



Managing Assumptions

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Overview

Most projects create a list of Project Assumptions at some point in time. These typically are documented at the start of the project and filed in a safe place. Aside from helping to pad out the project charter, they are usually ignored. In this white paper, we will move the spotlight onto Assumptions, explain why they are important, and give you some ideas as to what you might do about them.

What is an Assumption

A good starting point may be a dictionary definition.

“The act of taking something for granted, or something taken for granted.”

In other words, it is something that we cannot establish as being true at this point in time, but is likely to be true.

Why make an Assumption

In order to move forward without absolute information, we need to make assumptions. In a project, or in fact in life, we rarely have absolute information. We need to either ‘assume’, or we might as well stay in bed each morning.

We assume that because the weather forecast is for a sunny day, and there is not a cloud in the sky, it will not rain so we will not take an umbrella with us to work. We assume that the washing machine will not break down and overflow before we set a load of washing as we walk out the door. We assume the bus will come on time when we go to the bus stop at a certain time.

In a project, there is always a high degree of unknown. If we wait until all information was available, we would probably never start. Typically we assume that resources will be available and that business users know their business. We assume that funding will not be withdrawn.

The Danger with Assumptions

There is a natural tendency for an Assumption to become accepted as the truth. I read somewhere that a culture is a group of shared Assumptions. People share a common Assumption and believe it to be the truth. For example in the US, people assume it is fine to have your own gun regardless of your need to actually use it for any reason other than protect yourself from other people with guns.

In Australia, we assume the opposite. We believe that unless you are a country dweller, who may need a gun to carry out your farming duties, you should not have a gun.

Without getting into the rights and wrongs of the situation, here are two cultures that have many similarities, but share opposite Assumptions. If you talk to people from each country, they would not look on the assumption (to have or not have guns) as an Assumption. They would see it as a normal part of their life. The way things are.

Something they take for granted, and certainly not something they question daily (or most of them anyway).

Project Assumptions

A similar thing can happen with projects. People assume something, and as the project progresses, they forget to challenge the Assumption. For example, they assume that funding will be available next year for stage 2 of the project. As the project continues, the Assumption becomes the “accepted wisdom” and people stop seeing it as a question. They start to see it as a fact. When next year comes, and the money is not available they are shocked. They had forgotten that Assumptions are not the truth. They need to be continually reviewed to see if they are turning into the truth, or becoming a falsehood.

The Wrong Assumption

So what happens if the Assumption is wrong? Usually it means that everything that has been built on that Assumption has to be reviewed, and possibly reworked. It may mean new work has to take place.

Take an example. We assume early in a project that we will implement the solution being developed (e.g. perhaps a new computer program, a warehouse re-design, a sales team re-structure, a training program) in “Branch A” initially. For whatever reason, we decide later in the project that it will be “Branch B”.

When the Assumption is disproved, we need to look at what was built on the Assumption. For example, if it were a computer program, there may have been work scoped on the basis of the number of PC’s and users in Branch A that needs to be reviewed.

Assumptions and Risks

An Assumption is, in one sense, the flip side of a risk.

- With an Assumption, we expect something to happen.
- With a risk, we ask what will we do if something does not happen, or how do we increase the probability that something will happen.

Probability	4	Medium	Critical		
	3				
	2	Low	High		
	1				
		1	2	3	4
		Impact			

We measure risks by looking at their probability and impact. The probability may be highly likely, likely and not likely. The impact may be catastrophic, significant,

medium and minor. We might just give the parameters a numerical rating. A matrix of the impact and probability allows us to develop a priority.

Rating Assumptions

We can rate Assumptions but we need to use a different set of parameters. There are three key parameters for Assumptions.

- Confidence. How sure are we that the Assumption is true?
- Lead time. How long before we can prove or disprove the Assumption?
- Impact. If the Assumption proves incorrect, how much rework is involved?

I have developed an Assumption rating based on experience in a number of projects.

Confidence

Confidence is important because it is a measure of how certain we are of the Assumption. Confidence can vary during the period of the Assumption. For example, we may assume “Branch A” is the first in line for our rollout at the start of the program. As time progresses, we might become more attracted to “Branch C” before settling on “Branch B”. Our level of confidence falls as the project progresses.

Confidence is rated on a scale of 1 to 4

1. Almost Certain. Very little doubt about the Assumption.
2. Highly Confident. Some doubt but we all feel it will be true
3. Reasonably confident. Our best guess at the time, but we would not be surprised if it did change
4. Low confidence. We would prefer to not make a prediction, but if we have to this is our guess. There are many factors that could prove us incorrect.

Lead Time

Lead time has an impact in that the longer it is before the Assumption is proven true or false, the more work will be done based on the Assumption, or the more ‘finished’ will be the deliverables of the project. The other factor is the less time to undo any completed work that may be required.

Lead Time is rated on a scale of 1 to 2

1. The Assumption will be proven or disproven within the first half of the remaining project time.
2. The Assumption will be proven or disproven within the second half of the remaining project time

For example, if the project has 4 months to implementation, and the Assumption would not be able to be verified for 3 months it would rate a 2

Impact

Impact relates to the amount of rework that will need to be undertaken if the Assumption proves incorrect.

1. Minimal Rework. Would have a minimal impact on the workload. Typically less than 3% of the total work

2. Some Rework. There would be a requirement for additional work however it could still be accommodated within the existing timeframes. Typically no more than 10% of the total project would need to be reviewed and possibly reworked, or additional work undertaken.
3. Medium Rework. There would be either additional resources required, or the finish date would need to be adjusted. Up to 30% of the project would need to be reviewed and potentially reworked or additional work undertaken.
4. Significant Rework. A major impact on the project with more than 30% of the project work needing to be reviewed and changed, or additional work undertaken.

Example: If the total project was 4 man months work, and if the Assumption was incorrect, the review and rework would account for an additional man month, it would rate a 3

Assumption Priority

The three ratings should be added together to provide an Assumption Priority. Using the formula above, we can rate the priority of Assumptions as:

- 9-10 Critical
- 7-9 High
- 5-7 Medium
- 3-4 Low

The priority can be used to focus on potential failure points in a project. Take the following hypothetical example.

Example 1.

A project to build a 25 story building in a commercial area assumes there is a solid rock layer on which the foundations can be laid. This is based on the experience of other buildings in the area.

- The level of confidence is high – certainly at a level 2. Points - 2
- The lead time to find out will be in the first half of the project so it rates 1 point
- The impact will be significant if the rock is not suitable. Rework or additional work would be around 15% so it rates 3 points

In total, the Assumption rates 6 points which puts it in the “Medium” Assumption Priority range.

Example 2

In the same project, there is an Assumption that the mix of office and residential will be 50:50

- The level of confidence is Low as the building will not be completed for 3 years, and the market for office accommodation is volatile. Points – 4
- The lead time is long as it will not be until the end of the project that a decision can be taken given the volatility of the market. Points – 2

- The impact would be significant as the design and fit out of the building would have to change significantly. It could add 20% to the work. Points – 3

This Assumption rates a 9 so is a “Critical” Assumption.

Managing Assumptions

Both the examples immediately above are, as mentioned earlier, the flip side of a risk. We need to assume they will happen in order to progress the project, but there is a risk they will not happen. The risk should be part of our risk management plan and mitigation plans put in place. For example, for the first Assumption (rock for the foundations), one mitigation may be to do some test drillings. For the second it may be to develop a number of alternate designs and establish if common components could be completed first.

The Assumptions are an important input to the risk mitigation planning. If a risk workshop is being planned, the Assumptions – sorted by priority – are an important input. They should drive the priority rating for the risk. For example, it is unlikely that an Assumption that rated “Critical” would have a risk that rated “Low”. If the Assumption that the mix of office and residential in a building was 50:50 was considered a “Critical” Assumption, a risk that it would not, could hardly be “Low”.

Monitoring Assumptions

As mentioned, there is a tendency to let Assumptions ‘morph’ into accepted fact. A key part of project management is to monitor Assumptions. Action items should be created to follow up Assumptions and either validate or disprove.

Eventually the Assumption will prove true or false. Someone should be there to look at the eventuality and understand the impact (if any) on the project. Whenever an Assumption is listed it should also show that “John Smith will review this Assumption on 7th October to validate if it is true.” A project action plan should list the activity for 7th October with John Smith as responsible.

Summary

Assumptions are potential failure points in a project. They need to be monitored and managed. At the start of the project they should be noted, and used as input for the risk assessment. If new assumptions evolve, they should be treated in the same manner. The priority of the Assumption and the priority of the risk should be the same.

It has been said that one should never assume anything. In real life, we must assume or we will stand still. We should still however look at how we can be more confident about our Assumptions, or at least how we keep them on the radar.

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Project Perfect sell “Project Administrator” software, which is a tool to assist organisations better manage project risks, issues, budgets, scope, documentation planning and scheduling. They also created a technique for gathering requirements called “Method H”™, and sell software to support the technique. For more information on Project tools or Project Management visit www.projectperfect.com.au