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Larry Maccherone - How Long Will It Take

Premise

You know “collaboration over contract negotiation”, right? Metrics often drive a wedge between management/stakeholders and the team, none more so than forecasting metrics. However, when you give a probability distribution as the answer to the question, “How long will it take?” instead of a single date, an amazing transformation happens. Suddenly, the team and management/stakeholders start collaborating to manage tradeoffs and risk. So, how do you generate a probabilistic forecast?

Maybe you've heard of Monte Carlo simulation. Maybe you've seen probabilistic forecasting techniques demonstrated or even used. But you just don't understand how it works. This talk is a gradual introduction of these techniques. You need to know nothing about combinations and permutations. You don't need to know how to apply complicated formulas. You need only have the ability to understand the rules to a simple strategy game.

This talk starts off explaining the simplest form of probabilistic forecasting using throughput/velocity as an example that anyone can follow. We'll then layer on more sophistication (but no complicated math) and discuss the tradeoffs of each approach along the way. In the end you'll have everything you need to understand and make use of probabilistic forecasting.

Learning Outcomes: Easily understand Monte Carlo simulation Do what-if analysis Take explicit risks into account Utilize forecasts that are presented as a probability distribution rather than a single date Understand the advantages of using this approach

Summary

- Content rating (0-no new ideas, 5 - a new ideas/approach, 9-new ideas): 7
- Style rating (0-average presentstion, 5 - my level, 9-I learned something about presenting): 5

Action / Learning

- Todd Olsen - “build the right thing” problem / metrics - See "Todd Olsen - "build the right thing" problem" blog post

Presentation

larry-maccherone-probabilistic-decision-making.pdf

@lmaccherone AgileCraft

Notes

Probabilistic decision making as well

4th down conversion Often made wrong Fear - means make They should go for it Bellman equation Some coaches do it better - bill belacheck

Bias eats good decisions for breakfast Probabilistic decision making to overcome bias

Wednesday 3-4 - how get people to change based on analysis

“Every decision is a forecast” Outcome a has better outcome for company than b, c, d

Quality of decision Alternatives considered Models used for forecast

Probabilistic models are superior

Value of alternative = probability of good thing happening x value of good thing happening

$1M to invest

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            Worst case (25%), Likely case 50%, Best case 25%
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Strategy 1: Strategy 2:

What if you have to choose only one project. Individual motivation is conservative - so don't do risky thing

How many projects do you need to determine which which project you should do

See code

Http://jsfiddle.net/lmachherone/j3wh61r7/

Library called “luminize”

Break even between between 2 and 3. For strategy 1 is better than strategy 2

Katan - strategy game - find out about this

Emotion and bias plays part Scary negative Question the huge positive

How do you trust the qualitative inputs

Argument is about who is right Decision making is about what is right

Now can trust this

Douglas Hubbard Getting probability input you can trust

Equivalent bet calibration Even pretending to bet money works.

Http://maccherone.com/luminize.com Or luminize.com

Crossing burnup chart Scope fixed Where crossed is normal “release date” But tossing out a lot of information

Put frequency chart on top of release burnup chart

Let's start over 50% that risk delay by 7 to 8 weeks Gives bi-model curve

Then perhaps smaller risk but multiple Relates to spread out version

Later data points are more useful than Last n days are optimal

Mark off chains. Find patterns

Troy Macguiness Finite element analysis Look at each work item as it goes through the system Kanban board

Look at places where queues are really large

Eg typically not add developers, but rather testers etc

Using measurement in agile environment

Don't take measurement to the dark side Here be dragons - not 7 deadly sins anymore

Trick is to slay the dragons

Dragon 1 Manipulating 1 Once they know this is what is being measuring they will game it Need to create culture where people want to improve Use metrics to drive the improve

Dragon 5 Using Convenient metric

Measure, insight, decision, outcome

Actually want to do this Decide on outcome do you want Think what decision needs to be made Gives insight

Coaching basketball Under basket, and 3 point Optimize team result - not individual

Come Wednesday at 3:45pm session

Look at agilecraft - Portfolio and project tool over alter alternates

Estimation, Forecast, Conference, Planning