

# Mastering Agile Project Management

Learn to how to blend Agile and traditional project management to create an adaptive approach to project management



Review of Traditional Project Management Estimation Practices

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# Review of Traditional Project Management Estimation Practices

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In this first lesson, we're going to do a brief review and discussion of traditional project management estimation practices before we get into Agile estimation and how it is different.

# Estimation Approaches



The right approach depends on a number of factors including:

- The level of uncertainty in the project
- The relationship with the customer
- Previous experience with similar work

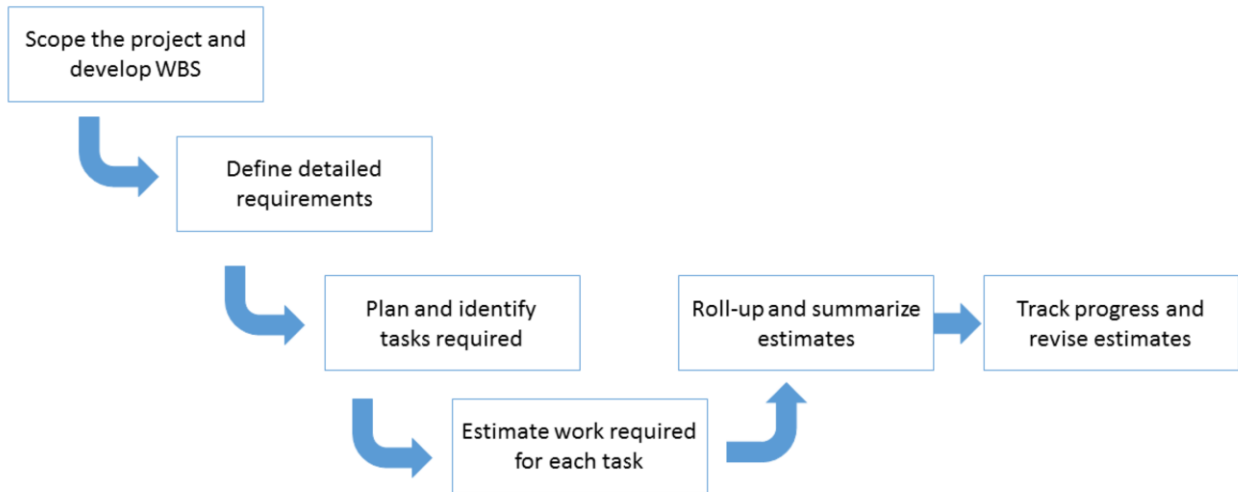
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The first thing to recognize about estimation is that there is not just one way to do estimation. There is a number of different approaches ranging from very detailed and precise estimates at one extreme to very high-level, ballpark estimates at the other extreme. The choice of the appropriate estimation approach will depend on a number of factors; however, here are several of the most important ones:

- Probably the biggest factor is the level of uncertainty in a project. It might be foolish to attempt to develop a detailed and precise estimate for a project with a very high level of uncertainty. It would probably require making a lot of assumptions about the uncertainties and that would have a significant impact on the accuracy of any estimates.
- The relationship with the customer is also a very significant factor. If there is an arms-length, contractual relationship with the customer and the customer has expectations of getting a firm price and schedule for the project, that may force doing a detailed and precise estimate. On the other hand, if there is more of a spirit of partnership and trust with the customer, it may support a more collaborative approach.
- Finally, previous experience with similar work can be a significant factor. If the project is something that is done somewhat repetitively, it is much easier to develop a relatively accurate estimate. If it is something that has never been done before; naturally, the uncertainty is much higher and makes it much more difficult to develop an accurate estimate of the work required. There's really two factors in this – one is the level of uncertainty in the requirements and the other is the level of uncertainty in the work required to fulfill the requirement.

# Typical Traditional Estimation Approach



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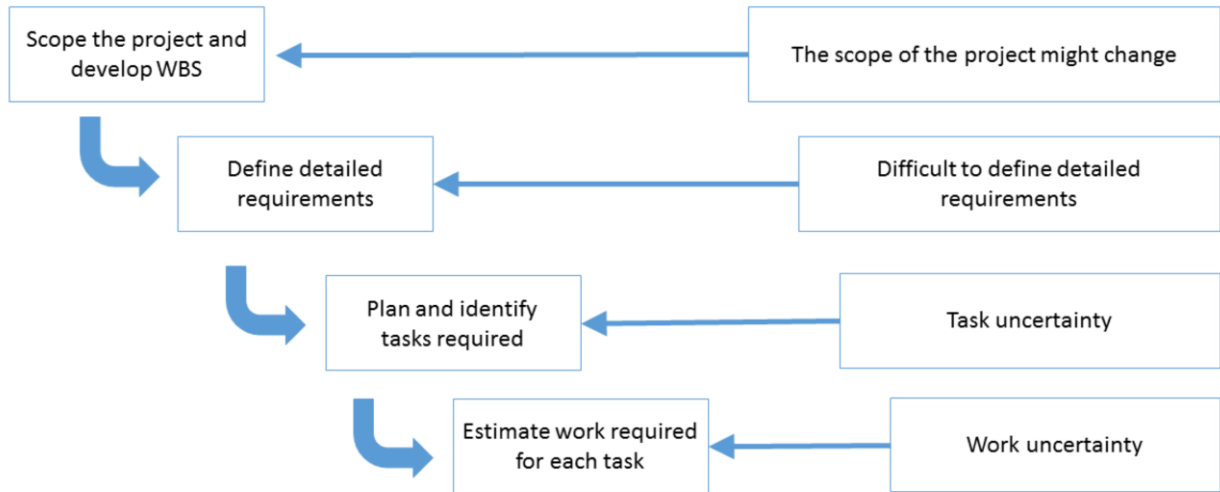
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We are going to ultimately focus heavily on how to do estimation in an Agile environment where the level of uncertainty is typically very high; however, before we get into that, I think it's appropriate to start with a brief review of how estimation is done in a traditional, plan-driven environment. Although the approach to doing estimation in an Agile environment may be very different, some of the principles are the same and I think it's important to understand a general estimation approach as a foundation. For that reason, I want to start with a discussion of how an estimation approach works in a traditional plan-driven environment.

This slide shows a typical project estimation approach:

- You generally start with an understanding of the overall scope of the project and break that down into a high-level Work Breakdown Structure (WBS)
- From there, the next step might be to define detailed requirements
- Then the tasks required to fulfill those requirements would be broken down
- And finally, the work required to complete each task would be estimated
- After all of that is done, the detailed task-level estimates would be rolled up and summarized at various levels up to and including the project level and once the project is in progress, the actual effort expended on the work would be compared to the planned level of work to further revise the estimates if necessary.

# Typical Estimation Problems



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There are some significant uncertainties at each of these levels that can all have a cumulative effect on making it very difficult to define detailed and precise estimates:

- At the highest level, it isn't uncommon for the scope of a project to grow as it is in progress because as you implement some of the requirements, you may discover other areas that were overlooked that will add to the overall scope of the effort
- Next, it is often difficult to define detailed requirements for efforts like software that really require the user to see something to see if it really fits their needs or not
- And, even if you can define detailed requirements, it is even more difficult to precisely define some of the tasks that will be needed to fulfill those requirements until you actually initiate the design effort
- And, finally, even if you can define the tasks required, developing a precise estimate for the level of work required to complete those tasks can also be very difficult to estimate especially if it is work that has never been done before.



The biggest problem with estimation is in failing to objectively assess the level of uncertainty in the situation

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By far, the biggest problem with estimation is in failing to objectively assess the level of uncertainty in the situation. There's a certain amount of naiveté of someone who is new to doing estimation. A seasoned project manager who has been "burned" a few times by inaccurate estimates learns to know the risks and pitfalls associated with estimation and develops a sound estimation approach that takes that into consideration.

## NEXT LECTURE...

### PROJECT ESTIMATION BEST PRACTICES

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In the next lecture, we're going to start a new section on "Critical Agile Project Management Knowledge and Skills". The first lesson in that section is on "Agile Development Practices".

Thanks for taking the time to do this lecture and I'll look forward to working with you in the rest of the course.