

# The 4-Box Approach

## “What Does Success Look Like”

An Approach for Determining Critical Event Resolution in a course of action Wargame  
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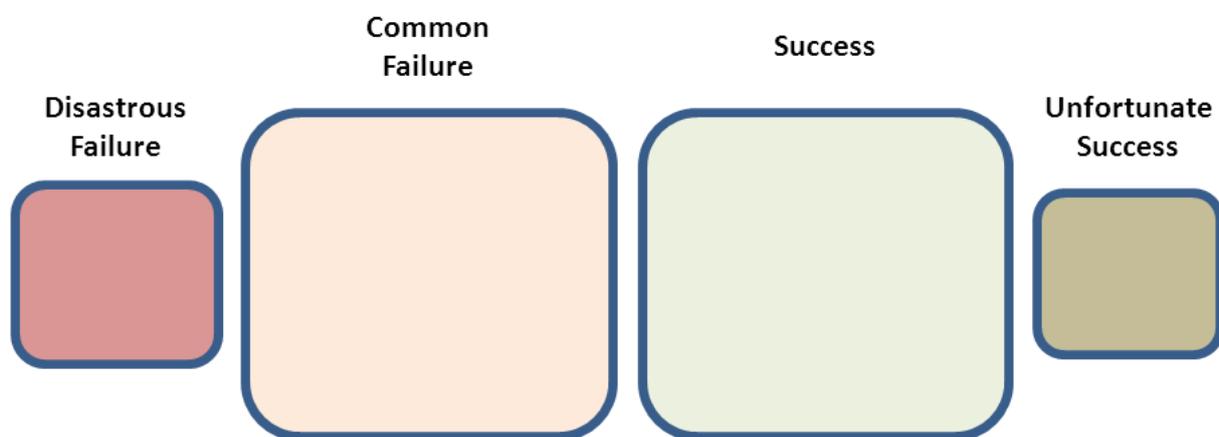
### Introduction

In many cases during a course of action wargame in support of a decision making process it is necessary to examine a critical event that carries with it a probability of success or failure - Destruction of a vital supply route, neutralisation of a High Value Target (HVT) or intercept of a vehicle carrying a terrorist bomb. In a good many cases the basic probability of success is arrived at using valid means, but insufficient time is spent understanding properly what success or failure looks like in the particular circumstances. This can result in confusion as to exactly what actually happened, a lack of proper examination of the consequences for failure and, in most cases, a disregard of the high-impact low-probability events that are the “outliers” to the basic success probability.

### Approach

The basic approach was to provide a simple framework with which to look the questions as to success or failure and a method to articulate a sufficiently broad range of outcomes to adequately express the risk involved. The key ingredients are that the system should be as simple as possible in order to ensure it could be used with the minimum of training for facilitators and take a very short time to resolve, yet still allow for extreme results.

The mechanism used was the “4-Box Approach” indicated below:



Let us take an example of a friendly Special Forces raid in order to neutralise a High Value Target (HVT), in this case the head of a terrorist organisation.

The procedure is as follows:

1. **Success Probability.** Arrive at a broad probability for success, determined by whatever method is appropriate.
2. **“What does Success look like?”** The object of this is to briefly examine the most likely favourable outcome, which we have called “Success”. A discussion should take place in order to understand the full range of outcomes that would be judged as a success, *with little or no unfavourable repercussions*. In our example, this would cover the capture and successful extraction of the HVT with no casualties at all, through the death of the HVT with very few casualties on either side (and what casualties there were coming from obvious combatants). The important thing to note here is that this is what “the average man” would call a “success” and the range of outcomes we are considering here are merely degrees of obvious success. A good example of this would be the

SAS action to end the Iranian Embassy siege in London. The probability for “Success”, with few unfavourable outcomes, is then entered in the box.

3. **“What Does Failure Look Like?”** The object of this is to look at unfavourable outcomes in a way we have characterised as “Common Failure”. This is slightly different to the way we looked at “Success” because what we want to understand here is *the most likely method of failure*. In our example, most Special Forces operations fail because they don’t take place at all - due to equipment failure, unexpected movement of the target or lack of coordination with other agencies leading to mission cancellation. It is, however, important to understand that if the target is not time critical it may be possible to simply re-schedule the attack at a later time until success is achieved – for example a strike on a fixed point. If there are no real constraints on time or resources this mechanism for failure can be discounted. The probability for the most likely “Common Failure” is then entered in the box.
4. **“What does a Disaster look like?”** The object of this is to understand what the scale of risk is for this type of operation. This should look at the sort of unfavourable outcome that has obvious repercussions far and beyond the immediate forces taking part. A good example of this would be Operation Eagle Claw, the aborted raid on the US Embassy in Tehran. The intention is not to waste time testing the imagination of the participants in coming up with bizarre “end of the world” scenarios, but to look at an outcome that would be generally regarded as a “disaster”. The probability of the most likely “Disaster” is then entered in the box.
5. **“What does an Unfortunate Success look like?”** The object here is to look at a situation where the objective of the mission is achieved, but with unfortunate consequences. In our example it may be that the HVT was killed but that there was an excessive degree of collateral damage that was widely reported in the international press. A good example of this is the controversy surrounding the NATO raids on Serbia in 1999. The probability of “Unfortunate Success” is then entered in the box.
6. **Understanding Risk.** The next step is that the probabilities should be checked and confirmed that they are appropriate and realistic (as well as adding up to 100%). At this point dice should be passed to the Actor in the wargame who owns the risk for the operation (it is important to use actual dice, despite the negative connotations with a military audience, as they have more psychological impact). The essential element of this stage is that *the dice represents the risk to the operation and the Actor holding the dice is responsible for that risk*<sup>1</sup>. A discussion should then take place as to whether the risk owner is content with the probabilities expressed in the boxes. *This is possibly the most important step in the process and should be emphasised as such.* It may well be that the Actor chooses to re-visit the plan and allocate more resources, or delays the operation to a more favourable time, in order to change the percentages in the boxes and reduce the risk.

**Guidance.** *A useful rule of thumb is assessing if the probabilities are balanced is to check the outer boxes. Are they the same numbers? If they are, you should question if it is really the case that an “Unfortunate Success” has the same chance as a “Disaster”. We would contend that “Unfortunate Success” has a higher probable outcome than a “Disaster” in most common military missions with relatively permissive rules of engagement. If, however, the rules of engagement are tightly controlled, we would expect to see this number reduce (along with the “Success” chance) with the balance being transferred to “Common Failure”.*

7. **Outcome is Determined.** The final stage is to work out the actual result and move the wargame forward. The dice is rolled and the outcome determined.

This process allows for the articulation of the outcomes in some detail without the process taking too long. Having a more complete range of outcomes is of benefit for subsequent analysis and if the result was one of the “Outliers” it is easier to conduct sensitivity analysis on the overall results of the event.

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<sup>1</sup> This insight comes from: <http://lbsconsultancy.co.uk/blog/on-using-dice-with-a-military-audience/>