       |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 | 3   |                                   |      |
|                | 16 | 1                     |                                     | 1                |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             | 1                               |     |                                   |      |
|                | 17 | 1                     | 4                                   |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |
|                | 18 | Communications Server |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                   |      |

Approach subsequently modified so that each Cap has £100 To share between NEIP projects

| Scores |                                  |
|--------|----------------------------------|
| 4      | Critical to the capability       |
| 3      | Major impact on the capability   |
| 2      | Some impact on the capability    |
| 1      | Minimum impact on the capability |
| 0      | No effect on the capability      |



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|                                 |                    |   | Capabilities                               |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     |                                  |      |  |  |
|---------------------------------|--------------------|---|--|-------------------------------------|------------------|----------------------------|-------------------------|------|---------------------------|------------------------|------------------|--|--------------------|---------------------|----------------|-----------------------------|---------------------------------|-----|----------------------------------|------|--|--|
|                                 |                    |   | Battlespace Manoeuvre                      |                                     |                  |                            | Information Superiority |      |                           |                        | Precision Attack |  |                    | Equipment Resources |                |                             |                                 |     |                                  |      |  |  |
|                                 |                    |   | Ground Manoeuvre                           | Expeditionary Logistics and Support | Theatre Airspace | Air and Littoral Manoeuvre | ISTAR                   | C2I2 | Special Projects and CBRN | Capability Improvement | Above Water      | Joint Training Evaluation and Simulation | Deep Target Attack | Technology          | Equipment Plan | Export Policy and Assurance | Deterrent and Underwater Effect | CDI | DCDS(Health) and Surgeon General | DE&S |  |  |
| Defence Plan Balanced Scorecard | OUTPUTS            | A | Current Operation                          | 1                                   | 1                | 1                          | 1                       | 1    | 1                         | 1                      | 1                | 1  | 1                  | 1                   | 1              | 1                           |                                 |     |                                  |      |  |  |
|                                 |                    | B | Readiness                                  | 1                                   | 1                | 1                          | 1                       | 1    | 1                         | 1                      | 1                | 1  | 1                  | 1                   | 1              | 1                           |                                 |     |                                  |      |  |  |
|                                 |                    | C | Policy Contribution & Security Cooperation |                                     |                  |                            |                         | 1    |                           |                        |                  |  |                    |                     |                |                             | 1                               |     |                                  |      |  |  |
|                                 |                    | D | Reputation                                 | 1                                   | 1                | 1                          | 1                       |      |                           |                        | 1                |  |                    |                     |                |                             | 1                               |     |                                  |      |  |  |
|                                 | RESOURCES          | E | Personnel                                  | 1                                   | 1                | 1                          | 1                       |      |                           |                        | 1                | 1  |                    |                     |                |                             | 1                               |     |                                  |      |  |  |
|                                 |                    | F | Finance and Value for Money                |                                     |                  |                            |                         |      |                           |                        |                  |  |                    |                     |                |                             |                                 |     | 1                                |      |  |  |
|                                 | ENABLING PROCESSES | G | Estate Management                          | 1                                   | 1                | 1                          | 1                       |      |                           |                        | 1                |  |                    |                     |                |                             | 1                               |     | 1                                |      |  |  |
|                                 |                    | H | Military Equipment Procurement             | 1                                   | 1                | 1                          | 1                       | 1    | 1                         | 1                      | 1                |  | 1                  | 1                   | 1              | 1                           | 1                               |     | 1                                |      |  |  |
|                                 |                    | I | Infrastructure Procurement                 | 1                                   | 1                | 1                          | 1                       | 1    | 1                         |                        | 1                |  |                    |                     |                |                             | 1                               |     |                                  |      |  |  |
|                                 |                    | J | Security and Business Continuity           |                                     |                  |                            |                         |      |                           |                        | 1                |  |                    |                     |                |                             |                                 | 1   |                                  |      |  |  |
|                                 |                    | K | Safety                                     | 1                                   | 1                | 1                          | 1                       |      |                           | 1                      | 1                |  |                    |                     |                |                             | 1                               |     | 1                                |      |  |  |
|                                 |                    | L | Sustainable Development                    | 1                                   | 1                | 1                          | 1                       |      |                           |                        | 1                | 1  |                    |                     | 1              |                             | 1                               |     |                                  |      |  |  |
|                                 | FUTURE             | M | Future Capability                          | 1                                   | 1                | 1                          | 1                       | 1    | 1                         |                        | 1                |  | 1                  | 1                   | 1              | 1                           | 1                               |     |                                  |      |  |  |
|                                 |                    | N | Change                                     | 1                                   | 1                | 1                          | 1                       | 1    | 1                         | 1                      | 1                |  | 1                  | 1                   |                | 1                           |                                 |     |                                  |      |  |  |
|                                 |                    | O | Future Personnel                           | 1                                   | 1                | 1                          | 1                       |      |                           |                        | 1                | 1  |                    |                     |                | 1                           |                                 |     |                                  |      |  |  |

Scores

|   |   |
|---|---|
| 0 | The capability not contributing to the Balanced Scorecard |
| 1 | The capability does contribute to the Balanced Scorecard  |



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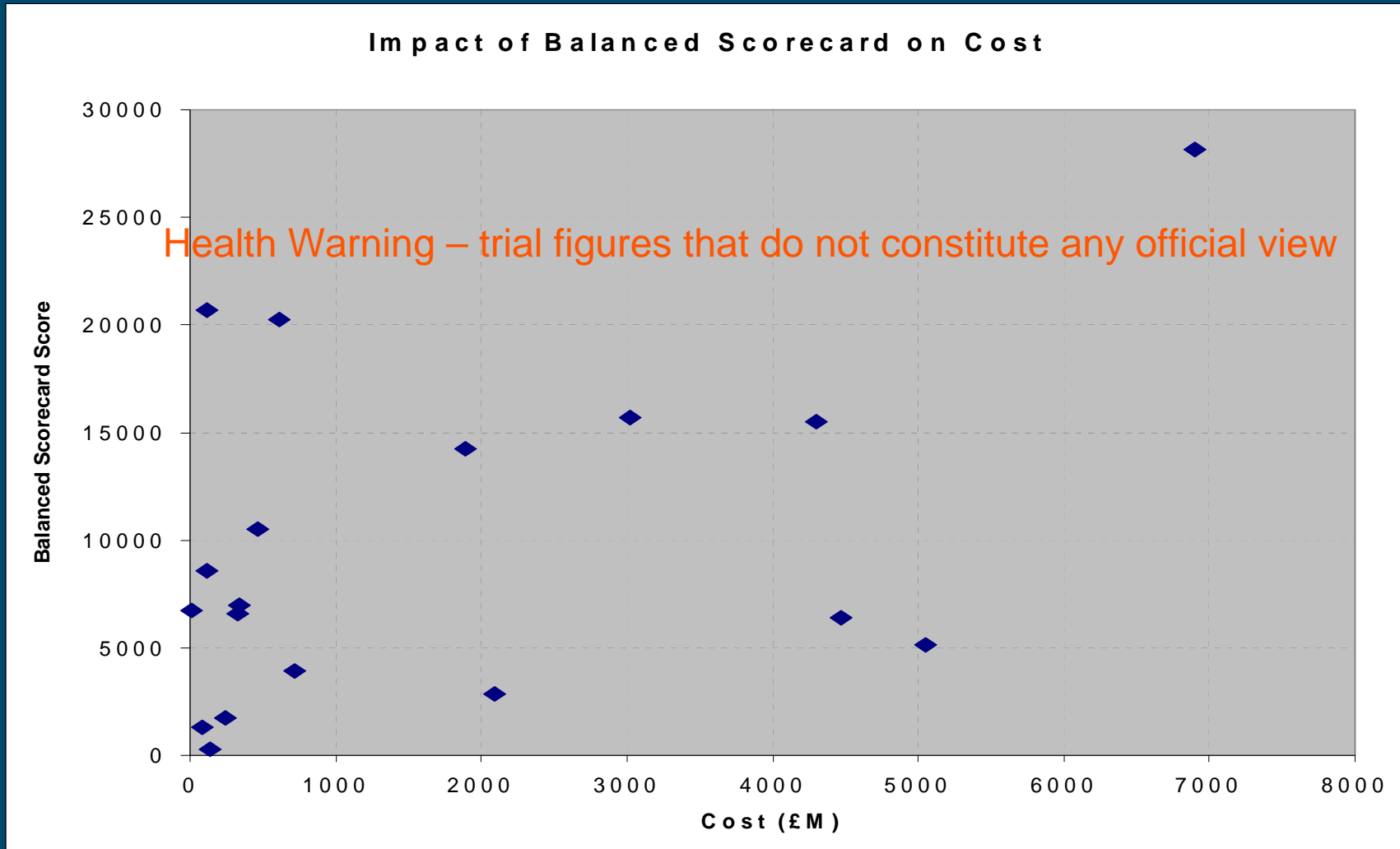
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|  |                           |   |  | Weighting |
|--|---------------------------|---|--|-----------|
| <b>Defence Plan Balanced Scorecard</b> | <b>OUTPUTS</b>            | A | Current Operation                          | 1         |
|  |                           | B | Readiness                                  | 1         |
|  |                           | C | Policy Contribution & Security Cooperation | 1         |
|  |                           | D | Reputation                                 | 1         |
|  | <b>RESOURCES</b>          | E | Personnel                                  | 1         |
|  |                           | F | Finance and Value for Money                | 1         |
|  | <b>ENABLING PROCESSES</b> | G | Estate Management                          | 1         |
|  |                           | H | Military Equipment Procurement             | 1         |
|  |                           | I | Infrastructure Procurement                 | 1         |
|  |                           | J | Security and Business Continuity           | 1         |
|  |                           | K | Safety                                     | 1         |
|  |                           | L | Sustainable Development                    | 1         |
|  | <b>FUTURE</b>             | M | Future Capability                          | 1         |
|  |                           | N | Change                                     | 1         |
|  |                           | O | Future Personnel                           | 1         |

# COEIA



# Observation

- The proposed method has validity and potential
- “Money Allocation” model is appropriate to Matrices A and B
- The entries of Capabilities need refinement
- Weightings in Matrix C need further debate



# Continuing Development in 2010

- Defence Plan 2010-2015
  - Abandoned Balanced Scorecard defining Defence Strategic Objectives!
    - stressed short term objectives
    - some of which are classified
  - Evaluating new high level metrics based on Lines of Development and/or Defence Capability Framework
- Reshaping of stakeholders
  - Reduction in number of Caps represented
  - Addition of D Pers representative
- Re-baselining NEIP projects
- Further trials of approach

# Questions



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