“Benefits Maturity Matrix”

Robin Smith

Considering:

- A Soft Method
- To measure, track and forecast
- Achievements of complex Programmes

Aim

Topic – A Case Study and associated soft method developed

Aims

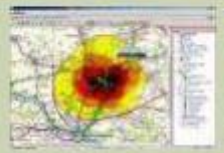
- Consider the “Benefits Maturity Matrix” method in its original context
- Consider Pros and Cons
- Reflect on ‘So What?’
  - Surprisingly…
  - Method still used
  - Started to be replicated

LE TacCIS - Quick Background

Bowman, Combat, Infrastructure & PBISA (BCIP)

50,000 Radios

21,000 Data Terminals



Planning Tools | Situational Awareness | Reports & Returns

Other Tactical CIS

Tactical Satellite

Gateway Devices

Specialist Radios

UORs

Modular Ops Rooms

Bespoke Software

Medical CIS

Other Projects

SATCOM - various systems

Falcon - a completely separate network

Information Systems – often called OpCIS but used at the Tac level

What?

- New generation: Hardware and Software
- New Acquisition & Deployment Model
  - Open systems
  - Faster updates

LE TacCIS – Other Key Points

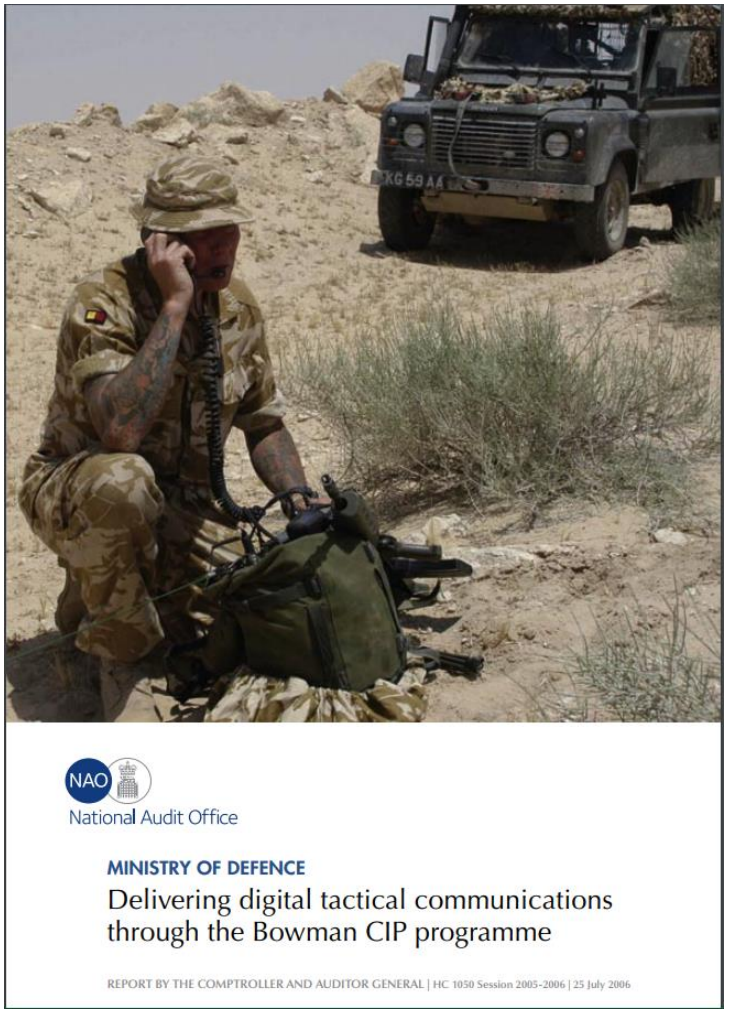
Benefits Targeted?

- Effectiveness
- Quality of life
- Upgrades cycle

National Audit Office

- on previous generation

Nat. Audit Office: ***"All stakeholders, should have common access to information on risks and benefits tracking"***



The Exam Question

Programme Board

Members.
Senior Owner, Army HQ Wider Representatives, Procurement Org', Cabinet Office, Field Army Representatives

- Our Job: **Develop a new supporting method**
  - What are the benefits to the soldier?
  - What is impact of newly fielded kit?
  - Is it really better?
  - Are we on track?
  - What does the plan forecast?

Some Challenges?

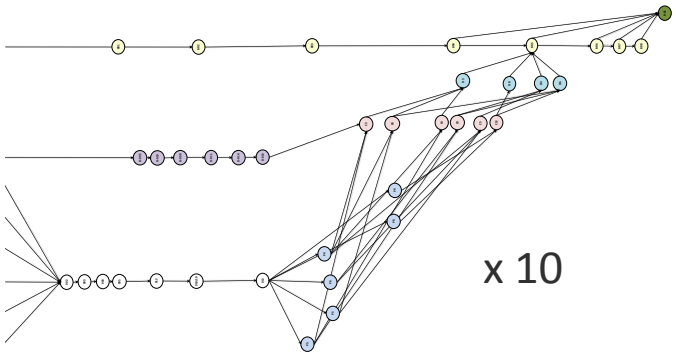
Continuity

~18 months

Data & Evidence?

No extra

Tried before, didn't stick



x 10

'Live' Programme -> Live Method

Prog. will change

Sources to draw from?

What

(V. Crudely)
Complexity
Robustness

Anecdotal, User Feedback

(New) Surveys

Lessons from Coll. Training

LE TacCIS Bespoke User Engagement

Bowman Capability Reviews

Bespoke Training Objectives

New Instrumentation & Data Collection

Where

Workshops with Users

Workshops with Staff Officers & Dept. Heads

Collective Training

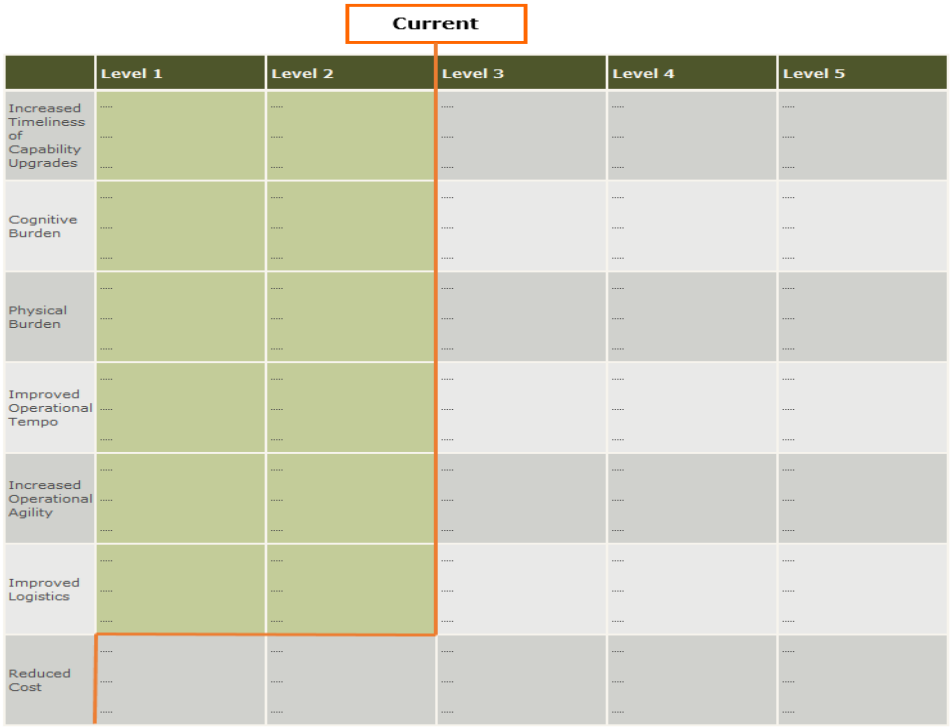
Trials Development Units

Bespoke Experimentation

Key help:

- 2015 Niteworks LE TacCIS Baselining Report (C. Beattie)
- Ex-contributors to Command and Control Development Centre (C2DC)
- MORPHEUS User Engagement Reports
- Army Training Branch, Field Army Change Plans (A Philpott), LWC S&T, Requirements Managers, Dstl (N. Paling, A Bain, N Lindsey)
- Rest of Army HQ IS-TacCIS team

Approach Needed?



What are the benefits to the soldier?

Lessons from Coll. Training

LE TacCIS Bespoke User Engagement

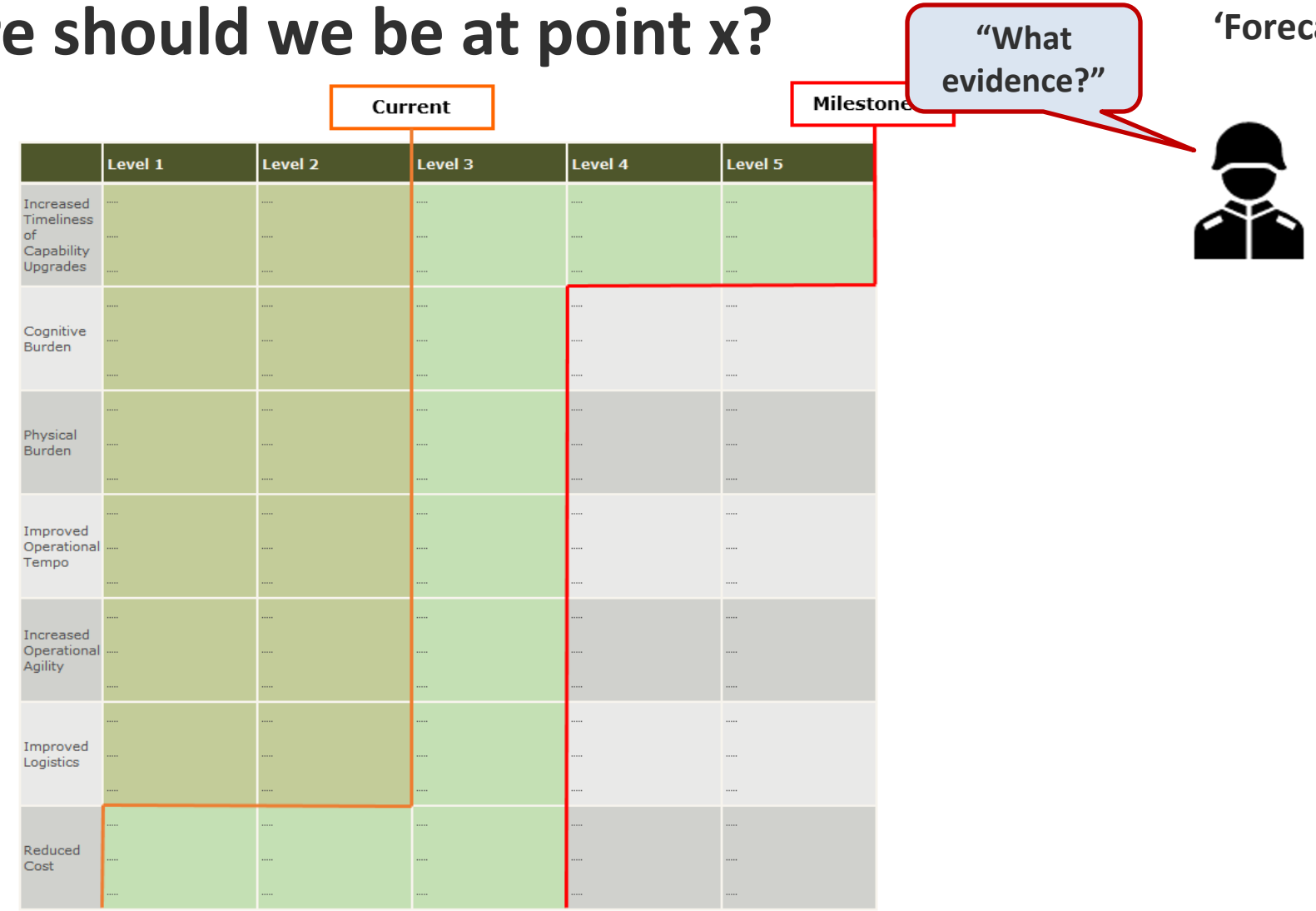
Bowman Capability Reviews

The Maturity 'Matrix' Approach

Where are we now?

Where should we be at point x?

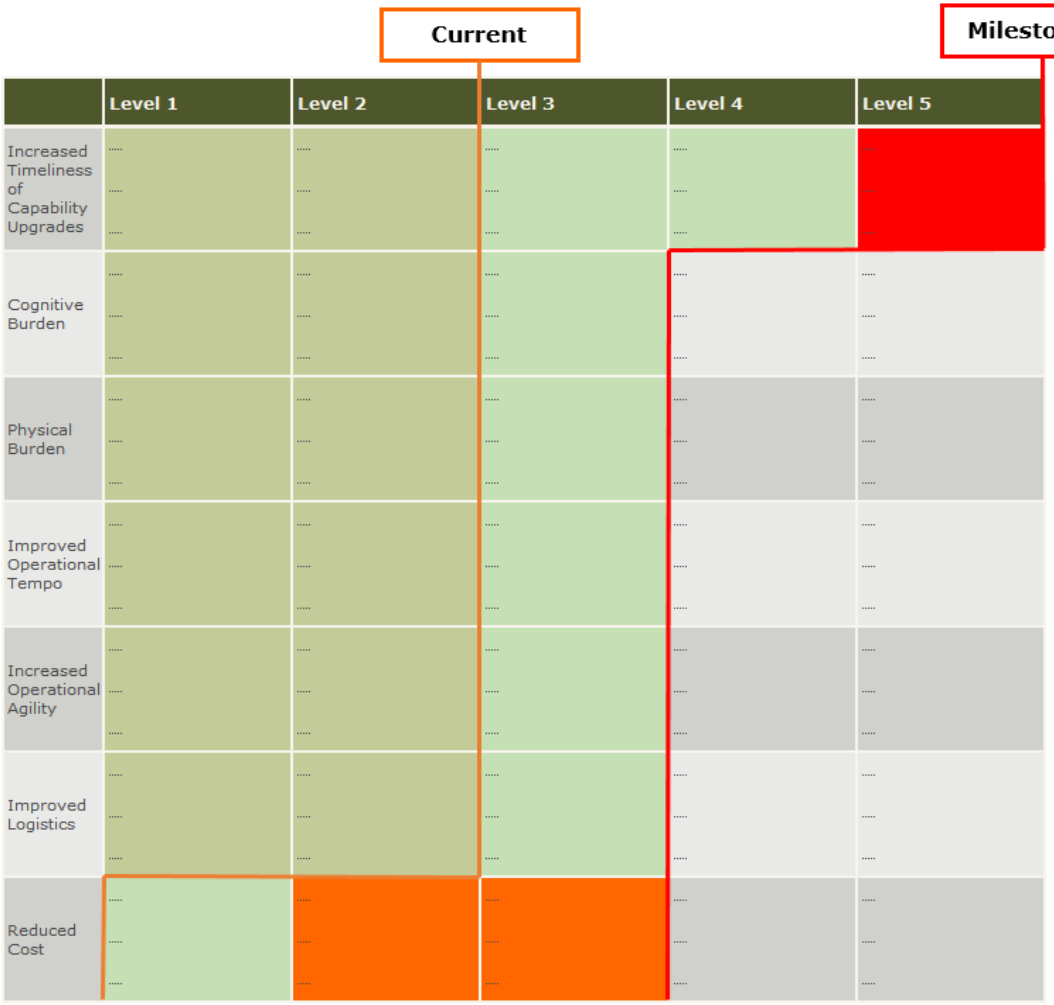
'Forecast'



The Maturity 'Matrix'

(Get real!) Think we will be… at poin

'Track'



Full Table – Bare Min.

* BCM -> The lead Field Army Staff Officer

Deliver Evolutionary Capability Delivery across TacCIS projects:

Benefit (or Category)	Description	Key words	Level 0 - Baseline	Level 1	Level 2	Level 3	Level 4	Level 5
		End user (Indicators of benefit to user)						
Overarching 'Benefit'		Key sub-elements to consider	Baseline qualification	• Indicators of user experiencing benefit • Assessment based on BCM* experience, user feedback and other indicative or qualitative measures				
		Maturity (Indicators of Pg delivery)						
				• Indicators of Programme delivery				

Judge whether indicators observable

Output

The Maturity Matrix

Full Table

Benefit (or Category)	Description	Key words	Level 0 - Baseline	Level 1	Level 2	Level 3	Level 4	Level 5
Timeliness of capability upgrades	Time taken to plan, approve, test and effect a capability change (of varying scales and complexity).	**End user (indicators of benefit to user)**						
		Frequency (push)	TacCIS upgrades and updates arrive as 'Big bang' conventions, usually separated by years.	Use is able to integrate 3rd party apps integration within in-service SOP.		Feedback from [JFAArmy Sp planning, MARITIME, AIR] indicates users able to influence the rate and scale of TacCIS change.	Feedback from [JAArmy Sp planning, MARITIME, AIR] indicates users able to manage change within constraints of availiness	
		Responsiveness (pull)	Increasingly obsolescence of some capabilities has added urgency to the user's requirements for responsive change requests. Recent experience with UOR has shown how COTS products can be procured and fielded quickly - demonstrating that procurement can be more responsive.			Feedback from [Int fr CapDev, Lessons, Trg, Warfare Dev] indicates a clear framework for reporting future capability requirements and in-service feedback.	Feedback from [Info CapDev, Lessons, Trg, WarDev] indicates that the programme is responsive the their evolving requirements for TacCIS.	Feedback from [cross-section joint use rs] indicates there is a acquisition respons iveness to change requests and lessons learnt (need, threat, feedback from use rs).
		New Tech Accessibility	User experience with commercially available devices and networks have shaped perceptions that current capabilities could be modernised. Comparison against capabilities utilised by NATO allies also shapes perception s. It is felt that current CIS hinder evaluation of emergent technologies.			Feedback from [cross-section joint users] indicates there are reduced barriers to bringing the latest CIS technologies into service.	Feedback from [cross-section joint users] indicates 'emergent 'off-the-shelf' CIS technologies are integrated and exploited quickly.	Feedback from [cross-section joint users] indicates users are enabled to evaluate low TRL CIS technologies as part of in-service equipment.
		Multiple Baselines	There is not a common / interoperable asset, position etc. register of TacCIS. Ability to locate TacCIS assets complex and intensive. Mixed fleets in-service with differing configurations hindering deployment planning, operations, meeting readiness requirements etc. Minimal compatibility between TacCIS baselines is hampering realisation of benefits across TacCIS.			Feedback from [Logs] indicates use of tracking technologies and techniques (e.g. barcoding) across MDBN & TRINITY might provide better tracking/inventory info.		Feedback from [TacCIS systems managers] indicates ops, planning eased by backwards compatibility across multiple baselines. There is end-to-end visibility of most configuration items across TacCIS.
		Maturity (indicators of Programme delivery)						
		Architectural Control	Closed system interfaces and lack of architectural federation between capabilities (e.g. between SOPS 5, FALCON and other systems), interfacing is restricted to gateways - if at all.	Fielded BMA within in-service SOP follows modular software design principles and enables 3rd party app hosting	MOD owns/dominated & open TRINITY architecture & MDBN/EUS architecture.	Fielded TRINITY and MDBN/EUS architecture s are delaminated and open offering common core services exploitable by TacCIS.	MOD is demonstrably assetting Design Authority (DA) for TRINITY and MDBN/EUS.	Fielded TacCIS architecture(s) are open, vendor independent, delaminated across all capabilities (e.g. elevation terminals, Morpheus, Trinity, other).
		ECD Operating Model	Flexibility and responsiveness of MOD Capability Introduction processes have prevented incremental refreshes of devices/networks/applications independently of one another. This has constrained the frequency of change. Change driven through identification of obsolescence issues and technology management is constraining temporal capability management and its ability to be responsive to user needs. Fielding has to be planned in the medium to long term in order to avoid disruption to training and exercise schedules. The smooth execution of fielding is hampered by changes in delivery schedules.	ECD business Operating model defined.	Ability to prioritise future changes through clearly defined roadmap and synthesis of: capability need, operational feedback and tech obsolescence drivers.	There is demonstrable intimate user engagement throughout all stages of the model and management of continuous test, trials, training, acceptance, to meet agreed delivery schedules.	Ability to field multiple and concurrent baselines within the constraints of force preparation and generation.	The transformation is institutionalised, it has delivered change through ECD, realised military benefit, and generated evidence to justify approval for the next 5 year epoch.
		ECD Governance (inc. approvals)	Focus of effort at project level with minimal re-use of artefacts (staff-work intensive), leading to a lack of 'Systems Of Systems' coherence.	Governance model defined.	Programme level approvals approach established, and appropriate financial delegation has been issued to the programme.	ECD governance framework providing coherent change management across interventions, increments and spirals.	A change has been delivered through the new ECD model and is in-service.	The governance is institutionalised, change is delivered through ECD, realised military benefit, and approval for the next 5 year epoch is in place; multiple changes planned within the pipeline.

Maturity Matrix:

6 levels of indicators

(A3 sheet per benefit)

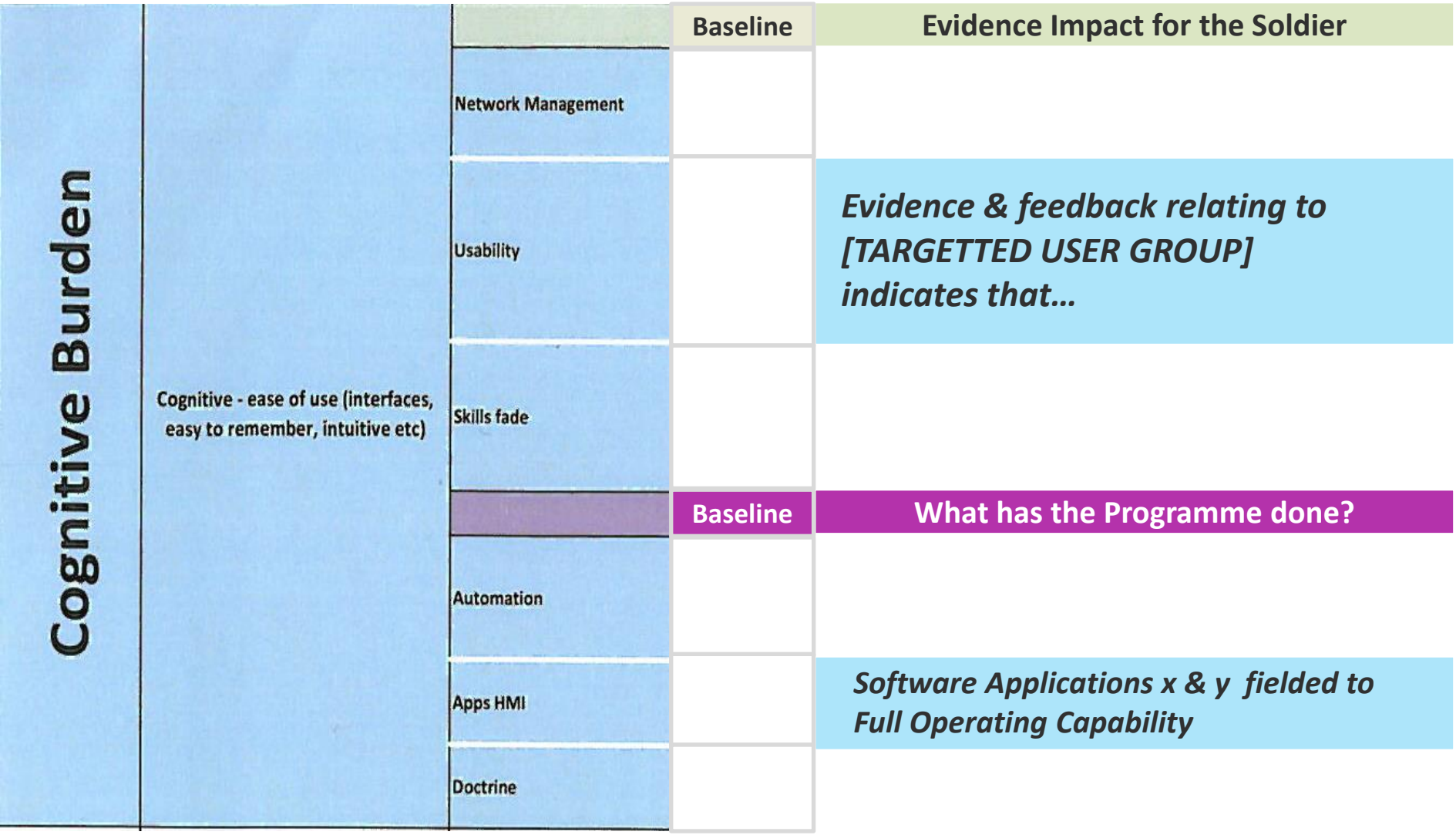
Are indicators observable ?

Output

Output summary diagram:
Graphical summary diagram

An Example

x5 Levels

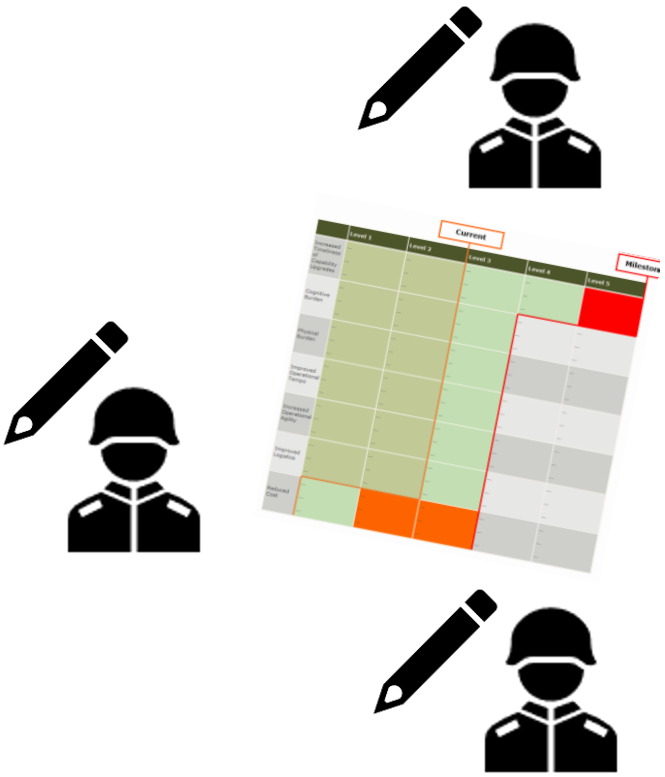


A Use Case

Land Environment Tactical Comms & Information Systems (LE TacCIS)

Programme Board

The Matrix – A Supporting Method



Staff Officer ahead of the Board meeting (or any time) could

- **Make a judgement (with help?)**
- **Send out a survey (s)**
- **Commission analysis task around an upcoming Trial**
- **Commission a whole new trial, experimentation programme, analysis tasks**

Customer decides what's right for them at the time and part of the programme… supported/steered by the soft method

Pros & Cons

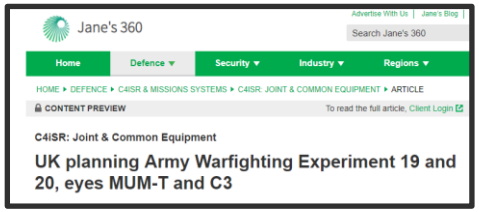
Pros

- It survived
- Enforcing focus on ‘benefits to the soldier’
- Transparency
- Excel, A3, highlighters
- Encourages some analysis structure – and records – at Prog. Board level
- Nothing new/radical

Cons

- No ‘hard-wired’ link to supporting evidence and analysis
- Minimum input: judgement only
- Vulnerable to bias
- Excel, A3, highlighters
- Maturity level ‘indicators’ could be altered: not a fixed KPI, a number
- Nothing new/radical

The Maturity Matrix



- It's still going(!)
- Detailed analysis results could be fed/presented to Programme Boards.
  - Seeks specific evidence from:
    - Bespoke Studies
    - Bespoke Modelling
    - Surveys & assoc. analysis
    - Training data
    - Experiments
- Customer was free to operate it and commission/seek wider evidence as needed.