Presentation to NAO - Ffiona Kyte
21st Jul 2004

Col Simon Deakin - DCC IPTL

Lt Col Andrew Macnaughton - PM FIST

(Represents the position on the project at the time of the presentation)

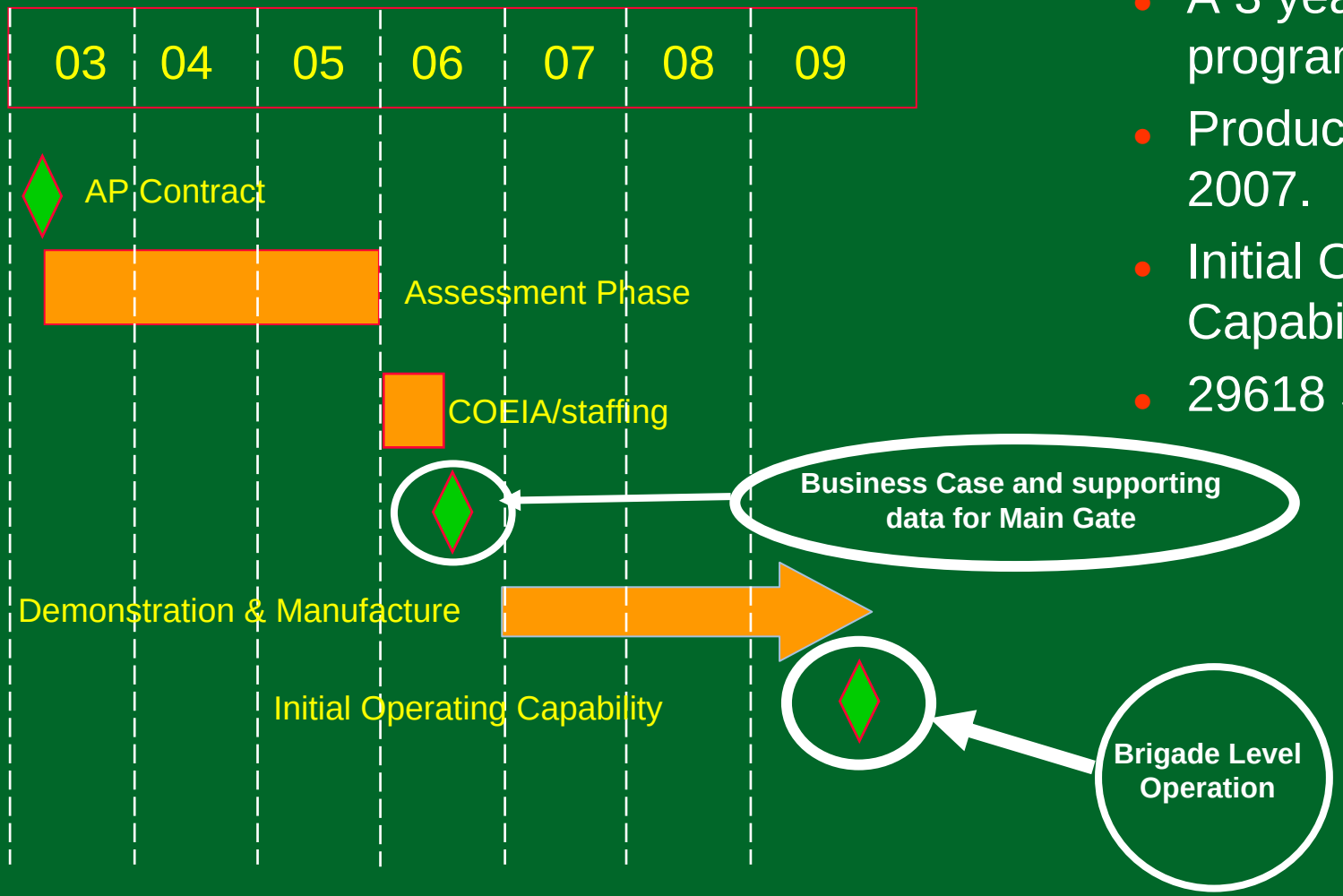
The Requirement

- Conduct DCC
- Move
- Find
- Engage

Soldier as a System……

Section as a Platform…….

Current FIST Programme



- A 3 year AP programme.
- Production Phase 2007.
- Initial Operating Capability 2009.
- 29618 Systems

The Vision

URD

- *analysis/Use Cases*
- *modelling*
- *trials, etc*

- retains the detail on what is really wanted.
-lists the "super-set" from which "traded" combinations are selected
-Can be re-visited for trading revisions if there are context changes
- Also needs updating

Overarching SRD

SRD

"ideal" SRD
Maximum benefit in each aspect
Each sensible for DCC use in isolation
No "trading" on combination "costs"

INFRASTRUCTURE
I/F design to support modules
Design based on SRD "superset"
Supports wide range of traded sub-sets
Minimalistic, low cost, low power
"**Fitted for, Not with**"

Traded SRD (for FIST 1)
Optimum "affordable" sub-set from above (using MOE/MOP)
Defines optimum set and distribution of functional modules
Modular nature allows flexing to many alternative solutions
Adaptable if trading context changes (climate, role, etc)

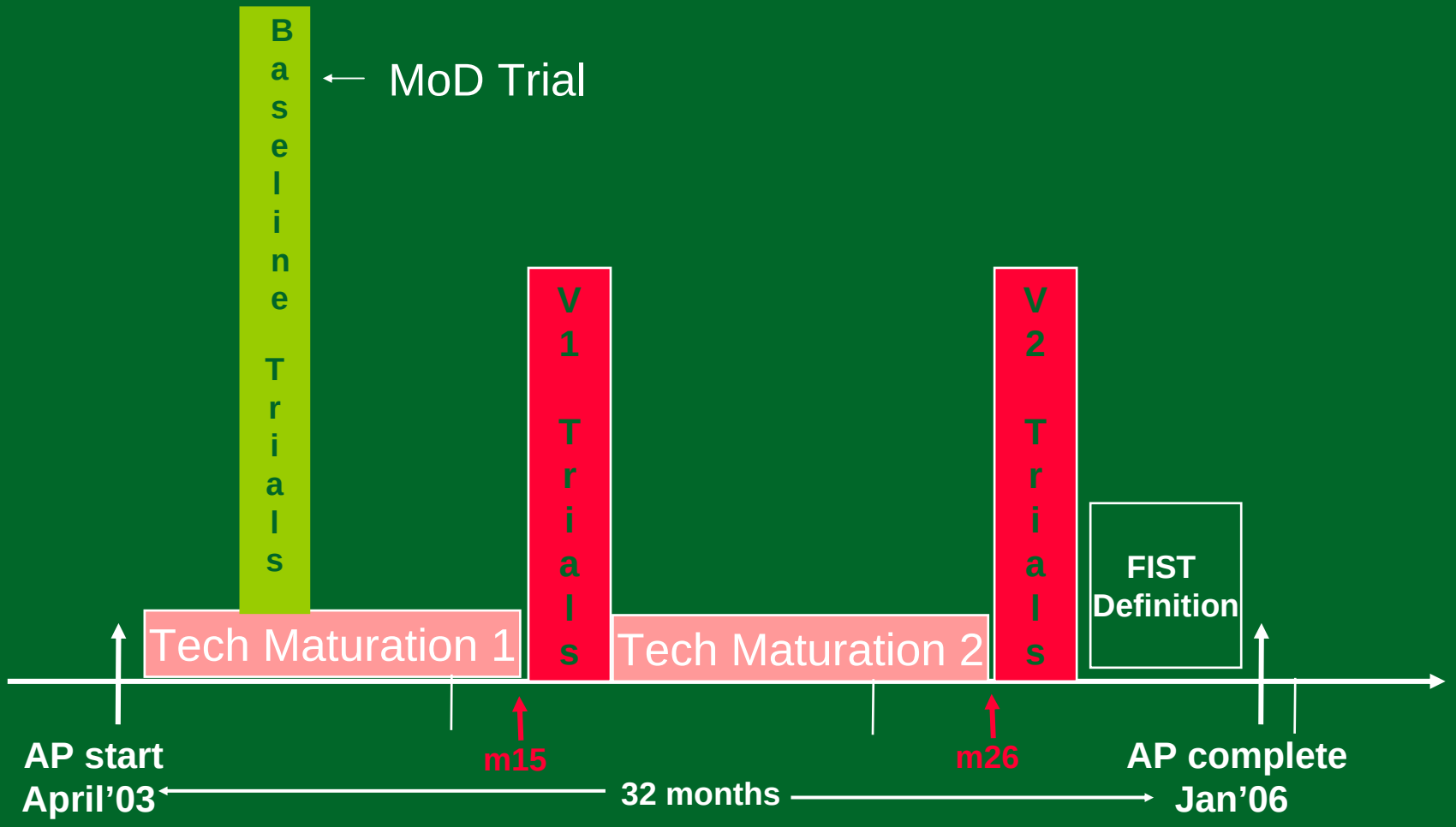
Infrastructure + **"Core" Universal modules** + **Other Tradable modules** = **FIST 1**

Entry level system - FITTED FOR - NOT WITH

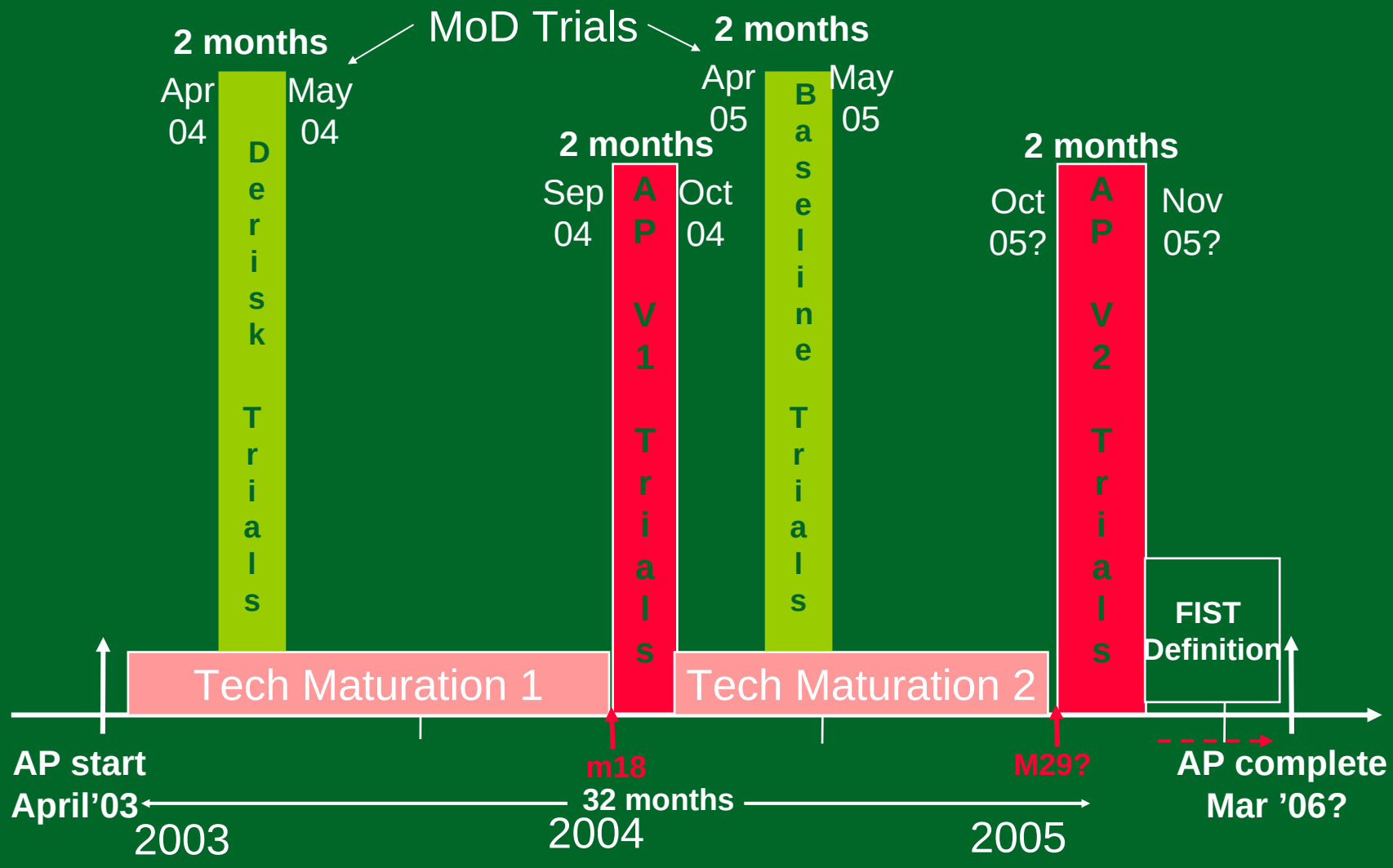
Assessment Approach

- Measure 2009 Baseline Capability
- Understand the relationship between functional areas
  - Lethality, Protection, C4I, STA, Sustainability, Mobility
- Trade off functional areas to optimise capability
- Measure FIST AP Capability
- Assess cost of increased capability

FIST AP Planned Timescales



FIST AP Planned Timescales



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Earned Value Management

"An integrated system of project management and control which enables a contractor and their customer to monitor project progress in terms of integrated cost, schedule and technical performance measures."

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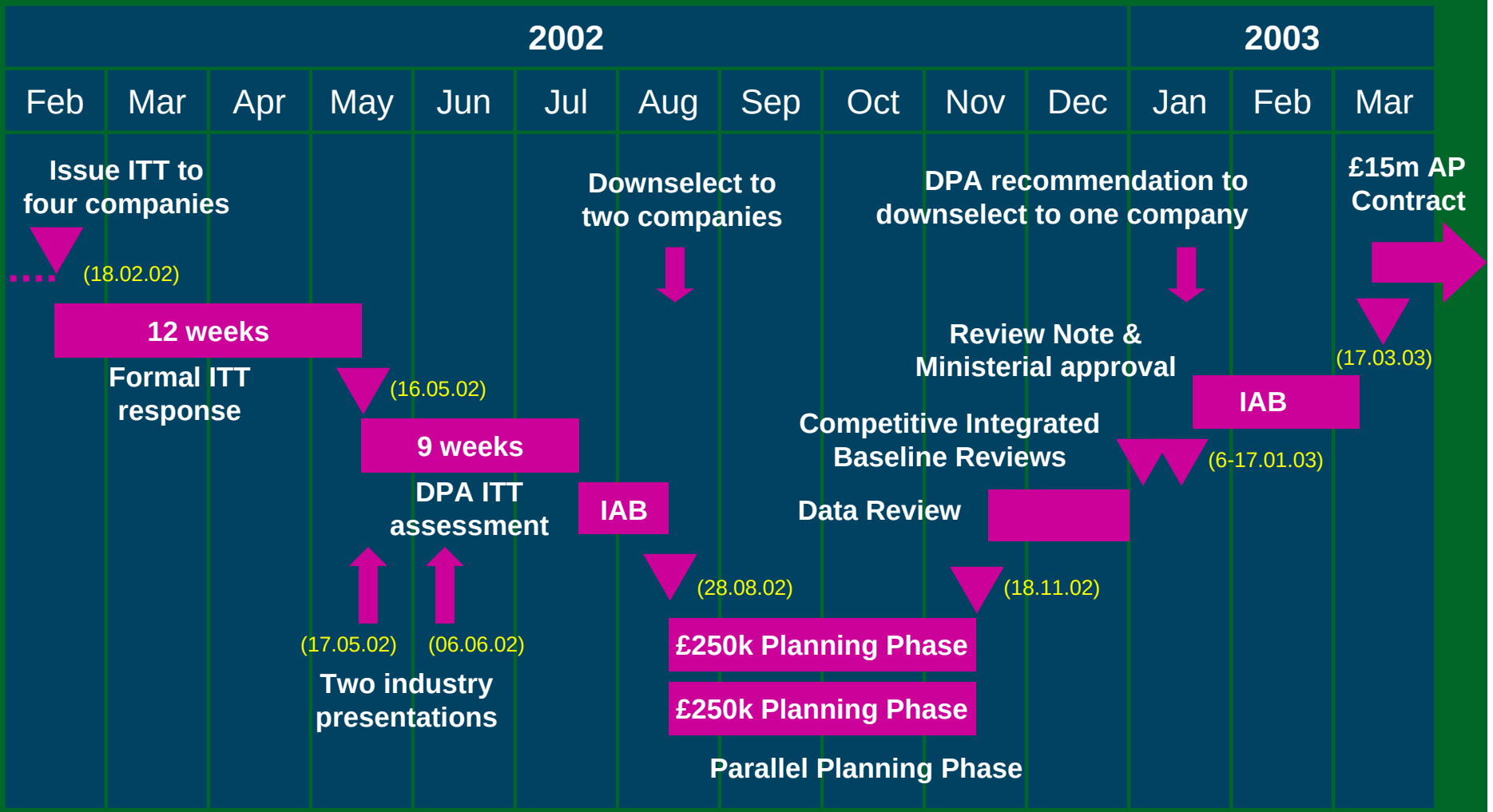
Down-Selection Process



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Integrated Baseline Review

"A formal review, conducted by the Authority, to assess the technical content of the FIST Assessment Phase performance measurement baseline".

Purpose of the IBR

"The purpose of the IBR Process is to achieve and/or maintain a project and customer understanding of the risks inherent in the PMB and the management control processes that will operate during it's execution."

It should confirm that:

- The Performance Measurement Baseline incorporates the entire scope of the project;
- The work is scheduled to meet the projects objectives;
- Risks are identified and are being managed;
- An appropriate amount and mix of resources have been assigned to accomplish all requirements;
- Suitable management control processes are being implemented.

What is an IBR?

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- Evaluation of performance measurement baseline
- Baseline realism
  - Identification of inherent risks
  - Joint assessment by customer and project
- Continuous
  - Part of integrated project management
  - Should be seen as a process not an event
- The major activity is the initial review, covering:
  - CAM discussions
  - data traces
  - risk review
  - documentation review
  - daily feedback

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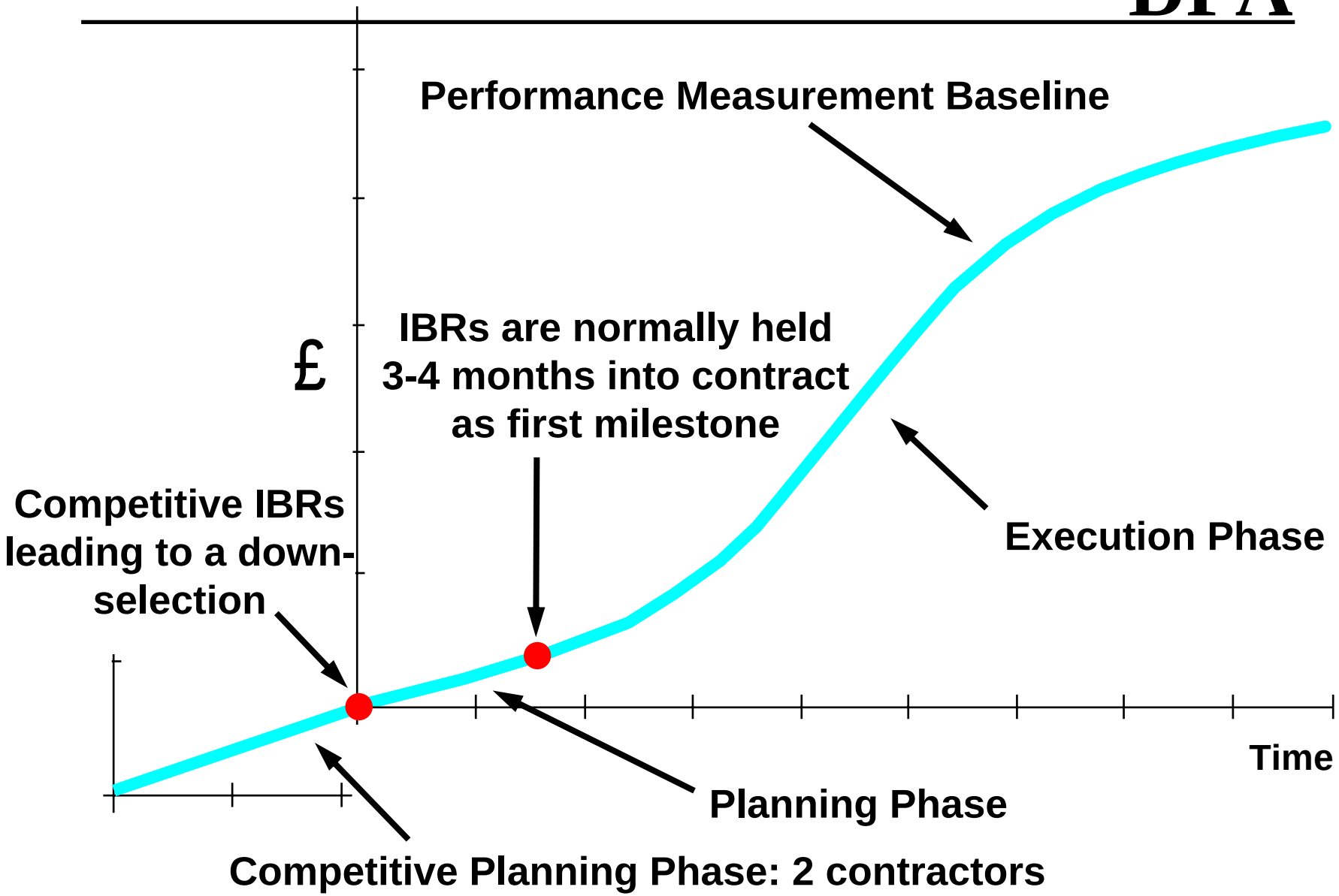
Performance Measurement Baseline
£
IBRs are normally held
3-4 months into contract
as first milestone
Competitive IBRs
leading to a down-
selection
Execution Phase
Time
Planning Phase
Competitive Planning Phase: 2 contractors

Competitive IBR Marking Criteria

- 35 marking criteria developed from ANSI-748 EVM criteria and draft UK IBR handbook
- Six Criteria groups:
  - Organisation
  - Planning, Scheduling & Budgeting
  - Accounting Considerations
  - Analysis & Management Reports
  - Revisions & Data Maintenance
  - Risk

Earned Value Management

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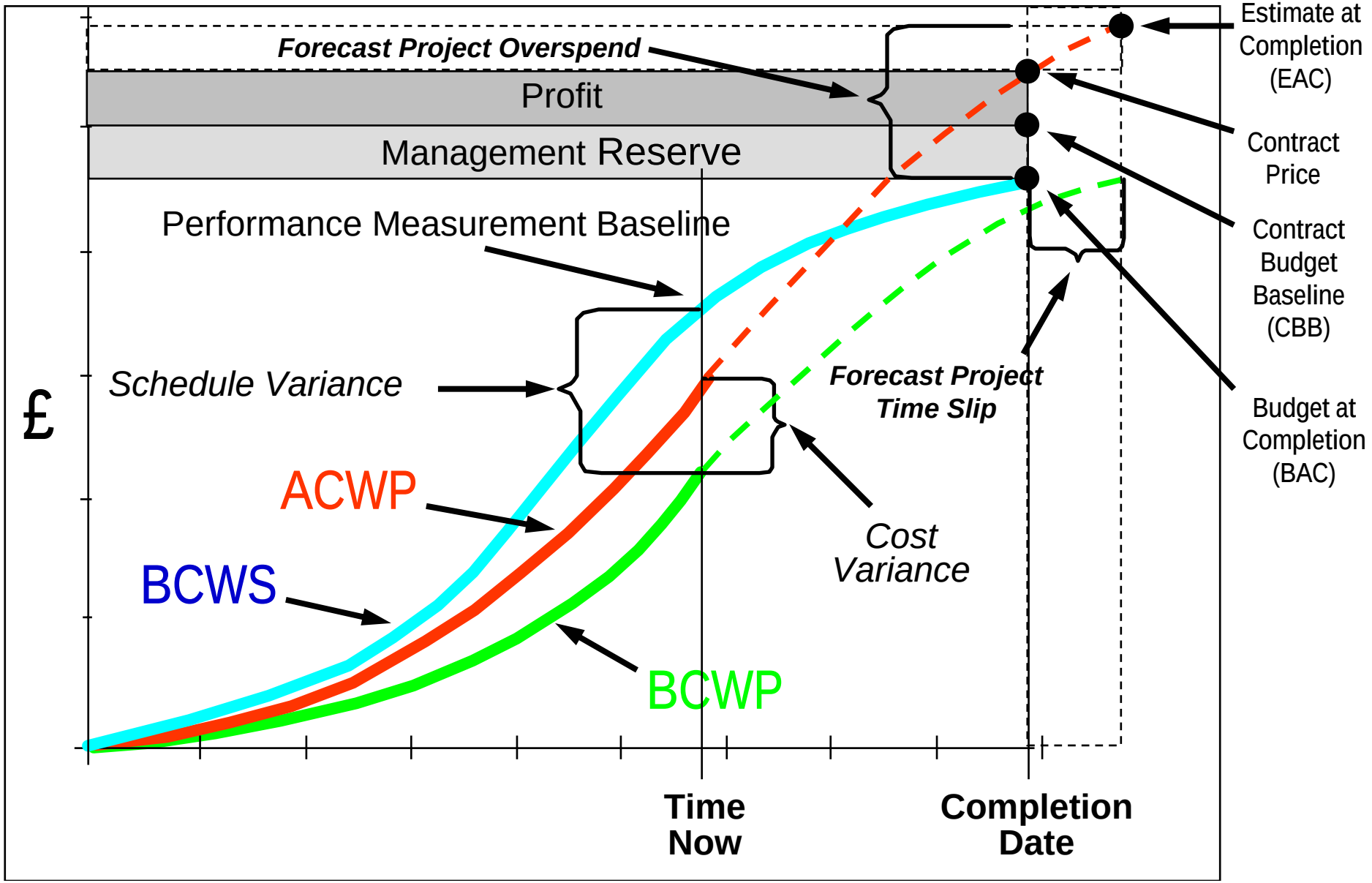

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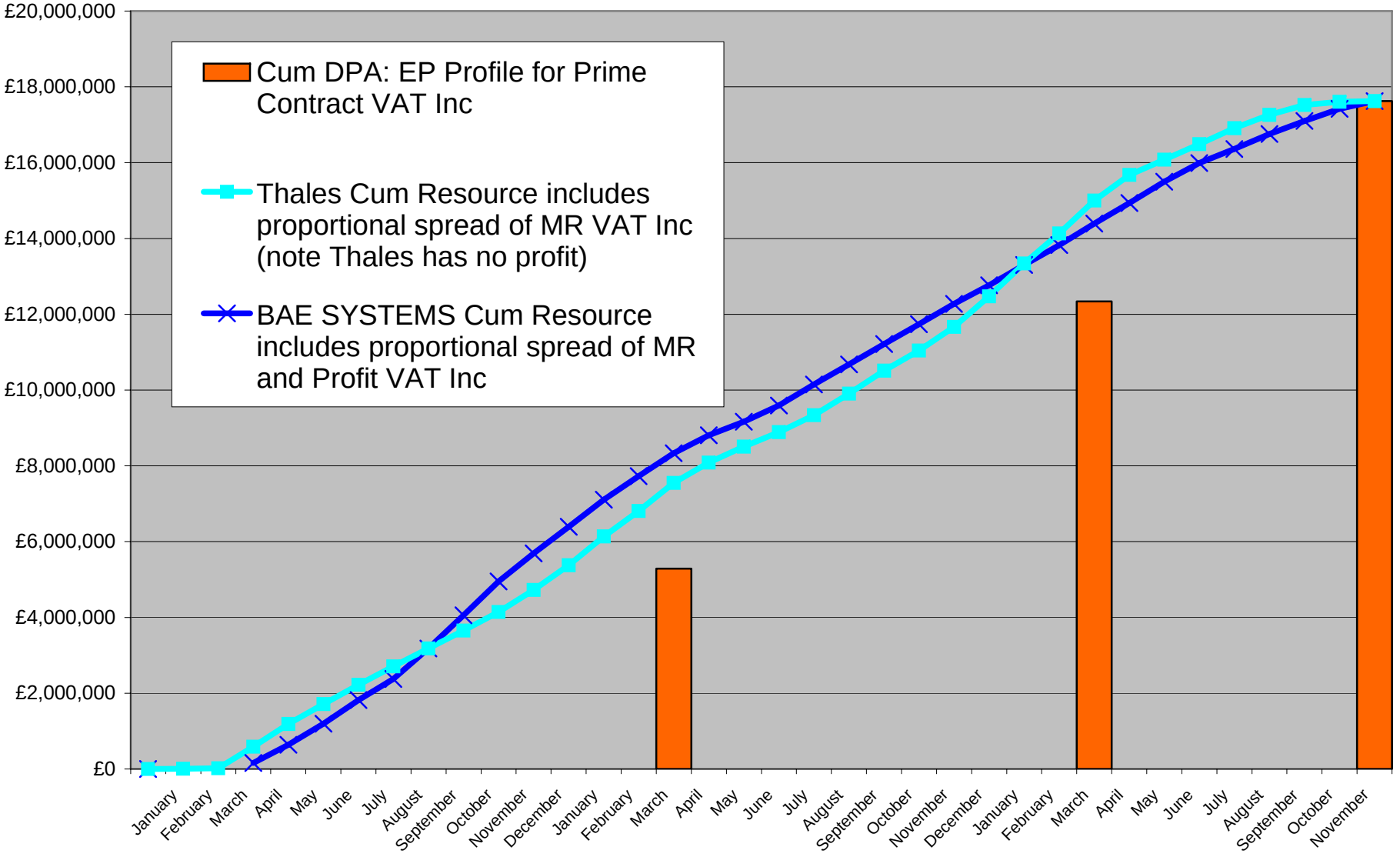
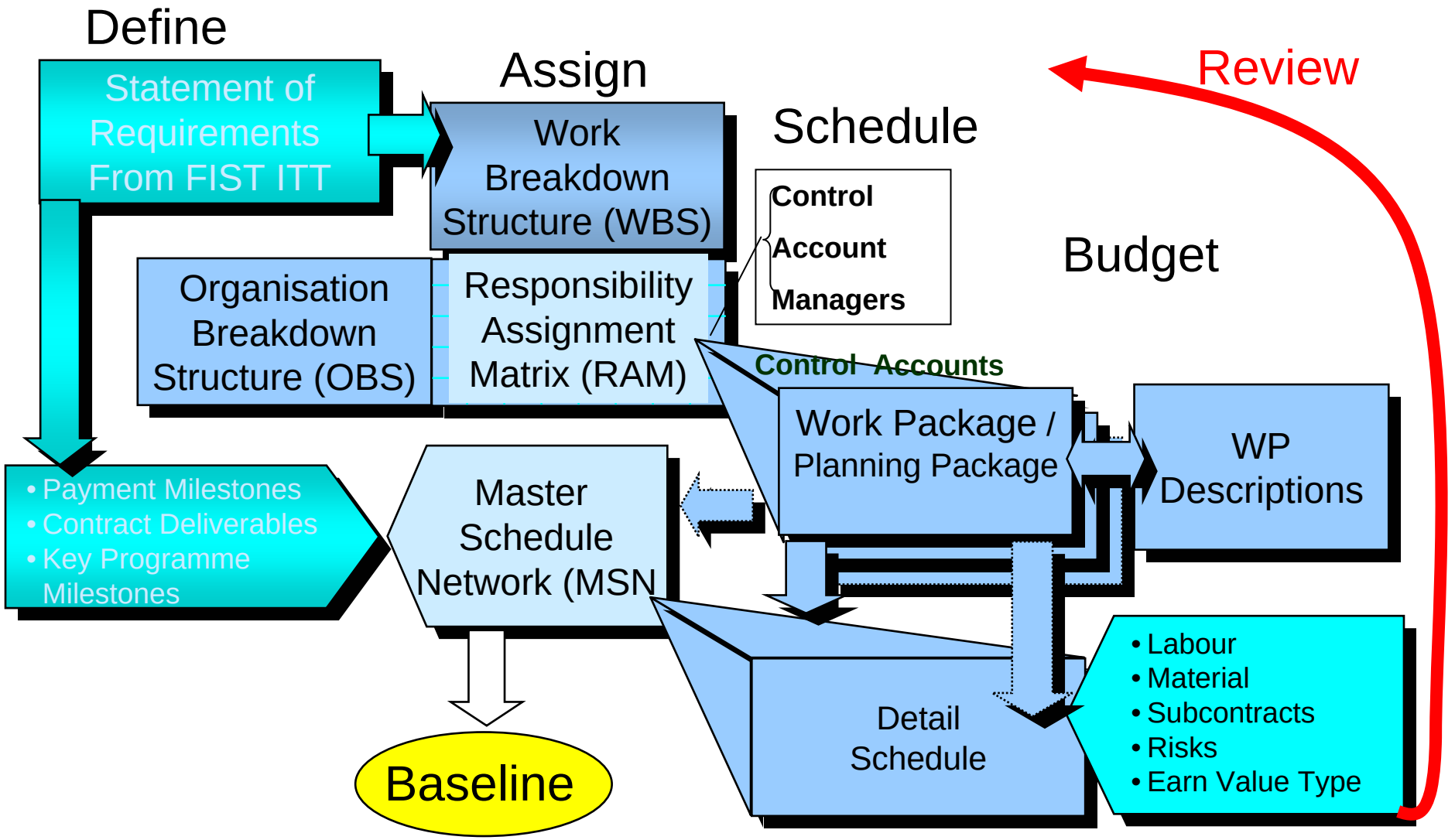
Resource Profiles



FIST Assessment Phase Planning



Rolling Wave Planning

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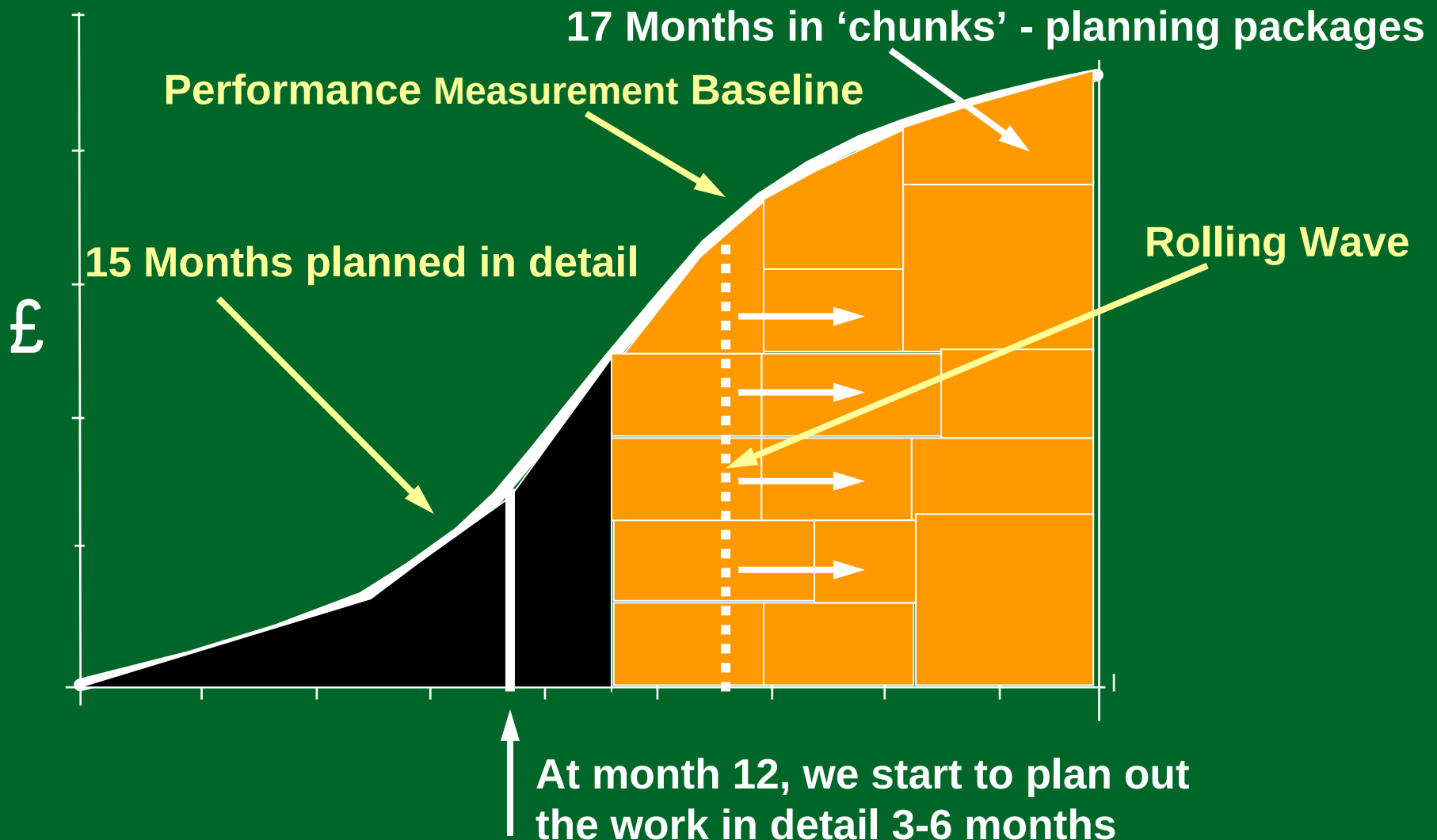

At month 12, we start to plan out the work in detail 3-6 months ahead. Every month thereafter, the 6th month ahead will be planned.

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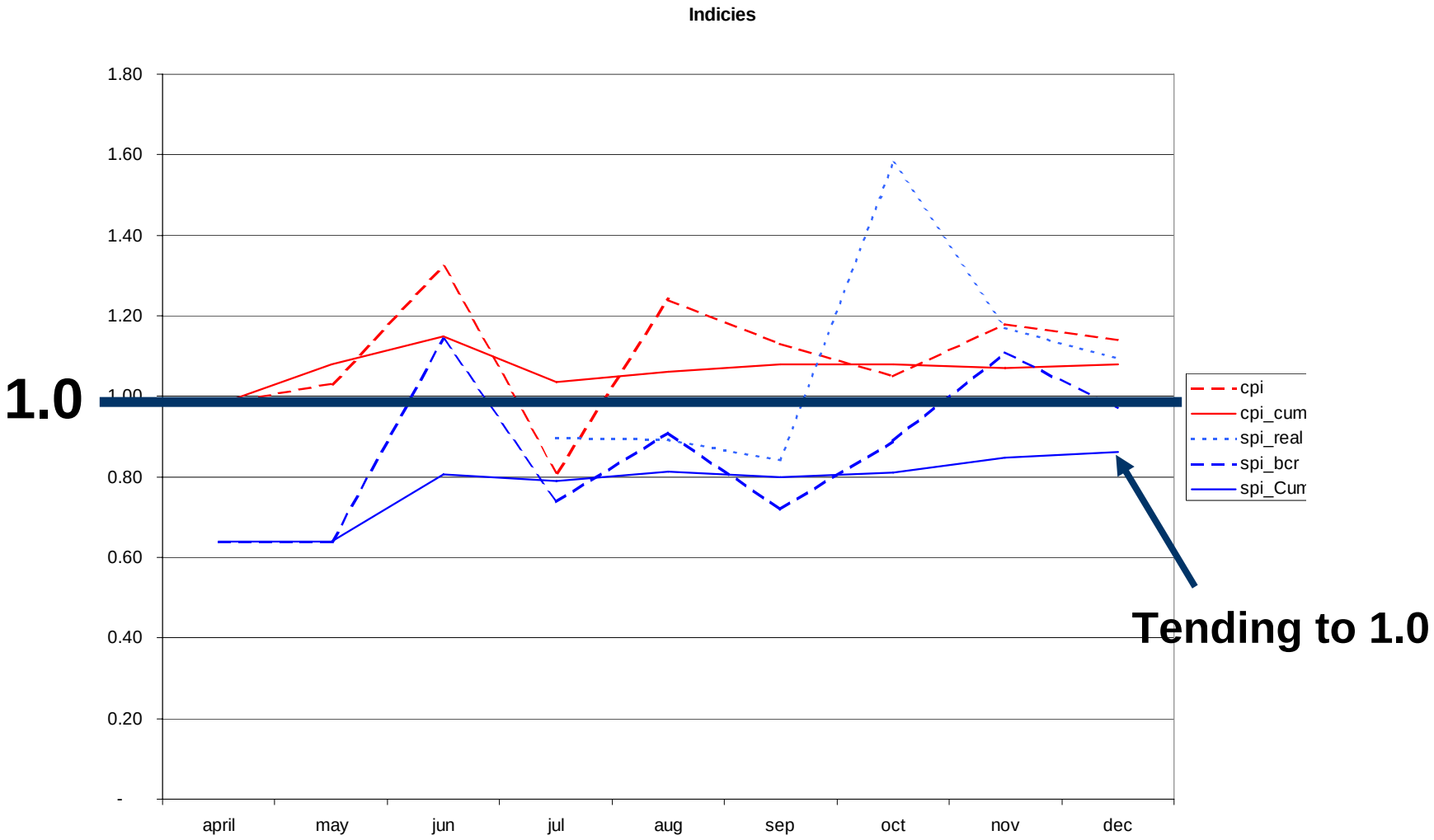

1.0

Tending to 1.0

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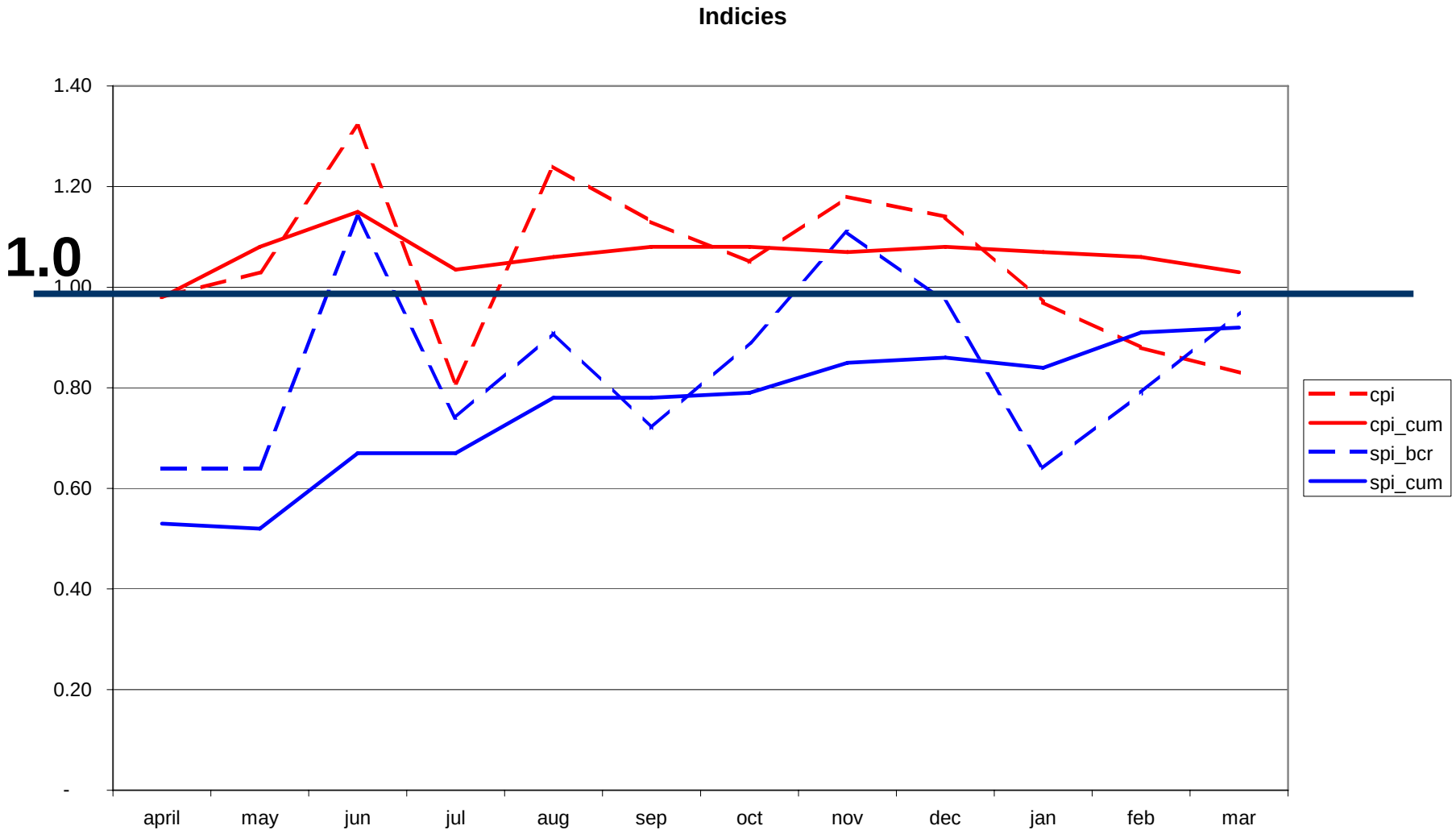
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1.20
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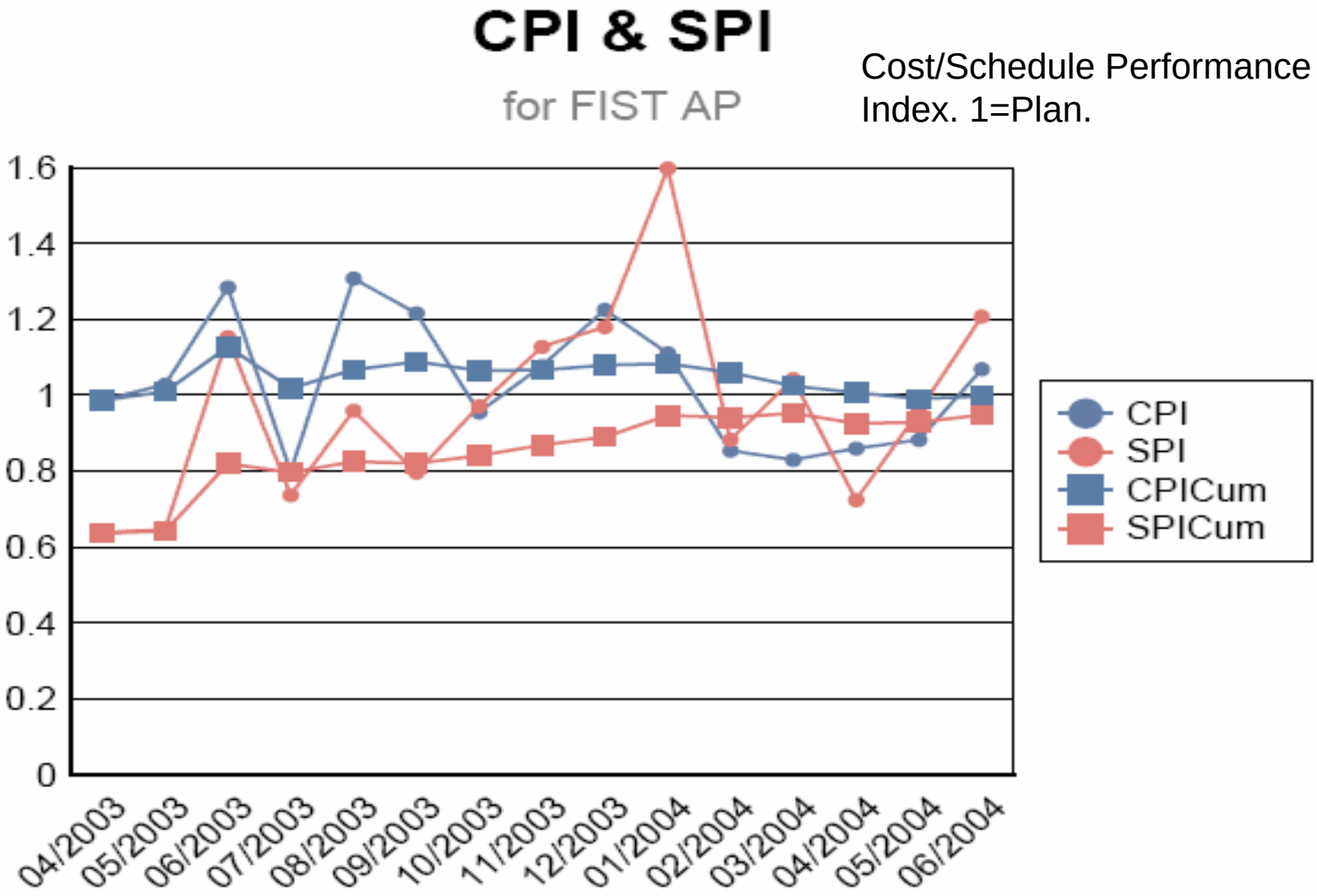
CPI & SPI
for FIST AP
Cost/Schedule Performance Index. 1=Plan.
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
04/2003
05/2003
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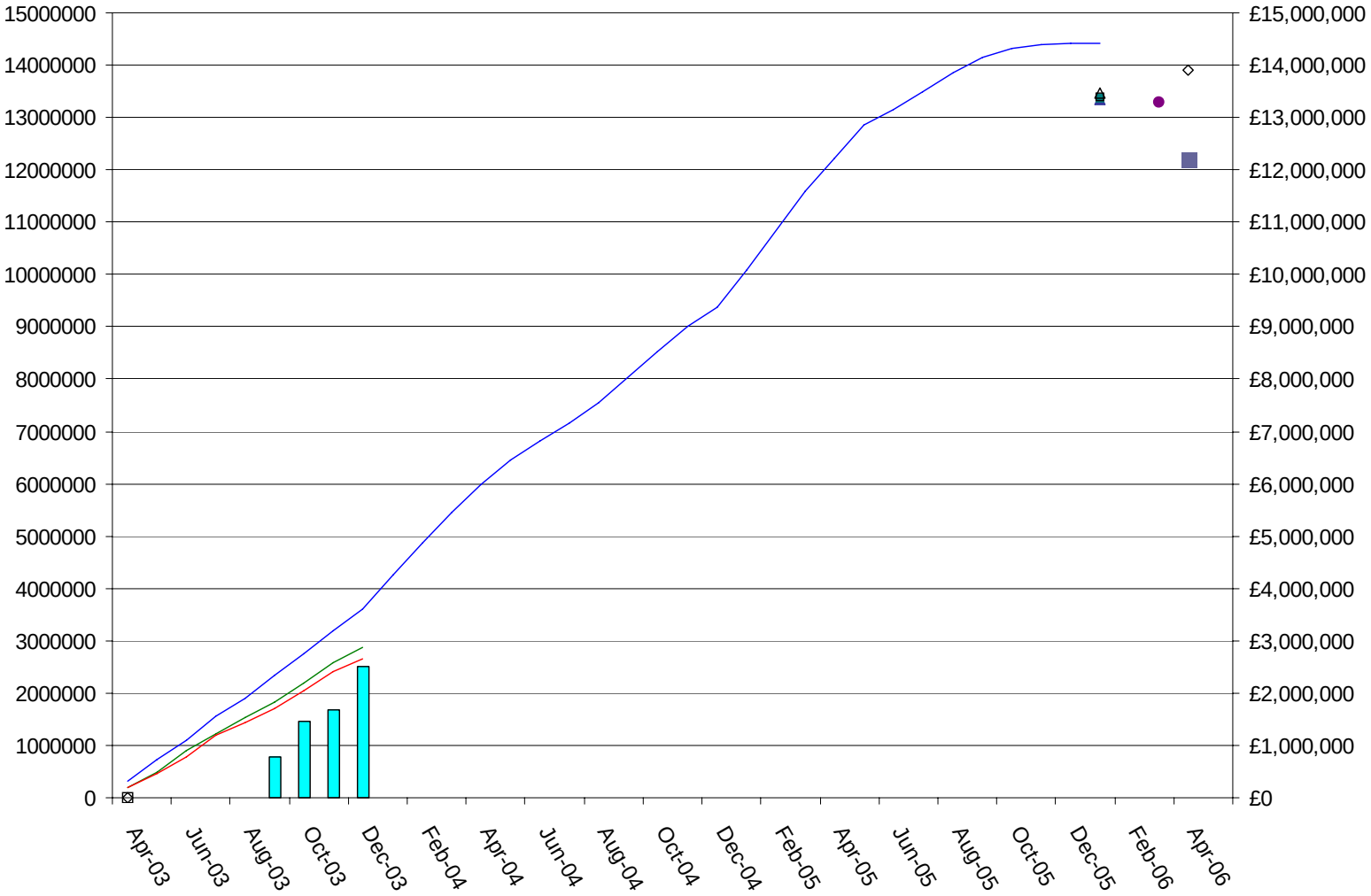
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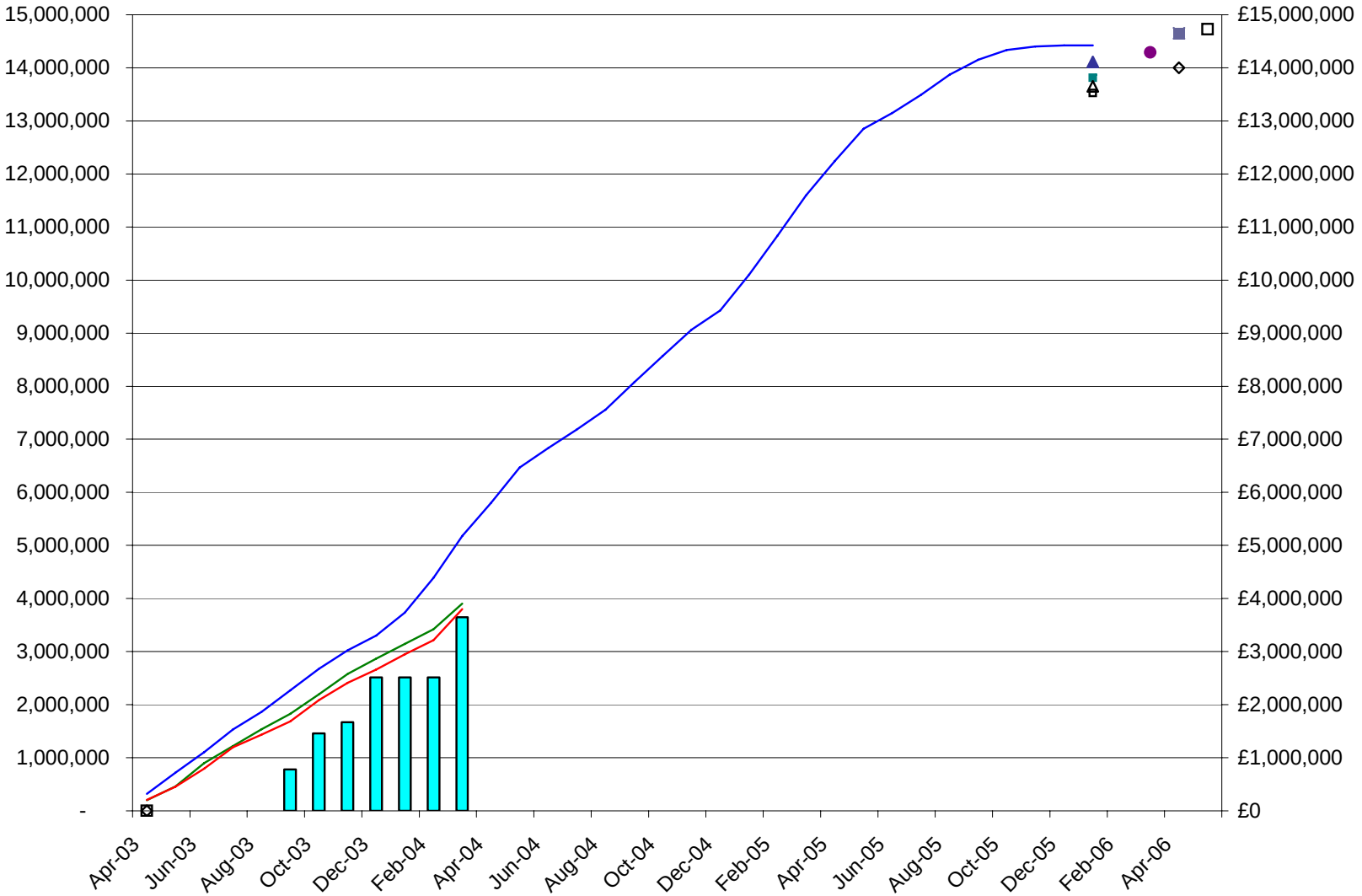
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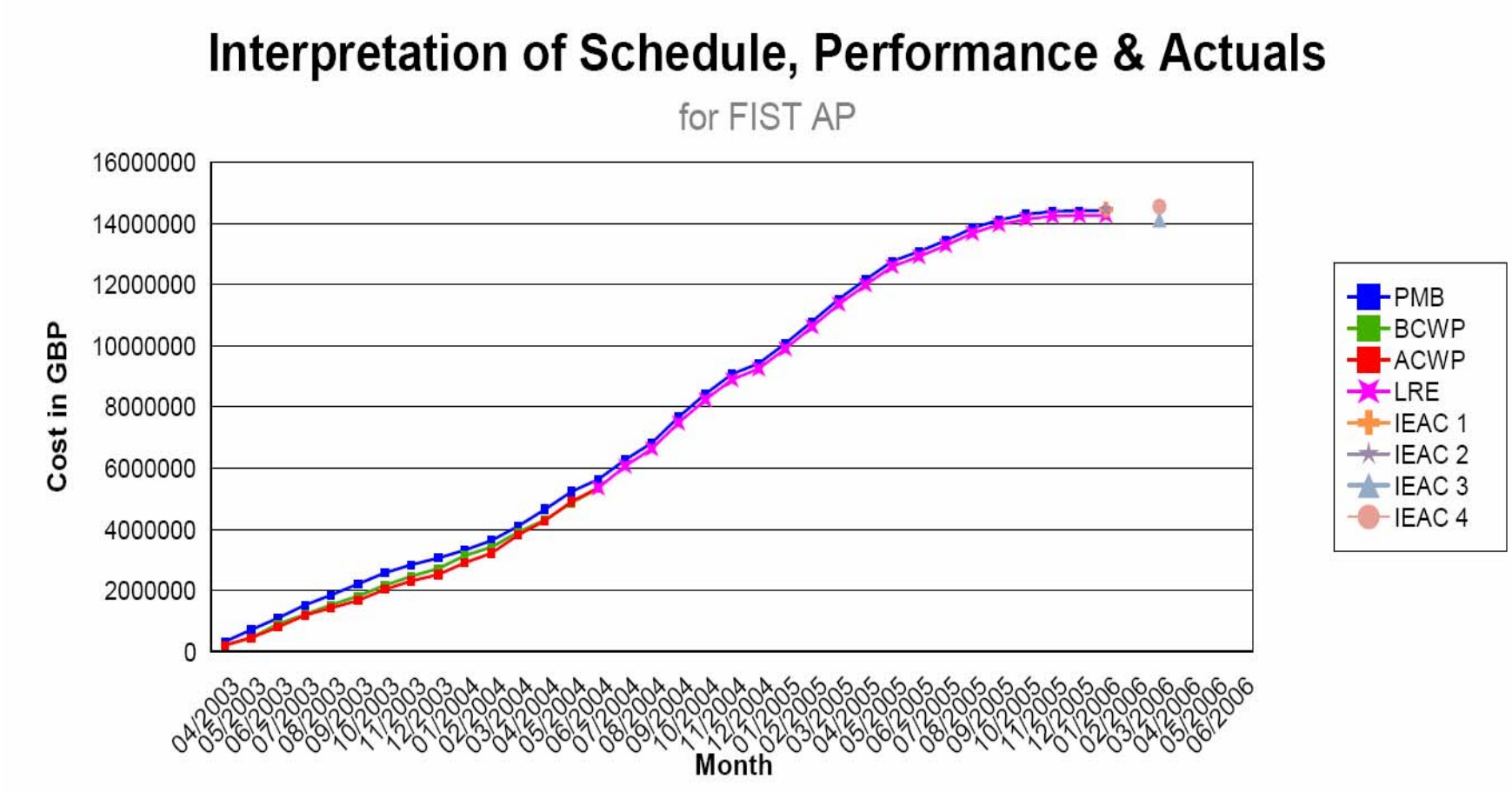
Interpretation of Schedule, Performance & Actuals
for FIST AP
Cost in GBP
16000000
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
Month
PMB
BCWP
ACWP
LRE
IEAC 1
IEAC 2
IEAC 3
IEAC 4

Project Summary (1 of 2)

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Illustrative example of project data:

BCWS	BCWP	ACWP	Schedule Variance
£5,631K	£5,340K	£5,356K	£(291)K

- **Key Ratios**
- **Cumulative Schedule Performance Index** **0.95**
- **Cumulative Cost Performance Index** **1.00**

Significant Variance

- **£54K System Design**
  - Integration & Infrastructure £45K
  - Slip in ICD (internal) £9K
- **£82K Equip Procurement**
  - WAS (C4I) late £52K
  - Cables & Connectors (Trials Qty) £30K
- Design and Procurement delays due to trials slip (troops unavailable)
- WAS (C4I) due to unit lost in shipping. Replacement due.
- Expect recovery in line with new trials dates.

Project Summary (2 of 2)

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Illustrative example of project data:

Remaining Variance

- **Delays 82K**
  - C4I 32K
  - Safety 18K
  - Training 12K
  - Systems Engineering (SRD) 10K
  - Misc 10K
- **Re-planning / Claimed post cut-off** **£73K**

Remaining schedule delays all non-critical path.

- C4I expected to recover in 2 months. Additional resource started.
- Training element re-competed and contract awarded.
- Safety / Systems Engineering recovery.

Partnering - Context

- Future Integrated Soldier Technology (FIST)
- 4:2 followed by 2:1 Down-select
- MOD and Thales Defence
- DCC IPT and Prime Contract Management Office
- 32 month Assessment Phase Contract - £15M VAT Ex

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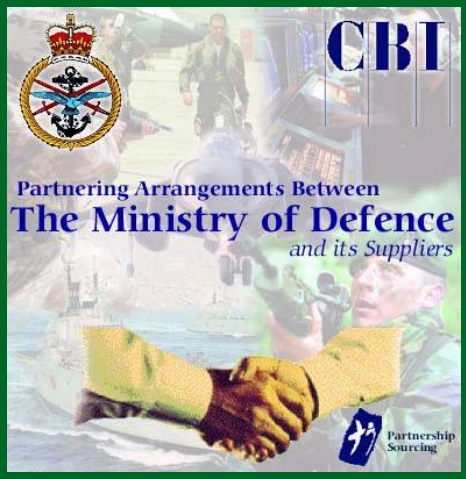
Partnering



- Sometimes described as "partnership sourcing"
- Not a 'partnership' as defined in the Partnership Act of 1890
- "Partnership sourcing is a commitment by both customers and suppliers, regardless of size, to a long-term relationship based on clear, mutually-agreed objectives to strive for world-class capability and competitiveness"

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Why Partnering

- Encourage innovation
- Deliver value for money
- Joint management of risk, Benchmarking, Continuous improvement and Gain Sharing
- Close working relationship with DCC and interface IPTs and especially the User as represented by ITDU and test-bed/trials troops
- Make the best use of the knowledge and experience of the project support team: QinetiQ, DSTL, R&PS, DLO

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The Requirement

- Transparent flow of information
- Trust
- Confidence

Partnering

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Comparative Benefits

ARMS LENGTH

- Distrust
- Secrecy
- Frustration
- Win/Lose deals
- Antagonism
- Time slippage
- Financial Loss

PARTNERING

- Trust
- Understanding
- Flexibility
- Value orientated
- Joint-team approach
- Innovative, Can-do
- Collective focus on P,T,C

Open Communication and Trust

Competition and Partnering

- Not mutually exclusive
- AP competition Partnering was assessed and marked
- BAE SYSTEMS Marconi Raytheon THALES
- **S**oft **I**ssues **B**id **E**valuation **T**ool **(SIBET)**
- Telelogic Continuous Assessment Solution
- 4:2 Down-select - 10% of the marks
- 2:1 Down-select - marked to give comparative position, one of four criteria (Ts&Cs, Technology Maturation, Partnering, Competitive IBR)

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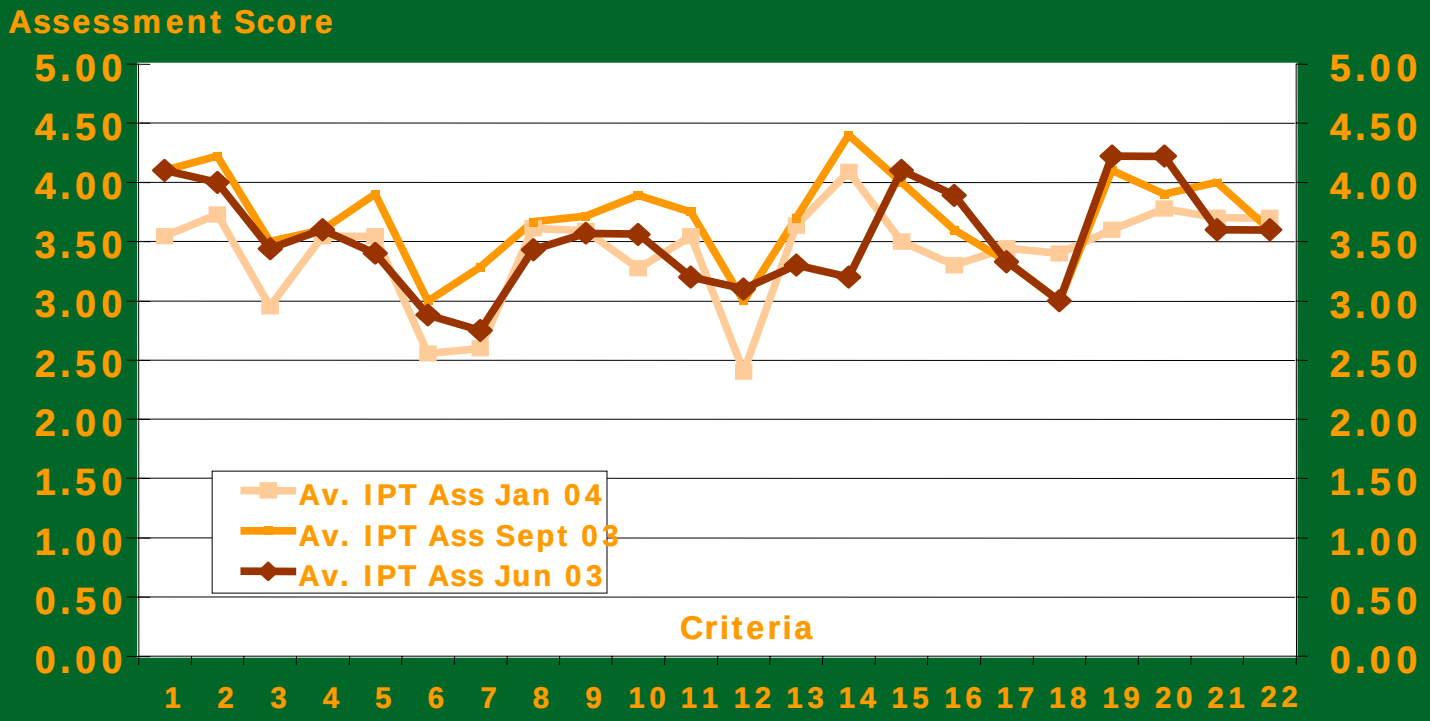
Partnering in Practice

- Use of SCRIA
- Development of the use of SCRIA and SIBET detailed in XB Memo 6 and DPA Business Plan 2003/4 (Cat A-C projects)
- Facilitated by *Sigma Management Development*



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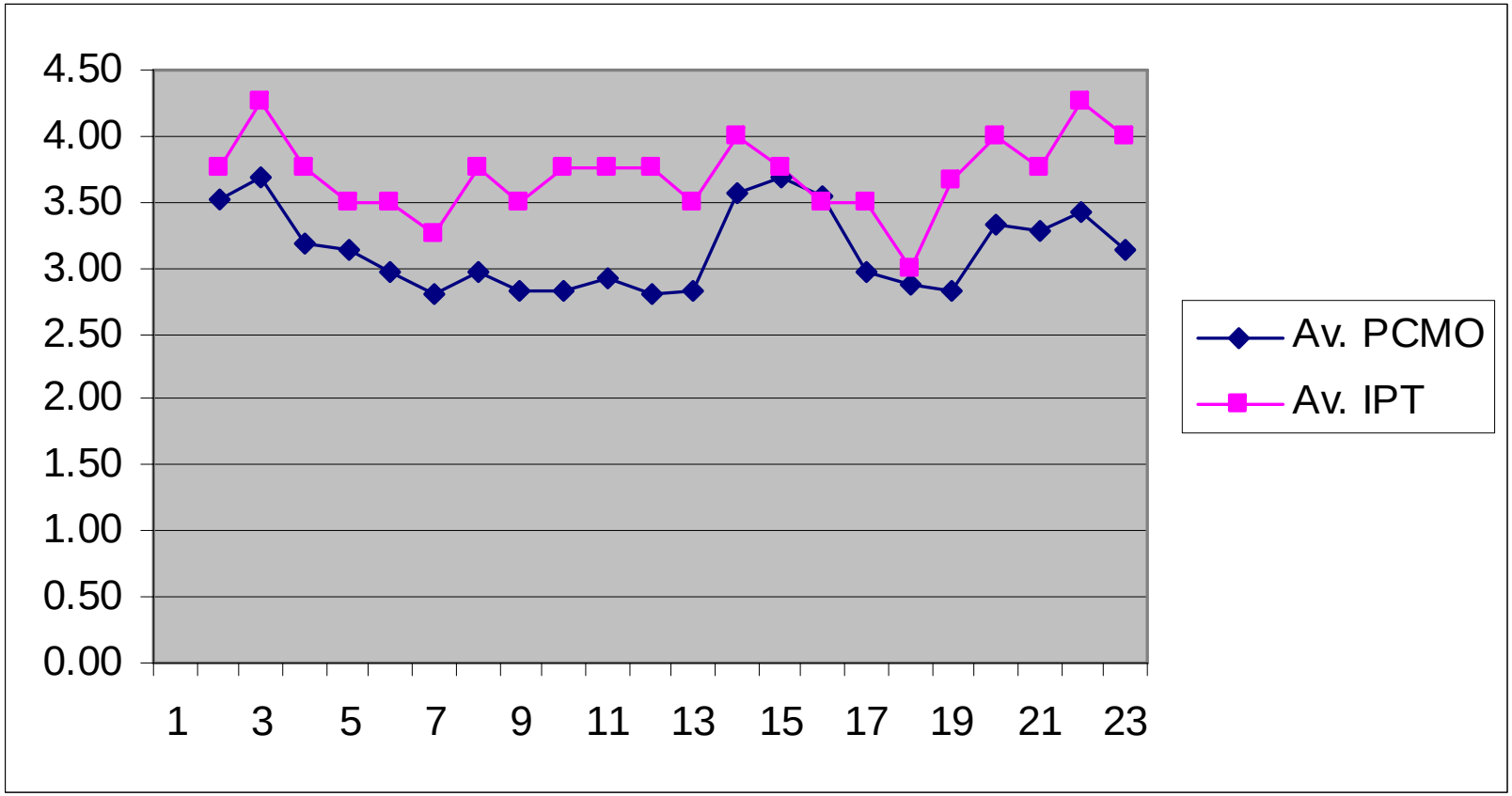
Assessment 2 Results; IPT vs PCMO



Assessment of CAM Areas

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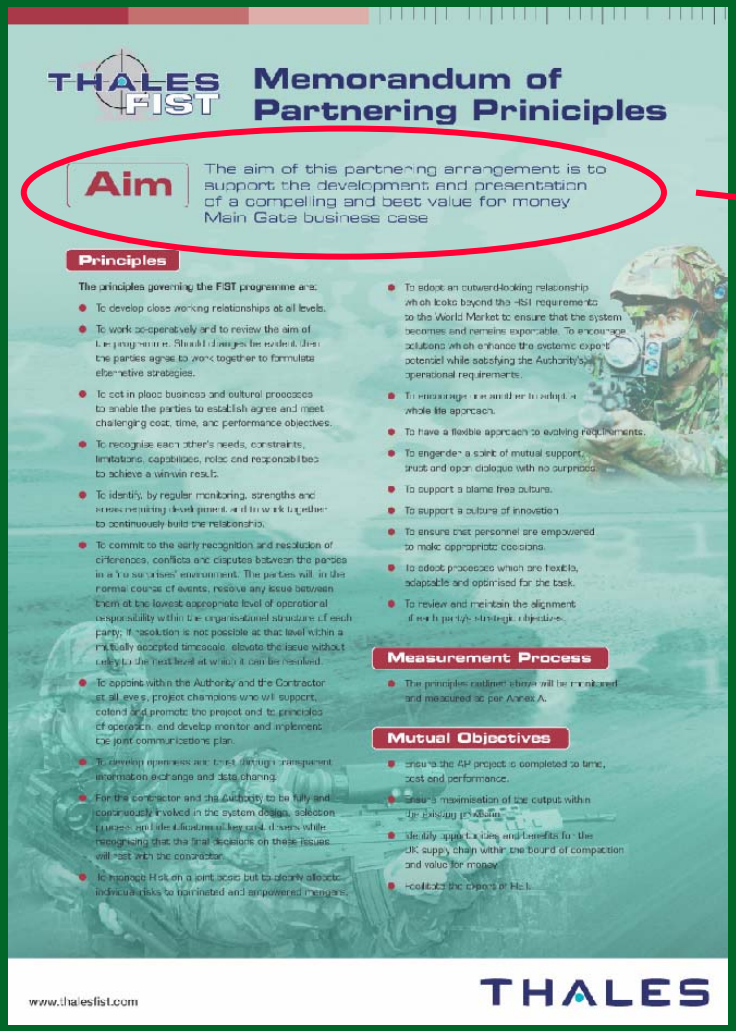
		Snr Mgt	Cam1	Cam2	Cam3	Cam 4	Cam5	SSCDA
Communication	Personal Relations	4	3.8	3.8	3	3.3	4	2
	Information Exchange	4.2	3.9	4.6	3.6	4	3.3	2.5
	Problem Notification and Resolution	4.2	3.3	3.4	3.2	3	3.7	2
	Visibility of Strategies	4	3.4	2.6	3	3.7	3.3	1.5
	Understanding of Strategy	3.6	3.4	2.9	3	3.3	2.7	2
Design for Manufacture	Management of Costs	3	3.4	1.9	3	3	3	2.5
	Value	3.4	3.1	3.1	3.3	2.5	3.3	1.5
	Investment Specific to the Relationship	3.6	2.6	2.3	3.5	2.7	3	2.5
	Process Capability	3.8	3.4	2	3.3	2.7	3.3	2
Continuous Improvement	Achievement of Targets	3.6	3.3	2	3.2	3.7	3.7	2.5
	Process Development	3.4	3	3	3	2.7	3.7	2
	Innovation	3.2	2.7	3.2	2.6	2.3	3.7	2
	Attitude Towards Change	3.4	3.8	3.8	4	3.3	4.3	2.5
	Relationship Development	4	3.8	3.8	3.6	3.3	4.7	2.5
Working Together	Ethics	4	3.8	3	2.6	4.3	3.3	1.5
	Protocols	3.2	3.3	3	2.8	2.3	4	1
	Commercial Arrangements	2.8	3	3	2.6	3	3.7	2
	Sharing Risk and Reward	3.2	3.1	3.5	3	3.3	4	1
	Trust	3.4	3.8	3.9	2.6	3.3	4.3	2
	Involvement	4.2	3.4	3.2	2.8	3	4	2
	Openness and Honesty	4	4	3.8	3.2	3.3	4	2.5
	Relationship Responsiveness (people)	3.4	3.3	3.9	2.8	3	4	2
	Relationship Responsiveness (organisation)	2.8	2.9	1.4	2.6	3	3.7	1
		3.6	3.2	3.1	3.3	3.1	3.7	2
Sample size		5	9	9	5	3	3	3*
Total population		8	16	31	16	4	5	7

Partnering in Practice



THALES FIST

Memorandum of Partnering Priniciples

Aim

The aim of this partnering arrangement is to support the development and presentation of a compelling and best value for money Main Gate business case

Principles

The principles governing the FIST programme are:

- To develop close working relationships at all levels.
- To work co-operatively and to review the aim of the programme. Should changes be evident, then the parties agree to work together to formulate alternative strategies.
- To set in place business and cultural processes to enable the parties to establish agree and meet challenging cost, time, and performance objectives.
- To recognise each other's needs, constraints, limitations, capabilities, roles and responsibilities to achieve a win-win result.
- To identify, by regular monitoring, strengths and areas requiring development, and to work together to continuously build the relationship.
- To commit to the early recognition and resolution of differences, conflicts and disputes between the parties in a 'no surprises' environment. The parties will, in the normal course of events, resolve any issue between them at the lowest appropriate level of operational responsibility within the organisational structure of each party. If resolution is not possible at that level within a mutually accepted timescale, elevate the issue without delay to the next level at which it can be resolved.
- To appoint within the Authority and the Contractor at all levels, project champions who will support, defend and promote the project and its principles of operation, and develop monitor and implement the joint communications plan.
- To develop openness and trust through transparent information exchange and data sharing.
- For the contractor and the Authority to be fully and continuously involved in the system design, selection processes and identification of key risk drivers while recognising that the final decisions on these issues will rest with the contractor.
- To manage risk on a joint scope but to clearly allocate individual risks to nominated and empowered managers.
- To adopt an outward-looking relationship which looks beyond the FIST requirements to the World Market to ensure that the system becomes and remains exportable. To encourage solutions which enhance the systems export potential while satisfying the Authority's operational requirements.
- To encourage [illegible] to adopt a whole life approach.
- To have a flexible approach to evolving requirements.
- To engender a spirit of mutual support, trust and open dialogue with no surprises.
- To support a blame free culture.
- To support a culture of innovation.
- To ensure that personnel are empowered to make appropriate decisions.
- To adopt processes which are flexible, adaptable and optimised for the task.
- To review and maintain the alignment of each party's strategic objectives.

Measurement Process

- The principles outlined above will be monitored and measured as per Annex A.

Mutual Objectives

- Ensure the AIP project is completed to time, cost and performance.
- Ensure maximisation of the output within the existing procedures.
- Identify opportunities and benefits for the UK supply chain within the bound of competition and value for money.
- Facilitate the objectives of FIST.

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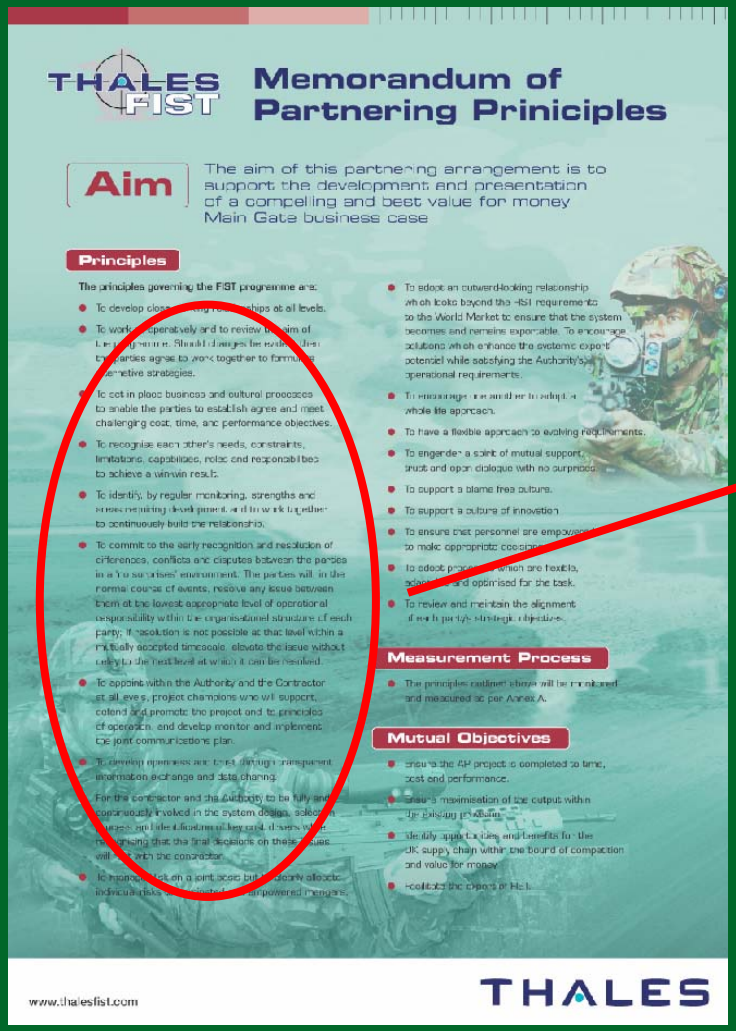
THALES

The ***aim*** of this partnering arrangement is to support the development and presentation of a compelling and best value for money Main Gate business case

DPA

Partnering in Practice


THALES FIST

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- To identify, by regular monitoring, strengths and weaknesses requiring development, and to work together to continuously build the relationship.
- To commit to the early recognition and resolution of differences, conflicts and disputes between the parties in a 'no surprises' environment. The parties will, in the normal course of events, resolve any issue between them at the lowest appropriate level of operational responsibility within the organisational structure of each party. If resolution is not possible at that level within a mutually accepted timescale, elevate the issue without delay to the next level at which it can be resolved.
- To appoint within the Authority and the Contractor at all levels, project champions who will support, defend and promote the project and its principles of operation, and develop monitor and implement the joint communications plan.
- To develop openness and trust through transparent information exchange and data sharing.
- For the contractor and the Authority to be fully and continuously involved in the system design, selection process and identification of key risk drivers with a view to arriving at final decisions on these issues with which the contractor.
- To manage risk on a joint basis but clearly allocate individual risks to the most appropriate empowered managers.
- To adopt an outward-looking relationship which looks beyond the MoD requirements to the World Market to ensure that the system becomes and remains exportable. To encourage solutions which enhance the systems export potential while satisfying the Authority's operational requirements.
- To encourage the MoD to adopt a whole life approach.
- To have a flexible approach to evolving requirements.
- To engender a spirit of mutual support, trust and open dialogue with no surprises.
- To support a blame free culture.
- To support a culture of innovation.
- To ensure that personnel are empowered to make appropriate decisions.
- To adopt processes which are flexible, adaptable and optimised for the task.
- To review and maintain the alignment of each party's strategic objectives.

Measurement Process

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Mutual Objectives

- Ensure the AIP project is completed to time, cost and performance.
- Ensure maximisation of the output within the existing procurement.
- Identify opportunities and benefits for the UK supply chain within the bound of competition and value for money.
- Facilitate the objectives of MoD.

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THALES

- To work co-operatively and to review the aim of the programme. Should changes be evident then the parties agree to work together to formulate alternative strategies

- To commit to the early recognition and resolution of differences, conflicts and disputes between the parties in a 'no surprises' environment.

- To develop openness and trust through transparent information exchange and data sharing.

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Commercial Safeguards

- Defcon 15 (as amended)
- Red Card - Sub-contractor selection
- Main Gate Business Case
- DESO, DTI and HMT

Partnering - Impressions

- Partnering is an enabler - it achieves nothing on its own
- Hard to see how sophisticated projects can be accomplished without it
  - neither party can afford the ‘master & slave’ or ‘homework marking’ approach
  - Industry must get used to close involvement from MOD team *ab initio*
- Not a natural state - it requires:
  - Commitment
  - Process
  - Metrics
  - Corrective action

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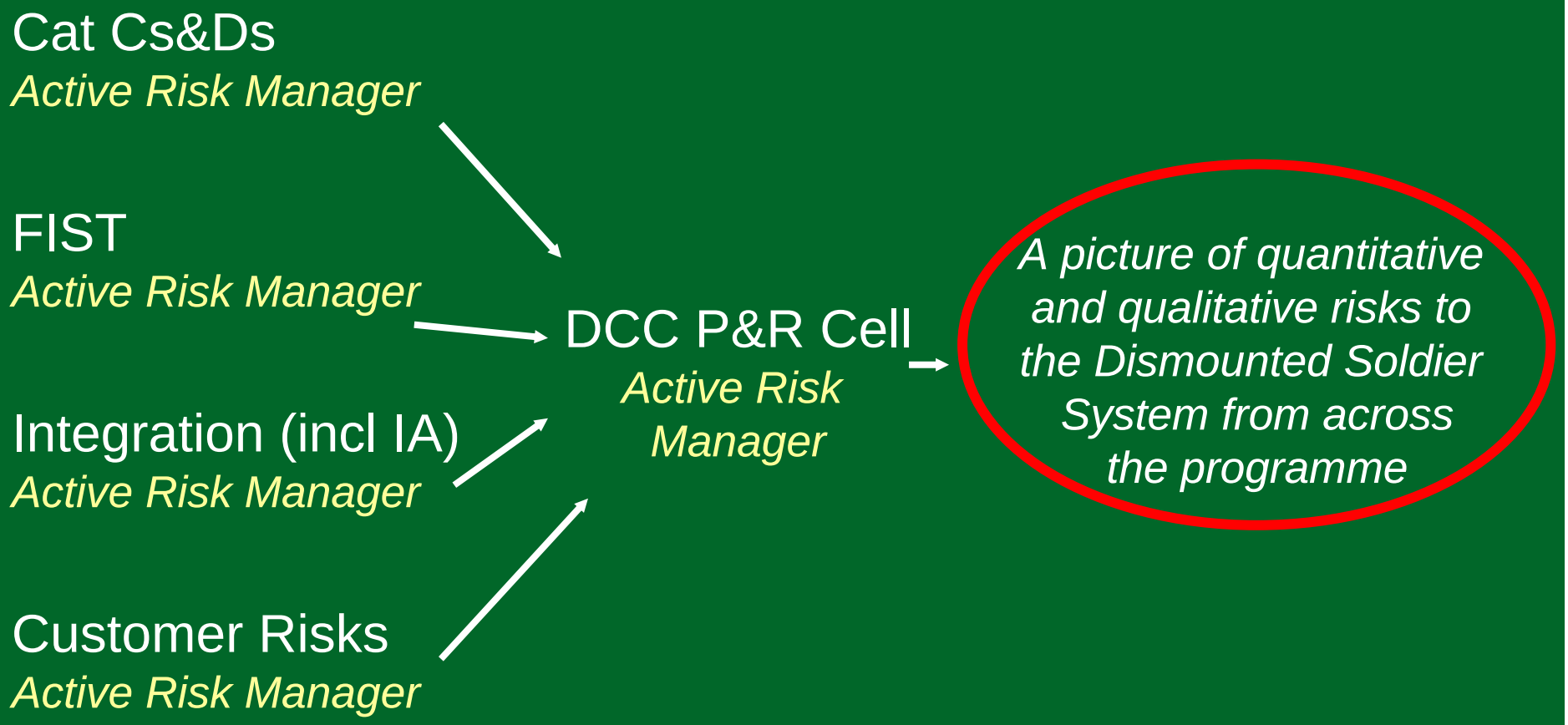
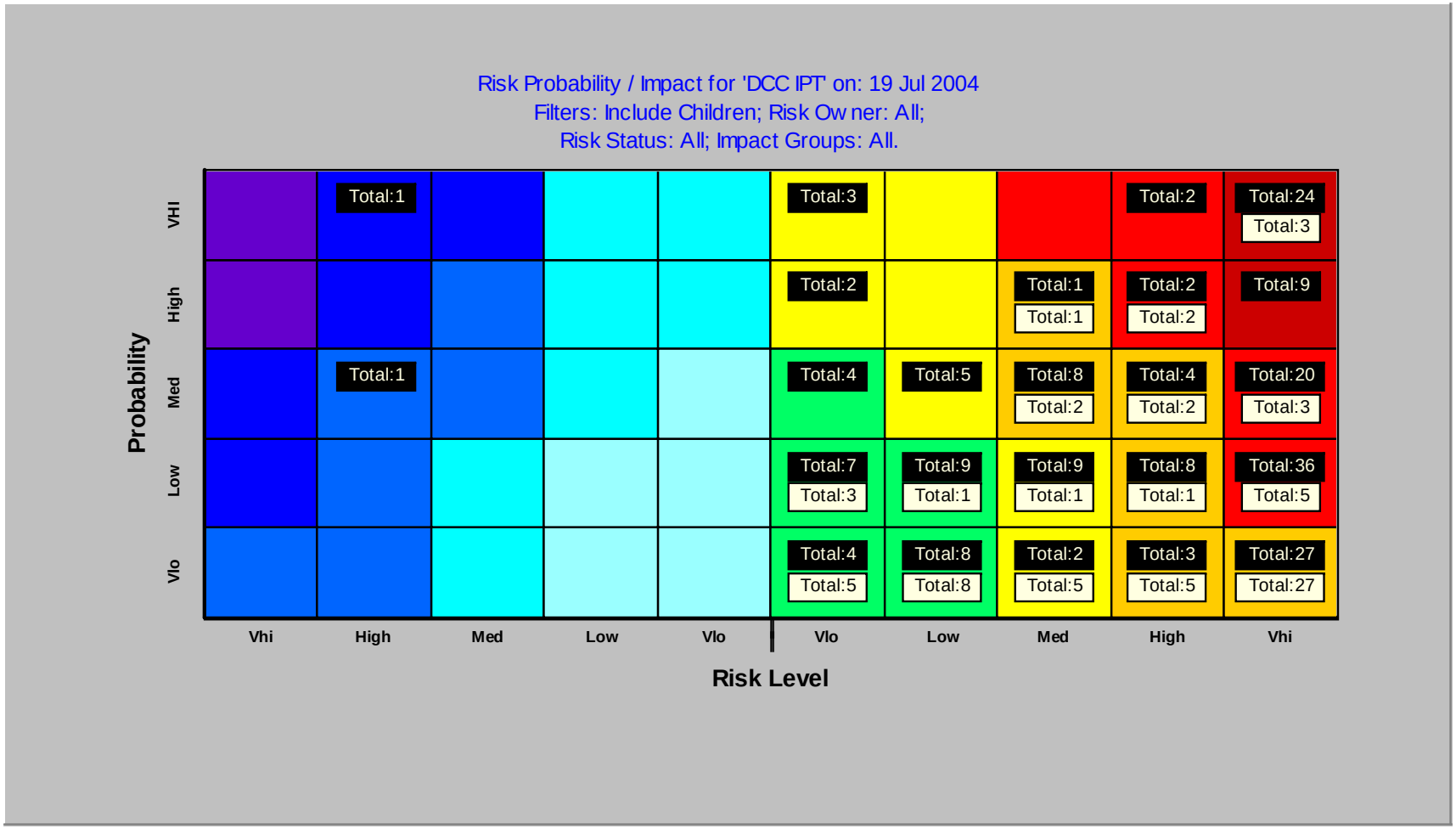
Partnering - Impressions

- Independent facilitation is necessary
- Commitment is required from leaders - the process must be driven
- The process must recognise the boundaries and constraints of both parties - metrics must be appropriate and tailored
- Openness, trust and passage of information are critical
- New team members do not have immediate uptake or buy-in
- There is a honeymoon period caused by euphoria, optimism and the process bedding-in
- The process adds considerable value if done properly

Risk Management



DPA


Risk Probability / Impact for 'DCC IPT' on: 19 Jul 2004
Filters: Include Children; Risk Owner: All;
Risk Status: All; Impact Groups: All.
Probability
VHI
High
Med
Low
Vlo
Total:1
Total:3
Total:2
Total:24
Total:3
Total:2
Total:1
Total:1
Total:2
Total:9
Total:2
Total:1
Total:4
Total:5
Total:8
Total:2
Total:4
Total:2
Total:20
Total:3
Total:7
Total:3
Total:9
Total:1
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Total:8
Total:1
Total:36
Total:5
Total:4
Total:5
Total:8
Total:8
Total:2
Total:5
Total:3
Total:5
Total:27
Total:27
Vhi
High
Med
Low
Vlo
Vlo
Low
Med
High
Vhi
Risk Level

DPA

Severity	ID	Risk Title	Risk Owner	Project Area	Risk Impacts			
					Probability	Cost	Time	Performance
Risk Status: Open								
Severity 9	293	AWES vest cannot be modified cost-effectively or in sufficient time for use in BIG FIST 3b trials.	DCC2a (Danny Castleton)	GFX Management	VHI	Vhi	Med	Vhi
Severity 9	56	Troops scheduled for BIG FIST 3b trials are withdrawn at short notice.	SO2 FIST ITDU (Paul Gaskin)	Trials Planning	VHI	Vhi	Vhi	NIL
Severity 9	240	Troops scheduled for BIG FIST 2 trials are withdrawn at short notice.	SO2 FIST ITDU (Paul Gaskin)	Trials Planning	VHI	Vhi	Vhi	NIL
Severity 9	282	Troops scheduled for BIG FIST 3a trials are withdrawn at short notice.	SO2 FIST ITDU (Paul Gaskin)	Trials Planning	VHI	Vhi	Vhi	NIL
Severity 8	95	Focus on high-tech FIST solutions leave suitable low-capability options disregarded.	OA / COEIA Manager (Rick Atkinson)	COEIA	Hi	NIL	NIL	Vhi
Severity 8	451	Power Support for FIST - Inadequate solution for battery charging.	ILS LSA Engineer (Richard Oliver)	LSA	Hi	NIL	NIL	Vhi
Severity 8	453	Power Support for FIST - Inadequate solution for transportation and storage.	ILS LSA Engineer (Richard Oliver)	LSA	Hi	NIL	NIL	Vhi
Severity 7	43	Ambiguous results obtained from BIG FIST 3a and 3b trials leads to insufficient URD validation evidence.	Dep. Tech. Director (Tony Marsh)	Requirements Engineering	MED	NIL	NIL	Vhi
Severity 7	145	Failure to extract a consistent series of conclusions from CAEn, BFM Model and BIG FIST 3b Trials results.	Dep. Tech. Director (Tony Marsh)	Requirements Engineering	MED	NIL	NIL	Vhi
Severity 7	159	Failure to reach MG with an acceptable Interface Control Document (ICD).	Dep. Tech. Director (Tony Marsh)	Requirements Engineering	MED	NIL	NIL	Vhi

DPA

					Probability	Cost	Time	Performance
Severity 7	300	Insufficient time for BIG FIST 2 data analysis compromises BIG FIST 3b trials equipment design.	Tech. Director (John Foley)	Requirements Engineering	MED	NIL	NIL	Vhi
Severity 7	133	Incompatibility between FIST and BOWMAN security rules.	Battlespace Integration Manager (Richard Ransford)	C4I	Hi	Hi	Vlo	Med
Severity 7	65	DSTL resourcing plan is disrupted causing delay to FIST COEIA.	OA / COEIA Manager (Rick Atkinson)	COEIA	MED	NIL	NIL	Vhi
Severity 7	67	Inability to show legacy (including future legacy) equipment integration at MG.	System Design Manager (John Gray)	System Design	MED	Vhi	Vhi	Vhi
Severity 7	283	BIG FIST 3b provides a lack of objective data - Observers of insufficient quality used to cover shortfall.	SO2 FIST ITDU (Paul Gaskin)	Trials Planning	VHI	Med	Vlo	NIL
Severity 6	124	Stakeholders not fully engaged at appropriate times during AP.	Dep. Programme Director (David Tibbs)	PCMO Management	LO	NIL	NIL	Vhi
Severity 6	123	Commitment of consortiums members and Authority weakens after the start of the Assessment Phase.	Dep. Programme Director (David Tibbs)	Programme Management	LO	NIL	Vhi	Lo
Severity 6	100	Turnover of personnel affects Authority / PCMO decision making processes and programme tempo.	Dir. of Future Concepts V&SS (Stephan Pattoni)	Partnering	MED	NIL	Hi	NIL
Severity 6	99	US failure to share Gov-Gov information with FIST programme due to lack of inter-government MoU and ineffective TAAs.	Int. Collaboration Manager (Paul Wathen)	International Collaboration	LO	NIL	NIL	Vhi
Severity 6	146	BIG FIST 3b provides a lack of objective data - FIST / BOWMAN interoperability fails.	C4i Manager (Ian Gallagher)	C4I	MED	Hi	Lo	NIL

Questions?