

Re: Estimate of hours to be spent on a project

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Hi Philip,

> > *The question is: "I'm deciding between 10 different priorities for my
> budget
> for next year. I have a one-page description of each problem. How much
> will each one cost, and how many resources will each one take?"*
>
> *No prob. You request the difference between selecting a direction and
> targetting a destination.*
>
> *Directions are safe to select up-front, and to schedule and budget
> proactively. Destinations (such as Features A thru N before the Trade Show
> in September) cannot be scheduled and budgetted up front. The features
> require tracking.*

I appreciate the distinction.

In the planning game, it is not only reasonable to approach a problem from the standpoint of what you know but also to recognize that there are some things that cannot be accurately known.

This makes sense.

However, the business users don't care.

Think about it. If you ask an architect "how much will it cost to build my house," and he gives an answer, he will be CLOSE. He or she will set expectations that there are unknown things that occur, and changes can be made at many points. However, an architect building a house, or an engineer designing a supporting structure, is still required to give an accurate estimate. This is not a "direction". This is a very specific destination, with specific features, specific resources, a specific timeline, and a reasonable estimate of how far off the estimate is likely to be.

These questions can be answered by science. The techniques can be learned by engineering. Unfortunately, in Computer Science, we largely ignore the Science. We, as an industry, do a lousy job of creating a hypothesis and actually TESTING it to see if it works. That's why Waterfall models are so prevalent. They make sense... who care if they are wrong!

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(It makes sense that a cannon ball should fall faster than a wooden ball, but they don't. Everyone assumed that they did... until a simple scientific experiment proved them wrong. To thank the scientist, the Catholic church convicted Galileo of heresy and convicted him to life under house arrest).

We are still preaching Aristotle vs. Copernicus! More importantly, we are still preaching!

If you want to know how much something costs to build, look at how much the last one cost to build. Experiments and measurement tell us: The variations are NOT the people... the variations are in the system. Science can prove this, and has. You CAN give a good answer to the question, without betraying the principles of good design. BE LIKE THE ARCHITECT. He is not sacrificing good design to answer a simple, and essential, question.

The answer can be given because productivity has been measured, and it continues to be measured, by a veritable army of software metrics specialists who practice in utter obscurity to measure and document the size of systems and the time that they took to build.

To use these numbers, you simply measure the system you are trying to build (the requirements do not have to be completely known... but the farther you are from knowing them, the less reliable your estimates are. The architect would say the same thing). You can measure the size of a system, independently of the technology, by measuring the requirements. You take the size (your measurement), multiply by expected productivity (using national numbers and ranges) and you reach a reasonable estimate.

It takes training, true, but I have faith that you could learn it, if you tried.

It is called Function Point Analysis. (see www.ifpug.org)

It works in the agile world. (It has Nothing to do with How the software is developed... it has only to do with the cost of developing it). It also works in the predictive MDA world.

It works well.

So the next time someone says a "cost estimation" is the same as a "selecting a direction," realize that there are folks, like me, who would find that statement humorous, if it was not so dogmatic.

I've sat on the business side. Business people are NOT WRONG to require this information.

You can give it to them... if you are willing to embrace change.

With utmost respect,

--- Nick Malik

Certified Scrum Master

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Certified Function Point Specialist