DEFENCE PROCUREMENT

by Tim Price

The Realities of Defence Procurement
A Matrix Game by Tim Price

Introduction.

The world of Defence procurement is a strange and wonderful place filled with amazing killing machines, Byzantine bureaucratic processes and periods of intense frustration punctuated by frantic effort. This Matrix Game seeks to introduce the players into a tiny fraction of that world so they can get an (almost insignificant) insight as to what goes on.

The Programme and the Profile.

In the world of Defence Procurement the Programme is King and a set of Endorsed Requirements the divine right for him to rule – but the Profile is the power that keeps him on the Throne.

The Programme is the answer to the identification of a shortfall in military capability, such as the identification that the current range of Recce Vehicles are old, have petrol engines where everything else has diesel engines, lack a night vision capability and don't have secure communications to actually pass their valuable information back to those who need it. In this case the Programme might be the Future Armoured Reconnaissance Programme (FARP), made up of a series of projects to find answers to the shortfalls identified.

You might think that we might merely seek to replace the missing bits with suitable pieces of equipment, such as a diesel engine – but it isn't as simple as that. What happens is that a study is conducted into the Requirements that the Recce vehicle needs to have, such as speed, range, obstacle crossing capability, diesel engine, and the list is prioritised into Key, Pri 1, Pri 2 and Pri 3. This list is then passed to industry who offers alternative solutions to the problem. This is to encourage innovation and to ensure that the individual (and very cynical) desk officer doesn't just buy the solution he thinks will do. One of the alternatives offered, of course, may well be to simply buy diesel engines and bolt on a thermal sight…

The *Programme*, therefore, is the general description of the Capability and the list of Requirements that make up each project within it.

The *Profile* is where the Money is held. This is the Defence Budget and is forecast out to 10 years based on a scientific assessment of likely threats and their corresponding equipment requirements. This is in a series of Lines (P9 Lines) forecasting how much money is required in each year to procure the Requirements that make up the Programmes.

Of course things change – budgets get squeezed, projects overrun in time, costs increase and technology changes. Matching the requirements to the money available is a very tricky business and moving the money about is strictly controlled and regulated. It is common for projects to get delayed and unable to spend the money in the year forecast, and not have enough money the following year to pay for it. You see – you can't save up the money – it is lost to the Block Adjustment.

Confused? Don't worry – just pretend you know what's going on – everyone else does…

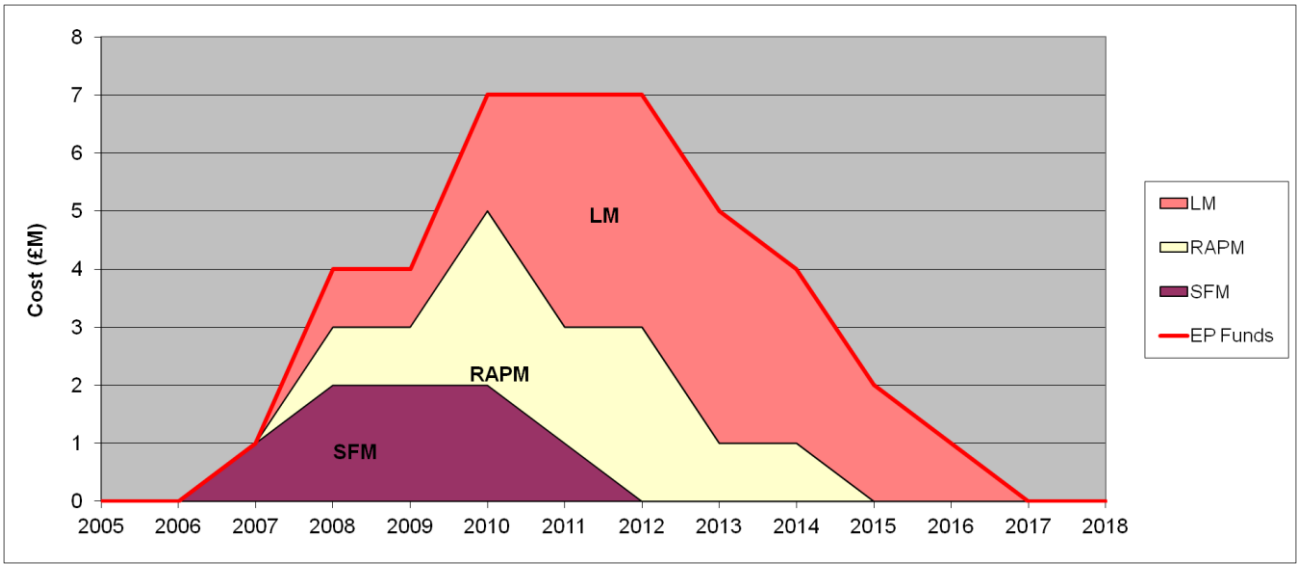
The Precision Attack of Distance Targets (PADT) Programme.

The PADT Programme (universally referred to as "Paddy") is made up of 3 key capability projects (listed in order of increasing range):

- Sensor Fuzed Munitions (SFM).
- Rocket Assisted Presision Munition (RAPM).
- Loitering Munition (LM).

The Profile.

This is the funding profile for the Programme over the next 12 years:



The year is 2005 and the STP (Short Term Programme) is agreed out for 3 years (real money), but forecast for 10 (fantasy money).

How Procurement Works.

The shortfall in *Capability* is identified and the *Requirements* of the Capability are identified. Some work is carried out as to the general concepts and how you hope to solve the problem and this is approved (Initial Gate) – this includes estimated costs (fantasy money).

Some research is done on the types of solution and then a clear plan worked out as to what you are going to buy (Main Gate). At Main Gate the plan is *Approved* and spending authorised (real money).

The programme then gets underway and the equipment bought into service, exactly as forecast by the plan, with no delays, at the cost approved, and to the performance required.

Or not…

If something goes wrong and a project is delayed, any money that couldn't be spent is lost, in the Block Adjustment. This is because delays are so common we plan to spend more than we have – so your *delay* pays for someone else's *on time* project.

Any money that has to be found in subsequent years has to be taken from other programmes. Usually by deferring them (push them to the right) (but this only make the problem worse in later years), by cutting projects completely, or by accepting less equipments, or less capable equipments.

If a project runs out of money and needs more, a Review Note is required to authorise more money to be spent on the Programme – but no extra money is actually provided – you have to find that by cutting other projects. If a project saves money this can be transferred to another project (using a Mantell Protocol) but only 10% of the programme value – any more requires a Review Note.

If performance isn't as good as expected and Key Requirements are affected a Review Note is required to authorise the change – and has to be agreed by the Customer.

Technology Readiness Levels[1].

The level of risk associated with new technology is assessed by the Technology Readiness Level (TRL) on a scale:

TRL 1	Idea exists on PowerPoint only – an Engineers wet dream…
TRL 2	We've had a go with a prototype – and something happened…
TRL 3	We've had a trial and it worked some of the time…
TRL 4	We've had a proper set of scientific trials and we know the results…
TRL 5	We've used it on operations, killed lots of bad guys and the boys love it…

Needless to say, the higher the TRL the less risk, the more likely it is to be on-time, on-budget and actually work…

Approval Level.

The Approval Level (APL) of a project is a measure of how well it is perceived in the Corridors of Power, so Body Armour and systems to avoid Fratricide are highly political and likely to be approved, whereas weapons to fight the Cold War against the Russians aren't… This is especially relevant if a Review Note is required…

The procurement process has a couple of hurdles that can stop a project but the most important is Main Gate (where the approval to spend the majority of the project money is made). If approval is not made at this point the project is delayed - please note that this is independent of the actual state of the technology as expressed by the TRL, but a high TRL can be a powerful argument for getting the approval increased.

APL 1	Nothing is known about the project apart from its abbreviation.
APL 2	The concept and the name has been explained in a sexy PowerPoint presentation
APL 3	Some of the scientific basis for the project actually makes sense.
APL 4	Reports from current operations indicate a pressing need for the project.
APL 5	There is high level political support for the project.

[1] There are nine levels in the real thing: http://en.wikipedia.org/wiki/Technology_readiness_level.

How The Game Works.

Each side makes an argument per year for projects – these could be to raise or lower the TRL (something that is normally the domain of the Contractors), raise or lower the Approval Level (something that is normally the domain of the MOD) or make an argument for something else

Things that affect projects are then noted and added to the project forecast sheet.

For a project to continue as forecast the TRL or less must be rolled on a D6. If there is a failure, the Umpire will decide on the problem and the team must decide on the solution. Examples of the types of problem can include:

- Contractor Delays.
- International Traffic in Arms Regulations (ITAR) delays on US systems.
- Product failure at a trial.
- Cost Increase.
- Requirement Change.
- Budget Cut.
- Defence Review changes priorities and the project requires a Review Note.

Most of these will mean that the profile changes. This is managed by looking at the "Silt Diagram" of the Profile in the Excel spreadsheet and adjusting it. Any changes that result in the profile "going over the line" have to be adjusted immediately in the first 3 years of "real money" but can remain in "fantasy money" - until the game moves on!

For this phase the Players don't have to make arguments about the changes they make by moving money horizontally to earlier or later years – the Umpire just has to agree they are realistic. This applies to money saved (moving money between projects), which can be transferred to other projects (a Mantell Protocol) (but only up to 10% of the original value of the project (rounded up) – any more requires a Review Note).

If the player needs more money due to a change in the profile he can argue for a Review Note (this is an additional argument that turn). If he is successful, then more money is approved for the project (taken from some other program elsewhere). Crucial to the success or failure of the Review Note is the APL - if the argument succeeds, the money is earmarked but cannot be spent unless the APL or under is rolled.

At any time the player can "Go for Main Gate Approval" where the APL or less must be rolled on a D6. However, if there is a failure the project is delayed immediately for a year and everything "moves to the right". If the "Main Gate Approval" roll is not made by the time 50% of the money is spent, the project is cancelled and the remaining money transferred elsewhere.

Occasionally the players should be given £1M or £2M at the end of the year with only 3 months to spend it. Occasionally an arbitrary cut should be made to a year (in the 3 year "real money" period) for £1M or £2M.

After 8 Turns (or the players get bored) the Game ends and the results are compared with the Players secret personal briefings…

Matrix Games

What are Matrix Games?

Matrix games are different to normal Wargames. In most of those games you compare lists of statistics and peer at complicated books of rules containing someone else's idea about what things are important, before rolling a dice. It takes a long time and can be very difficult to explain to a newcomer. Instead, in a Matrix Game you simply use words to describe why something should happen, the Umpire or the players (or both) decide how likely it is and you roll a dice. If you can say "This happens, for the following reasons..." you can play a Matrix Game.

Where did they come from?

The Chris Engle Matrix Game was created in the USA by Chris Engle, and published in 1992. Chris wanted to create a system by which it was possible for a player to "role-play" anything from a single person to an entire country. Chris felt that previous numbers-ridden game designs essentially missed the point (and anyway were too complicated and boring). What he wanted was a system that could take into account anything the players though was relevant, including intangible elements such as culture, beliefs, and perceptions of themselves.

Taking as his starting point the work of the philosopher Emmanuel Kant, Chris began to develop a "matrix" of cue words that would form the framework for his "model". To this he added George Hegel's idea that argument and counter-argument (thesis and antithesis) lead to a synthesis or consensus of ideas.

Thus the basic idea of the Matrix Game was formulated. Over the years the actual "matrix" of cue words has been dropped, but the name has stuck. Like all good ideas, the Matrix Game is very simple in concept, but has huge potential in that it can be adapted to fit any game setting. Matrix Games have been used by the UK MOD with the Unmanned Underwater Vehicle capability, education of Consultants in UK MOD Procurement systems and in the preparation by HQ ARRC for the deployment into Bosnia. They have even been used by the US DOD.
Game arguments

In a Matrix Game, actions are resolved by a structured sequence of logical "arguments". Each player takes turns to make an argument, with successful arguments advancing the game, and the player's position. There are a number of ways you can do this and each has their own strengths and weaknesses, some of the most popular are:

- The "Three Reasons" system.
- The "Pros and Cons" system.
- The "simple narrative" system.

You just need to experiment to find which system best suites your circumstances, player audience and style of play.

The "Three Reasons" System

In this system each argument is broken down into:

- Something That Happens.
- Three Reasons Why or How.

For Example:

In a Peninsular War campaign, Wellington might argue:

I shall fortify the town, and I am able to do this because:
- I have a ready source of trained manpower.
- I have an experienced Engineer in command.
- The British Government has recently sent me the money with which to pay for the work.

The arguments themselves are judged by the Umpire based on inherent likelihood, historical precedence, personal experience, and his own judgement (and quite often the other player's judgement), and a chance of success arrived at (percentage dice normally being thrown to see if the result was achieved, but you could use any combination of dice or random number generator that you like – or the Umpire decides based on military judgement and the justice of the circumstances).

The advantage of this system is that it works well where there are a number of teams of players and you have a strong central Umpire. You have to be careful, however, that other players don't interrupt or heckle with a reason why these arguments might not work - that is the role of the Umpire. Of course, if it turns out that one of the players is more knowledgeable about the situation than the Umpire, the Umpire can lose credibility and the game becomes less effective.

The "Pros and Cons" System

In this system each argument is broken down into:

- Something That Happens.
- A Number of Reasons Why it Might Happen.
- A Number of Reasons Why it Might NOT Happen.

For Example:

In a Peninsular War campaign, Wellington might argue:

I shall fortify the town, and I am able to do this because:
- I have a ready source of trained manpower.
- I have an experienced Engineer in command.
- The British Government has recently sent me the money with which to pay for the work .
- The weather is fine so they can work interrupted.

This represents 4 x Pros - so at this point the other players are invited to point out Cons:
- The best source of trained manpower is the British regular troops, but these are on the frontier guarding the approaches. The Portuguese troops are less well trained or led so the first reason is weak.

- The weather is hot and there is little access to fresh water so there is a high chance of disease.

This represents 2 x Cons (or 1 x Con and cancels out 1 x Pro) - so at this point there is a net result of +2 Pros.

The overall argument is then adjudicated by taking 3 x D6 with a base chance of 10+ (this is an exact 50% probability - as, without any evidence for or against the outcome, the chance is even that it may or may not happen). So, in this case, we would roll 3xD6 and add 2 to the result, trying to score more than 10.

The advantage of this system is that you formalise the Pros and Cons of an argument and the role of the Umpire becomes that of ensuring that the Pros and Cons carry equal weight - perhaps making compelling reasons worth two Pros and two or three weaker reasons against only worth one Con. You need to ensure you don't end up with a list of trivial reasons or the player re-stating a reason already accepted in a slightly different way in a desperate attempt to gain points. One very useful product of this system is that it provides reasons for failure should the dice roll not succeed. In this case the two major failure outcomes would be shoddy work by lazy and untrained conscripts or work incomplete due to disease reducing the number of personnel. You can also more easily run the game with very knowledgeable players.

Personally, I like to have a "narrative bias" in the games I run, making the base success chance of 7+ on 2 x D6 (which is a 58% chance). This also has a significant increase / decrease in success probabilities for each point, which I use to encourage players to come up with a few good reasons, rather than a laundry list of lots of trivial ones.

This system is also very good with students when considering tactical problems in a syndicate wargame and I would recommend it as the most preferred way of adjudicating Matrix Games.

<u>The "Simple Narrative" System</u>

In this system an argument simply consists of a narrative that advances the player's position in the game. The players states what happens next in the evolving story that is the current situation. The chances of success or failure and exactly what those results look like are judged by an Umpire or, more usually, by another player taking it in turns.

The advantage of this system is that it is extremely simple and accessible to players of all ages and abilities. The disadvantage is that it lacks structure and, if you get the players to assign the chance of success, you could get inconsistent and arbitrary results.

<u>Notes about arguments</u>

The important thing to remember in a Matrix game is that arguments can be made about anything that is relevant to the scenario. You can argue about your own troops or about the enemy, the existence of people, places, things or events, the political leadership back home, the weather, plague, disease, public opinion, and you can even argue for changes in whatever rules you are using. With a bit of imagination, common sense and rational thinking, it is possible to present persuasive arguments as to what should happen in any scenario - from traditional military campaigns to the strange world of defence procurement.

When an argument succeeds it remains in effect until another argument stops it. This means that if you are Napoleon and succeed in arguing that you march on Moscow, you will continue to move forward, every turn, until you get there - unless of course someone argues that you don't...

Optional Rule: If your argument fails to succeed, you get a "Fail Chit". This is retained and can be used at a later stage in the game to re-roll your dice (if the score wasn't what you wanted). This helps balance the game and prevent an unlucky player getting placed at a big disadvantage early in the game and being demoralised.

If two arguments are in direct opposition ("This happens" - "No it doesn't") they represent a Logical Inconsistency since they cannot both be true. The earlier argument has already happened, so it is impossible for it not to have happened. The later player may argue that the event is reversed, but this tends to make for a poor narrative in the game and should be discouraged (see Playing Tips below).

Resolving Conflicts

If two sides are placed in direct Conflict, they resolve the outcome by making additional arguments. The players both make arguments as to the outcome of the Conflict situation they are in, and the strength of the arguments is decided upon by the Umpire. I usually allow the player with an advantage to choose who should go first (no Conflict situations are every really equal - but if you felt they were, you could make the players write their arguments down in secret).

They then both roll the dice, together, to see who succeeds. In a Conflict situation, one side must succeed and one side must fail. If both succeed, or both fail, they must both roll again, and again, until one succeeds and the other fails.

For Example:

So if one player makes an argument that he is attacking the town with his troops and the other player makes an argument that he is improving the defences, the arguments are judged normally. If the attack argument fails, the attack does not take place at that time, and there is no conflict. If instead one player argued he was attacking, and the other player argued that the attacker ran away, it would be a Logical Inconsistency (since they both can't be true) and would be resolved in turn order.

If the attack argument succeeds, a Conflict situation will be inevitable, but if the defender's argument about improving the defences succeeds, he might have an advantage in the ensuing battle. Let's say that his argument does not succeed because the Umpire judged that he really didn't have sufficient time to get the work done, made the argument Weak, and it failed.
The attacking player elects to go first and argues that he captures the town. The other player argues that he is repulsed with heavy losses. They then both dice to see who wins, with the likelihood that the defender will have to roll higher, because the town’s defences were not what they could have been.

Comments on Resolving Conflicts

This may seem a little arbitrary and all dependent on a good Umpire but, in practice, it works very well. When a player makes a particularly good argument it is obvious, normally from the rueful grins and grudging nods of the opposition, that he will have a good chance of succeeding.
Playing Tips

Some players get caught in the Logical Inconsistency trap by arguing directly against another player who has already had a successful argument. This puts them at a disadvantage because, not only has their argument got to succeed, but they then have to roll off against the other player. It is far better to be a little more subtle. If he succeeds in arguing that he attacks you, you might argue that the attack does indeed take place, but was ill-timed and badly co-ordinated - which might place you in an advantage in the resulting battle.

It helps the players to insist on an argument always failing if you roll very poorly . Nothing is ever certain, and the player can look on it as not necessarily a total failure, but simply that it didn't happen at that time. It might happen later, if they argue again.

Conversely, you will need to veto stupid or trivial arguments. I simply say that I don't believe the argument is realistic and give them a chance to come up with something else.

Secret arguments

There will be some cases where you want to hide from the other players the thing you want to argue about. It could be that you have booby trapped a piece of equipment you think your opponent will use, or that you have swapped the vital blueprints for a set of fake ones in case the safe is broken into. In this case you simply write down your argument on a piece of paper, and present it to the Umpire announcing to the other players that you are making a secret argument. The Umpire will make a judgment and you will roll the dice normally, but the other players have no idea what it is about.

You should be careful, however, that the players don't make too many secret arguments. This can ruin the game's atmosphere and reduce the focus, so that the game drags on unnecessarily. They must only be permitted when they refer to quite specific things or events. An argument about gathering information from a spy, in most games, will be quite a generic argument and should be argued openly. Similarly Arguing about the placement of an IED to catch forces moving down a route should be made openly as the results will take effect the same turn. It is only really for secret things you need to establish several turn in advance.

You may want to limit the players to only a single secret argument per game.

Big Projects

Depending on the level of the game, some actions and events represent such a large investment in time and effort that they require multiple arguments in order to bring them to fruition. In a Spy Game, recruiting a spy would take a number of arguments in order to make the spy do everything you want them to. You must make the initial contact, followed by persuasion to carry out a minor act (like stealing a copy of the Pentagon telephone directory), and followed by more important spying actions (like photographing secret plans). It would be

unreasonable to argue in a Spy Game that you recruit a girl from the typing pool to assassinate the head of the CIA in a single argument.

The level of the game will determine what sort of arguments are Big Projects, so in a game about Wellington's action in the Peninsular War a single argument about fortifying a town would be perfectly reasonable. In a game about individual Refugees in Bosnia, building a house might take several successful arguments. A Matrix Game can easily be at the Strategic level involving the actions of Governments and Countries; or equally at the Individual level involving the actions of you and your close friends.

As a rule of thumb, a Big Project should take no more than 3 successful arguments; otherwise the game is dominated too much by a single event. You should also remember the principal that once an argument has started an ongoing action, it will continue until another argument stops it.

This means that the 3 stages in, for example, building a house could logically be:

- Acquiring the funds (Can I get a mortgage?).
- Starting to build the house (When will the right builder be available?).
- Completing the building of the house (Are they ever going to finish it?).

Killing arguments

It often arises in Matrix Games where one of the players argues that something happens to kill off one of the other player characters. This is, of course, permitted as you can argue about anything in a Matrix Game, and it will be assessed like any other argument. It may well be less likely to succeed as the player characters in the game are usually chosen from the survivors of a particular historical event, but it is not impossible - nor should it be.

If a character is killed off in a game, however, it does not prevent the player from continuing to make arguments.

Player Roles and the Level of the Game

When you are designing a Matrix Game it is worth thinking about the level at which the player's roles will be operating in the game. In is usually better, and produces a more balanced game, when the level on which the player roles are operating are broadly similar. It would be difficult to get a balanced game if 3 of the players are playing Generals in command of vast Armies, and another player is playing a simple individual soldier.

Levels of Protection and Hidden Things

At the start of a game there are certain things that are not readily accessible to some of the player characters. For example, in a Cyber-Security Game the secret plans for a new submarine would be heavily protected. Equally, in an X-Files game, the location of the secret government base would be carefully concealed.

Things that are hidden or secret require a successful argument merely to find them. Things that are protected will require successful arguments to overcome the different levels of protection. A secret government base may declared by the Umpire to have 3 levels of protection: Its hidden

location, its boundary fence, and the security guards, all of which must be overcome by successful arguments before the base can be penetrated.

Having Battles and Fighting

Many players feel uneasy about the concept of the result of a single argument (and dice roll) deciding the outcome of a battle or a fight. This is natural, but they should remember that the Matrix Game is about the entire campaign and it is the results of many battles or fights, rather than a single one, that is important.

It is up to the umpire to decide exactly what the outcome of the battle or fight was. He will make a judgement, depending on the strength of the arguments and the difference in the score on the two dice rolls, as to how heavy the defeat was or just how narrow was the margin of victory. If the outcome was very close, the loser may have an opportunity to withdraw in his next turn with most of his forces intact.

More information

More information and examples of recreational Matrix Games can be found at: http://www.mapsymbs.com/wdmatrix.html .

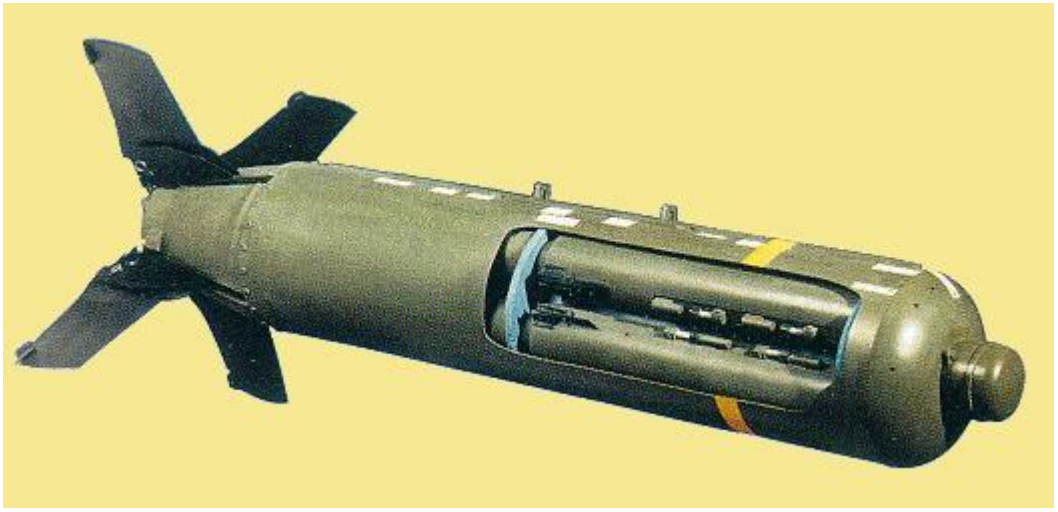
The original Chris Engle Matrix Game site is here: http://hamsterpress.net/ .

A very good website that has developed the Pros and Cons system: "The Open Ended Machine" is here: http://theopenendedmachine.blogspot.co.uk/.

Disclaimer

This game represents a cartoon parody of the real procurement systems and Defence Contractors and similarity between the systems or entities represented in the game are purely coincidental and not intended to give offence.

Sensor Fuzed Munition (SFM).



This is a standard artillery shell with seeker sub-munitions intended for attacking large scale armoured formations. The warhead technology is relatively mature, but the seeker has some problems.

The Technology Readiness Level for the programme is 3.
The Approval Level for this Project is 3.

The project is worth:

2007	2008	2009	2010	2011	2012	Total
1	2	2	2	1	0	8

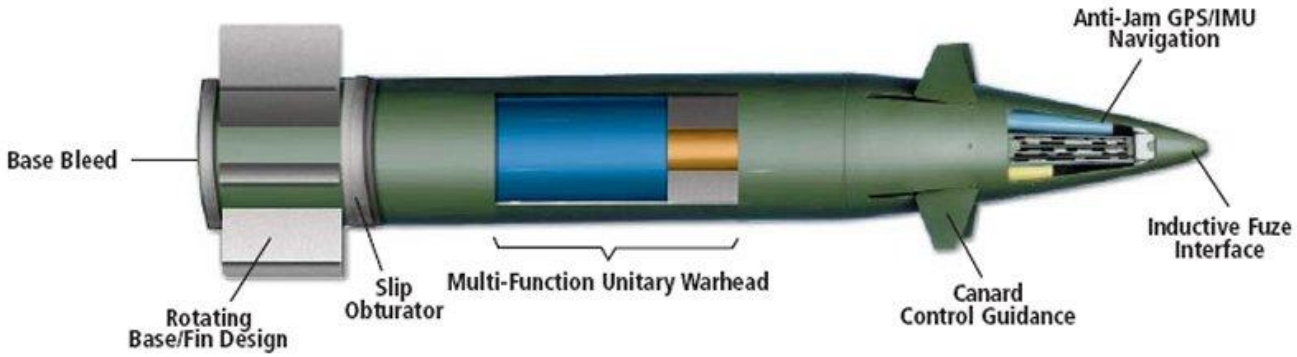
The prime contractor is BEA Systems.

Key Requirements:

- 30Km Range (35 Km desirable) (Current range 25Km).
- Have at least 2 sub-munitions (3 desirable).
- Be able to discriminate targets.
- 90% Kill Probability.
- Weight 420kg
- Cost per round: £10,000

It is intended to buy 400 rounds initially with a training use of 10 rounds per year.

Rocket Assisted Precision Munition (RAPM)



This is a rocket assisted artillery shell with a GPS guided warhead intended for attacking high value targets in Phase 1 (the so-called "competent bomb").

In Phase 2 it is intended to leverage the SFM programme by introducing a seeker warhead (the "smart bomb").

The rocket assistance and GPS technology is relatively mature, but the dependency on the SFM project has some risks.

The Technology Readiness Level for the programme is Phase 1: 4 and Phase 2: 3.
The Approval Level for this Project is 4.

The project is worth:

2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
0	0	1	1	3	2	3	1	1	12

The prime contractor is Raltheon.

Key Requirements:

- 40Km Range (50 Km desirable) (Current range 25Km).
- Be able to hit precision targets (GPS)
- Be able to discriminate Targets (SFM)
- Warhead lethality no worse than existing warheads.
- Cost Per round: £6,000 (Phase 1)
- Cost per round: £14,000 (Phase 2)

It is intended to buy 500 rounds in phase 1 with a training use of 50 rounds per year and to buy 250 rounds in phase 2 with a training use of 20 rounds per year.

Loitering Munition (LM).

This is a relatively long range precision attack munition with the ability to loiter in the target area for some time and a number of different attack modes. Some elements of the technology are reasonably mature, but it is very expensive and depends on the ability to locate targets.

The Technology Readiness Level for the programme is 3.
The Approval Level for this Project is 2.

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
0	0	1	1	2	4	4	4	3	2	1	0	22

The prime contractor is LM (Mockheed Larkin).

Key Requirements:

- 800Km Range (1000 Km desirable).
- Be able to hit precision targets.
- Be capable of real-time tele-guidance.
- Be capable of autonomous anti-radiation operation.
- Warhead lethality with restricted collateral damage (30m blast zone).
- Cost per round: £40,000.

It is intended to buy 100 rounds initially with a training use of 10 rounds per year.

Game Roles

The game roles are as follows:

- Raltheon
- Mockheed Larkin
- BEA Systems

- HQ Land Command (The User)
- The DEC (Defence Equipment Capability) (The Sponsor)
- The Defence Procurement Agency (The Acquisition Agency)

Secret Personal Briefings

Raltheon

You are the fifth largest Defence Company on the Planet. You are arrogant and secure in the knowledge that your products are the best quality and most reliable there are (they are also the most expensive) (and usually late).

- Be American and avoid any risk to your projects.
- Screw the Customer for every penny.
- Make sure any other project fails.

Mockheed Larkin

You are the largest Defence Company on the Planet. Your plan is to take over the world's defence industries, a piece at a time. You are occasionally able to take a hit in profits or work with someone else if it means you increase your market share in the end.

- Invite everyone else to "see the bigger picture".
- Increase your market share but be really polite.
- Sell expensive training systems to go with other people's equipment systems.

BEA Systems

It is not generally known that you are the second largest Defence Company on the Planet – and you are a British Company (well – at least partly). You have no difficulty in blackmailing the British Government over jobs or bribing Saudi Ministers if it means you get the contract, after all you aren't selling knitting patterns…

- Make sure your systems succeed.
- Remind everyone you are a British Company.
- Entertain lavishly and extend your influence in the corridors of power.

HQ Land Command

You are the User in all this Procurement stuff and you set the Requirements! You need stuff in service NOW and out in Afghanistan and Iraq tomorrow! You are, after all, fighting a couple of wars here!

- Change your mind about priorities at least once.
- Never worry about anything except getting the equipment.
- Change or add a Key Requirement in at least one system.
- You favour the Sensor Fuzed Munition project (because it will deliver early!).

Defence Equipment Capability (DEC)

You are the organisation that looks ahead and keeps your eye on the big picture. You get the money for all the projects and keep them in line, as well as handling the politics of Defence Budgeting. You are based in MOD "Main Building" where all the real power is…

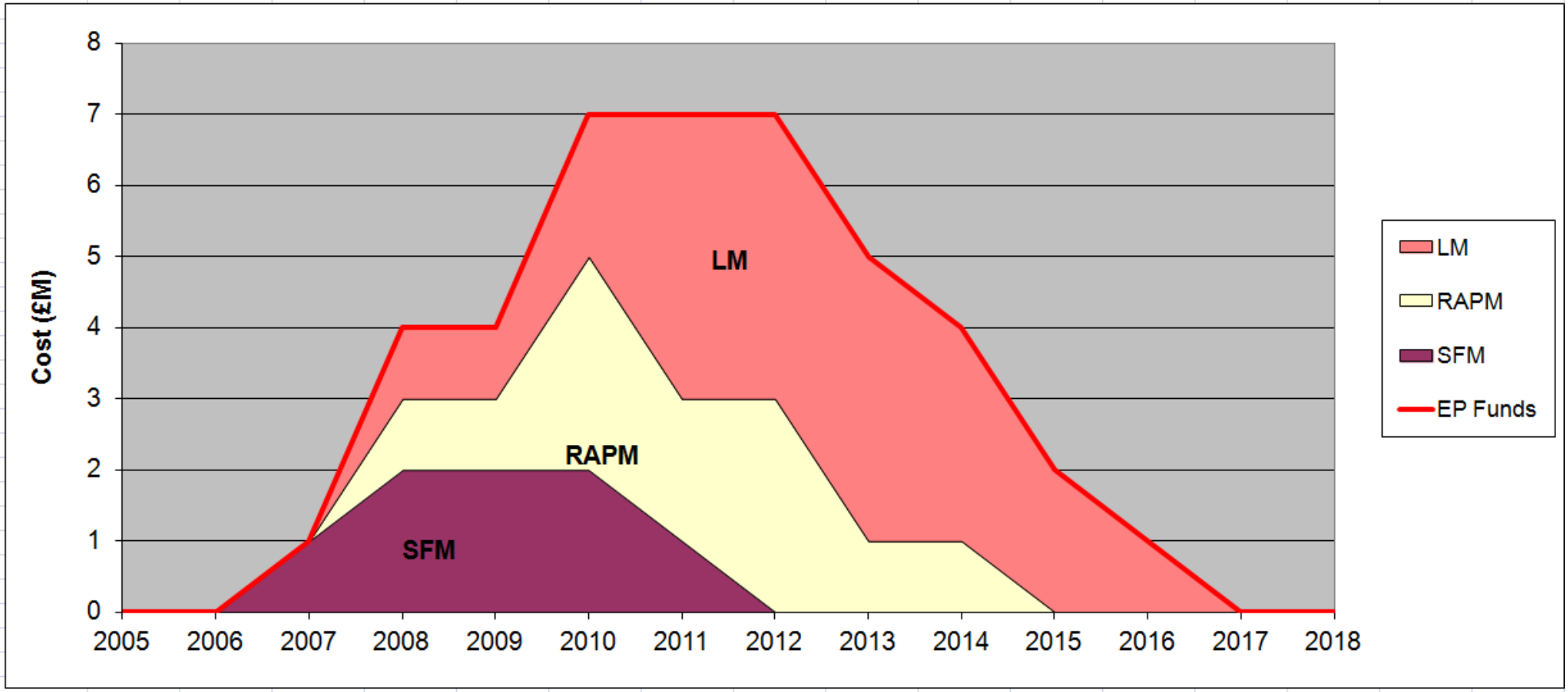
- Tell the others to "Grow up and get on with it" at least once.
- Make sure projects come in on time.
- Make an argument about an "Urgent Operational Requirement" for some additional bit of kit (not the ones listed) at least once (after all you have many more things to think about than just these Projects).
- You favour the Loitering Munition project because it is the flagship programme (has the most money allocated) and is similar to an Israeli idea - so it must be good!

Defence procurement Agency (DPA)

You are the organisation that actually buys this kit. The biggest problem is that nobody properly considers all the lines of development – and not just the Equipment – that is: Personnel, Logistics, Infrastructure, Training, Doctrine, Information and Organisation. Too often the emphasis is placed on the equipment and it cannot be properly supported through its life.

- Demonstrate Innovation in Procurement (it doesn't matter if it works).
- Re-use technology from one system in another.
- Make an argument about the Defence Lines of Development (DLODs) at least once.
- You favour the Rocket Assisted Projectile Munition project because the paperwork is really thick and therefore has the highest approval with the Defence Scrutiny community.

Profile



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
SFM			1	2	2	2	1								8
RAPM				1	1	3	2	3	1	1					12
LM				1	1	2	4	4	4	3	2	1			22
Total	0	0	1	4	4	7	7	7	5	4	2	1	0	0	42
Forecast	0	0	1	4	4	7	7	7	5	4	2	1	0	0	42