

RED TEAMING & WARGAMING

“Understand – Anticipate – Adapt – Win”

(or to put it another way, ‘Why don’t the competition or the environment ever do what we assumed in our plan?’)

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Executive Summary

Executing strategy, or rather aligning desired outcomes with actual outcomes, is inherently difficult, often conducted in a constantly changing environment; we probably only have incomplete information and may only have a desired direction of travel without clear goals, yet we are still required to deliver results. Diving straight into the execution phase without robust planning would be foolish; however, when we do start a planning phase, a common failure is that we don’t see things as they are; we see things as we are. True objectivity and the ability to see things through the prism of somebody with a different perspective and agenda is a rare quality, all the more so when we are wedded to the brilliance of our own ‘certain to win’ plans.

This paper introduces the complementary but discrete activities of Red Teaming and Wargaming which are extensively used in intelligence and military circles to stress-test the underlying assumptions in a plan, and then to role play its execution, simulating high-consequence decisions in a low-risk environment in order to identify knowledge gaps, new risks and further actions required. For important decisions, plans or campaigns, the effort in implementing a Red Team, or scenario modelling through Wargaming, is likely to be a fraction of the cost of failure or the reward for success. The requirement is not for more resources but for an open mind; the point is to work smarter, not harder. For complex and changing situations, improved critical analysis and objectivity in planning can be major factors in delivering desired outcomes. In an age of ever increasing pace of change and competition, Red Teaming and Wargaming are essential tools to **Understand** our own environment and that of our competitors or target audience, **Anticipate** third-party actions and then **Adapt** our plans to ensure that we deliver success and **Win**.

INTRODUCTION

“Most people, sometimes in their lives, stumble across the truth. And most jump up, brush themselves off, and hurry about their business as if nothing had happened.”

Churchill

Disaster, scandal or failure forces us to face the truth. This can be painful as admitting personal or organisational failing is hard. All too often we are faced with daily accounts of this in the media, whether it is Members of Parliament’s (MPs) expenses, the financial crisis or gross failures of leadership in global organisations. The majority of the individuals involved did not wake up in the morning and decide to fail themselves or their organisation. Most people and organisations want to win, beat the competition and deliver an outstanding service. If MPs, senior bankers and business leaders had had the ability to gaze into a crystal ball and accurately predict the future, one would assume that most of them would have re-evaluated their planned actions and taken a different path to achieve an alternate outcome. That same crystal ball would be invaluable before we sign off a business or campaign plan; however, when we choose our strategic direction or make our plans, it is always with imperfect knowledge and based on a number of assumptions, many of which may be significant, implicit and/or untested. Military strategists and planners have been aware for many years of the joint dangers of cognitive biases and hidden assumptions, and have developed the related concepts of Red Teaming and Wargaming to mitigate the associated risks earlier, less painfully and less expensively than through failure. Application of these concepts should not be financially or resource intensive. They can produce a disproportionate return from only a limited commitment of resources.

At its core, Red Teaming is the use of objective parties to try and view a situation from the perspective of a competitor, adversary, customer or another third party in order to challenge the implicit and explicit assumptions within our plan. The outcome of successful Red Teaming is a plan that has been rigorously stress-tested from a number of angles; this will highlight new opportunities and identify risks, threats, vulnerabilities and contingencies that require further action.

The Wargame allows us to put our plan to the test in an opposed role-play exercise so that we can **understand** and **anticipate** the likely outcomes, advantages and disadvantages of the plan, and if necessary **adapt** the plan in order to **win**. The output of the Wargame is a greater understanding of how critical decisions may affect the outcome, and for those decisions to be made based on a judgement of acceptable risk. Additionally, tangible value can be delivered by allowing inter-departmental personnel to have clarity in common purpose and priority efforts, and to understand the wider context of their actions, and thereby synchronise their activities and make better collective decisions in the allocation of scarce shared resources.

These are not new concepts; they have been used successfully by military planners and leaders for centuries to attempt to stack the odds in their favour. At Mission Excellence, our experience of Red Teaming and Wargaming is grounded in theoretical knowledge from top military and business academic institutions as well as practical experience and insight gained during complex training exercises and operations. The purpose of this paper is threefold:

- to highlight how Red Teaming can assist in the development of plans for an organisation of any size or function,
- to illustrate the benefits of visualising the plan by simulating the execution phase in the Wargame, and
- to demonstrate that the main requirements are the right organisational and behavioural approach rather than any significant commitment of resources and effort.

RED TEAMS AND PLANNING

“We can't solve problems by using the same kind of thinking we used when we created them.”

Albert Einstein

Overview

In the famous children's story, *The Emperor's New Clothes*, Hans Christian Anderson tells the tale of two tailors who hoodwink the emperor into believing they have made him a beautiful set of clothes, from fabric so light and fine that it looks invisible to anyone who is too stupid and incompetent to appreciate its quality. Each of the emperor's trusted advisors, having been told of the claim by the tailors, reviewed the invisible, non-existent suit of clothes and proclaimed them extraordinary, for fear of being revealed as incompetent and losing their job. Finally, a child who had no important job proclaimed the truth: the emperor was naked and had no clothes.

This may not be directly analogous to the CEO and her advisers; all are after all on the same team planning in good faith, however direct reports and internal subject matter experts are unlikely to be the ones telling the CEO what she doesn't want to hear, or pointing out that their own division's strategy is fundamentally flawed. However the truth will generally win out and a failure to consider other perspectives will be exposed. Sometimes an objective (or even naïve) viewpoint will provide a valuable new angle to a situation. Red Teams fulfil the function of the child in Anderson's fairy tale; they are charged with telling the CEO that the plan might not deliver the effect she hoped it would, but in doing so, also highlight the possible alternative courses of action that might better deliver success. Put simply, Red Teaming is the art of applying independent critical thinking from a variety of perspectives, to challenge assumptions and fully explore alternative outcomes so that we can enhance our plans, understand risks and perhaps most importantly increase our opportunities.

The military uses Red Teaming to consider an operation from the point of view of an adversary, partner or other influential actor. Homeland Security uses Red Teaming to think like a terrorist to identify security weaknesses and potential targets. In the commercial world, Red Teaming could be a critical peer review of a business proposal from both competitor and customer perspectives. Red Teaming as a process is agnostic; a business of any size can aim it at just about any issue from strategy development, competitive analysis, or a change management programme to part of a strategic risk mitigation exercise. Whatever the issue, a second opinion from an independent critical perspective will be invaluable as we tend to make better decisions when presented with a range of possibilities, no matter how 'off the wall' some of them may seem.

Unfortunately, we never plan with perfect knowledge. Unclear priorities, excessive internal focus, poor intelligence (on other parties), misalignment of incentives and a rapidly moving world all contribute to the fog and noise within which plans and decisions are made. Plans have to be based on assumptions and our assumptions are only as good as our understanding. The better we **understand** the environment and the issue, the better we can **anticipate** the potential problem areas and **adapt** our plans and execution accordingly.

Benefits

“Where Red Teams exist in active and vigorous forms...organisations have almost invariably outperformed their opponents.”

Hicks and Associates, “Thoughts on Red Teaming”

So how might a business use Red Teaming and how might it benefit from the practice? Imagine that you found your competitor’s business plan for the next 3 years on a train; how would you change your plan if you got inside the head of your competitor or even better, your customer? The Red Team is our best attempt to simulate that scenario. For big decisions, the effort of a Red Team activity is likely to be a fraction of the cost of failure or the reward for success.

When we create a new plan, the output is not a glossy document or polished PowerPoint presentation which now just requires implementation – it will never work out like that anyway; the real value is the thought and brainpower which went into the process of first developing it, and then testing it. It could be that the analysis of our assumptions proves them to be robust and no major changes are required. In this case, the process of Red Teaming might still have been very beneficial, as it will have challenged how the organisation thinks and given increased confidence that our plan will achieve the desired effect. Alternatively, our plan may require significant change following a Red Teaming event.

Red Teaming is not an oversight function, a search for a worst-case scenario, or a silver bullet to solve all problems. However, when carried out correctly it can offer a hedge against failure, guard against complacency and identify powerful insights that may have been missed. The aim is not to humiliate or score points, but simply to improve the chances of success. Often the main problem is with our own organisational culture and cognitive bias; we don’t always see things as **they** are; we see things as **we** are. This makes Red Teaming difficult to do and even more difficult to do well. We may not ever have the luxury of finding our competitor’s business plan on a train but successful Red Teaming might be the closest we get – an unparalleled opportunity to stack the odds of success in our favour.

Implementation and the Critical Success Factors

The ideal Red Team will consist of 3 types of people:

- Experienced operators (who can simulate adversarial thinking)
- Analytical thinkers (who deal in an evidence-based approach)
- Creative thinkers (who offer different perspectives)

However Red Teaming does not require permanent staff in those roles or even any significant commitment of people or time. It does require a certain mindset though. With some careful guidance and facilitation, the Red Team session can be conducted by the same team who formulated the plan, possibly with some form of ‘role-swap’ within the team. This one simple act can significantly reduce defensiveness, releasing people to express opinions, which might have produced more defensive reactions ‘in-role’. With just a little more commitment of time and effort, a different internal group might be tasked to act as the Red Team role playing the competitor or adversary. For significant decisions, a dedicated Red Team should be formed with a defined mandate, clear guidance and expert support.

Like many things, Red Teaming is a simple concept, but that does not mean that it is easy to implement. The critical success factors are objectivity and non-defensive behaviours. As humans we fall in love with the plans we make; it’s your ‘baby’ and nobody can criticise it. When the plan is

complete we step back and congratulate ourselves on the genius behind what we have created; this overconfidence is one of the many cognitive biases that we unfortunately fall prey to. It is hard to expose our plan to criticism as we naturally view critiques as a personal attack; this characteristic can be a significant weakness as it constrains thinking, discourages people from speaking out and excludes alternative perspectives.

To encourage a more productive behaviour, organisations must fully support the Red Team as they will often operate outside of the organisational norms. They will require overt support from the highest levels if they are to achieve their goals and have sufficient influence and credibility to raise issues that might not be welcome throughout the organisation. They need to be empowered - being told what is to be achieved, why and when, but given ownership and freedom as to how. Perhaps more importantly is how the organisation views the output of the Red Team. Acceptance and implementation of the Red Team analysis can only thrive in an environment that tolerates and values internal criticism and challenge. The secret to getting the right individual behavior is to diffuse resistance to personal criticism before the Red Team critique takes place; we need to de-personalise the process. We must understand and incorporate the concept that it is not 'me' that is being probed by critics, it is 'us', and we must appreciate that the critics are actually on the same side as us.

In summary, Red Teaming is the stress testing of the validity of assumptions underpinning a plan. Because of the implicit cognitive biases inherent in making plans, it is essential to make this process objective, intellectually rigorous and impersonal. If this can be achieved, the benefits are at least increased confidence, and potentially the turnaround of a plan which might otherwise have failed. Once the critique of our plan is complete and we have a greater understanding of the influences that may affect it, Wargaming the execution phase against other third party plans is the next complementary step.

WARGAMING

“If I appear always prepared, it is because before entering on an undertaking I have meditated for long and have foreseen what may occur. **It is not genius** which reveals to me suddenly and secretly what I should do in circumstances unexpected by others; **it is thought and meditation**”

Napoleon

Definitions

- **Red Team** – represent competitive or adversarial organisations.
- **Blue Team** - represent your organisation.
- **White Team** – represent friendly or neutral organisations (e.g. the customer for a business).

Real-time and/or computer-simulated Wargaming are extremely intensive in time, effort and resources. However there is a practical solution which is far less so: a role-play of a dynamic situation involving a number of players who each have their own identity, where the execution is played out in fast time. The crucial element of a Wargame is that it involves free play, it is opposed, and (critically) it involves chance – unfortunately the opposition does get a vote! The purpose of the Wargame is to anticipate the likely outcome and to identify the advantages and disadvantages of our plan, all of which will allow critical decisions to be made based on a judgement of acceptable risk. The theory is simple; it might be more helpful to consider an example:

Example: International Joint Command (IJC) Head Quarters (HQ), Kabul, Afghanistan.

Context

In Afghanistan in Feb 2010, I was the Senior Air Advisor, and part of the IJC HQ team tasked with operational planning. The multi-national coalition forces were essentially trying to convince the people of Afghanistan that they would be better off under the Government of the Islamic Republic of Afghanistan than they would be under the Taliban; this was a very complex argument with many nuances. Troop withdrawal was due to commence in 2014 and the coalition forces were also trying to manage the transition of security to Afghan forces, whilst simultaneously still fighting the Taliban insurgency. The people of Afghanistan were the target audience and the Taliban were a competitor of a rather extreme kind for the affections of the target audience. The coalition campaign plan was to focus on the Afghan population in a number of key cities; the aim was to create a ring of 'security bubbles'. Once these had been established the transition of security could be passed to the Afghan forces.

In reality, the problem was even more complex than described above; the people of Afghanistan were not one single 'third party', but many hundreds if not thousands of different tribal groups. Our plan needed to be coordinated but it also had to be adaptable. We didn't really know the local grievances or requirements, as within each bubble there were pockets that had been described as 'bandit country' for a number of years. Success was not so much dependent on a great plan, but on the ability to react to and capitalise on changing circumstances and new opportunities.

Task

The IJC HQ was responsible for the overall multi-national campaign plan in Afghanistan; the country was split up into 6 subordinate HQs, each commanded by a Major General and each with their own operational plan. IJC's role was to ensure that each regional plan was coherent with the overall campaign plan, including the prioritisation of resources and identification of the main effort.

Purpose

The plan had been under development for a few months, so the purpose of scenario modelling the execution (the Wargame) was to refine the commander's action plan and coordinate the disparate regional plans that had been largely crafted in isolation. It was seen by the 100 people involved as part of the planning process, testing assumptions, introducing chance and preparing for the frictions that would undoubtedly occur. The key difference between the Wargame and the planning process to date was that this was the first time that all of the plans had been rehearsed simultaneously, with representatives from each regional planning team and the higher HQ all actively involved. More importantly, it was hoped to identify the minor mis-alignments between the regional planning teams and the intent of the IJC HQ.

Setup

A map and models were used to illustrate the disposition of coalition and Afghan forces in each region. The Chief of Staff (facilitator) explained the rules, conduct, agenda and strict timeline to 'keep the ball rolling' and drive output so that we did not just end up going round in circles in a meaningless discussion. Three whiteboards were used, titled: Tasks, Gaps in Knowledge and Risk. Each whiteboard had a dedicated 'scribe' to capture key points, and an additional scribe was used to capture the flow of the Game. Six hours was allocated to the task.

Roles

Chief of Staff and Scribes. The Chief of Staff is the facilitator and Chairperson. Their conduct of the Game is the critical factor in achieving value; the role requires a subtle combination of intellect, knowledge and facilitation skills. They avoid 'rabbit holes' and ensure that issues requiring further work are captured. This means that the Game maintains pace and focus on the task in hand, rather than getting side-tracked. The scribes had been personally selected for this task; as issues were raised the scribes immediately captured them, under the guidance of the Chair. This allowed the Wargame players to focus on the game rather than capturing the results.

Blue. Blue comprised the individuals who had actually devised the operational plan. They had detailed knowledge of their own regional priorities and critical success factors.

Red. Red comprised intelligence threat analysts, those with an expert knowledge of the competition, in this case led by an experienced operator and Red Teamer. Their task was to consider Taliban courses of action, which included intimidation, subversion of traditional tribal structures, creating power vacuums at district level, elevating religious beliefs above traditional beliefs, discrediting the Afghan Government and seeding doubt about coalition intentions.

White. Our target audience, the people of Afghanistan was represented by NGO and government departments with expert local knowledge, as well as cultural advisors comprising local Afghan experts.

Conduct

The 12-month plan was split into 4 phases of approximately 3 months. The concept of a Wargame is to have an **Action – Reaction – Review** cycle for each move. Each cycle started with the simulated execution of a Blue security plan in each region, followed by Governance and finally Development initiatives. The blocks were moved on the map to illustrate how the plan unfolded. Red then 'played their hand'. Their actions were not crafted in a fantasy world; their input represented reasonable Taliban actions (usually most likely and most dangerous). White reaction was next, which also posed challenges to the plan that made Blue rethink their actions in the review part of the cycle. The Wargame cycle tested the plan, our assumptions and injected some 'black-swan'¹ inputs. A 12-month period involving 6 disparate plans was reviewed in quick time. The driver behind this impressive process was the discipline from the Chief of Staff and scribes to sort 'the wheat from the chaff', quickly and effectively.

Outcomes

The data was captured in a Wargame report, not days after the event, but within hours. It had clear accountable tasks and task owners. Knowledge gaps were filled by drilling into specific areas for more information and effects gaps were filled by refining contingency plans, particularly on the geographical seams of each regional plan. The commander reviewed the output and it was disseminated to the regional commands the following day. What sort of things did we actually expose? The main outcomes were:

- **Identification of new low probability high impact events**, that if occurred would have a significant impact on the overall campaign plan. The result of this was the development of additional contingency plans.

¹ Low-probability, high-impact events.

- **Refinements to the synchronisation and delivery** of the plan. These were the frictions that could not really be anticipated until the execution of each regional command plan was modelled as part of the whole. This led to the development of a detailed synchronisation matrix that prioritised objectives and the allocation of the limited key enabling resources required to support those objectives.
- **Alignment of effort.** The IJC HQ now knew that the plans developed at regional levels would support the overall campaign. This was as much a reverse briefing as it was part of the planning process, as it was a visual simulation of how the plans might play out. Each regional command was left in no doubt as to where the overall priorities lay, what was considered to be the main effort and what change in conditions would allow a change in focus. Without the Wargame, the collective understanding and confidence in the plan would have been lacking when we came to the execution and implementation phase.

Business Context

An example of how Wargaming could be used would be to consider a scenario to launch a strategic initiative. The planners and those who will be responsible for execution form the Blue Team. The Red Team is made up of experienced operators who can offer a realistic simulation of likely competitor reaction. The White Team is comprised of those who simulate the relevant third parties e.g. marketing assuming the role of the consumer. The Wargame sequence would be started by whoever has the initiative at the selected start point. The first team (usually Blue as we are launching our initiative) states their initial execution phase, not the totality of the plan. The other third parties (Red, White etc...) should then consider all possible reactions. The final part of the sequence is to consider Blue's response to the action/reaction sequence of events. Through playing out this sequence a number of times we should enhance the execution of our plan by exploiting new opportunities, and capturing knowledge gaps and risks in light of plausible adversary actions or external events.

Although we are all on the same side (this is supposed to be a win-win exercise), Wargaming can become adversarial and large amounts of data may need to be captured. The role of the facilitator in Wargaming is vital, to not only chair the session but also manage the role and conduct of the process. Arbitration may be required and outcomes need to be accurately captured for further analysis post Game. The facilitator must co-ordinate the process and the Wargame principles must be followed to ensure the integrity of the process and to avoid bias. These are:

- **Impartiality** – We need to avoid being emotionally attached to our plans to remove the likelihood of any one individual having undue influence over the process.
- **Credibility** – If at any time during the Wargame the plan becomes implausible (usually due to third party actions) then the game should be stopped and only restarted once the plan has been modified.
- **Objectivity** – We must avoid drawing premature conclusions and presenting facts or assumptions to support them. Let the game play out.

Benefits

The Wargame may uncover scenarios that were not considered in the initial planning process that would benefit from further contingency planning. It should also provide us with a better understanding of the likely actions and reactions of third parties and an indication of the outcome of our plan, associated risks, threats and opportunities. We must however be cautious in overstating the assessment of the Wargame results. The Wargame is a visualisation of the types of activities that could happen, not a prediction of what will happen. In all likelihood, our competitors will not

react exactly as the game predicted; however, Wargaming or scenario modelling will greatly reduce the chances of being surprised by any counter to our plan.

As with Red Teaming more generally, the important bit is not so much the piece of paper with our now 'robust plan', but the brainpower, time and effort spent scenario modelling the options and contingencies. It may be that various departments (sales, marketing, IT, HR, operations etc...) are too inwardly focussed, creating an atmosphere where individual teams perform well but are not strategically aligned. The Wargame will allow all departments to visualise their own plan and see how their plan fits in with that of the whole organisation. Often the frictions that exist within a strategic initiative are not within the individual department plans, but in how these plans will be executed alongside each other to achieve the common objective. It may be that the self-interest of a single department overly influences high-level decision-making. An understanding of how the sales plan affects the marketing plan, the IT structure or any other department plan will mitigate the threat of unforeseen 2nd or 3rd order effects that may be detrimental to the overall objective. In our experience the single biggest factor affecting organisational and team performance in the execution phase of a plan is clarity. What are we trying to achieve, why, how will the resources (time, people, assets) be allocated and what is our main effort?

During the Wargame we can also identify and confirm the priorities or main effort for each phase. The more high-pressure, fast-moving or complex the operating environment, the simpler the priorities need to be as during a dynamic execution phase, there may not be time to undertake a rigorous re-evaluation of the situation. Everyone needs to understand the big picture, where the priorities lie and what issues will be central to the decision-making process. Wargaming increases the likelihood of everyone pulling in the same direction with the same clear priorities.

CONCLUSION

No two organisations are likely to have the same approach to Red Teaming or Wargaming. This paper suggests a best practice but formalising and/or standardising a process should not be a barrier to creative thinking. As an organisation, if we have the ability to understand the operating environment, anticipate our competitor's actions and then adapt our own plan, then we maximise our chances for success. Red Teaming is not easy. The biggest hurdle for an organisation to overcome is that of behaviour, empowering the Red Team, accepting their objective opinion of our hard work and then valuing any constructive criticism.

Wargaming provides the opportunity to play out our plans and see how the execution phase might unfold. Wargaming is not adversarial. At the end of the day we are all on the same team and the objective is to enhance our decision-making and reach a win-win situation whereby we develop robust plans with suitable contingencies. However, the real value is often in allowing the organisation to synchronise actions and to visualise how the execution of the plan may play out. This helps us anticipate possible events and develops our mental agility to deal with them. It is our ability to **Understand, Anticipate** and **Adapt** that will combine to generate that **Winning** edge, hedging against strategic surprises, identifying and accepting risk, all of which will stack the odds in our favour when we come to actually execute our plans.

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