Cost of Delay – a key economic metric

By Sebastian Radics

During the last weeks I read quite a lot about portfolio management and proper ways to include economics in our decisions. With this post I summarize some of my key learnings so far (most impressions I got from the great source provided by _blackswanfarming_ _(and thanks for the permission to use your cool stuff on my blog too)_.

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> ____   _blackswanfarming_

What is cost of delay?

> The impact of time on value (or rephrased: Impact of time on the outcomes we hope to achieve)

It combines urgency and value.

> **Cost of delay = value x urgency**

What is it good for

- It helps making better economically based decisions.
- Using CD3 – cost of *d*elay *d*ivided by *d*uration – helps with prioritization
- It shifts the discussion focus to speed and value (instead of cost and efficiency)
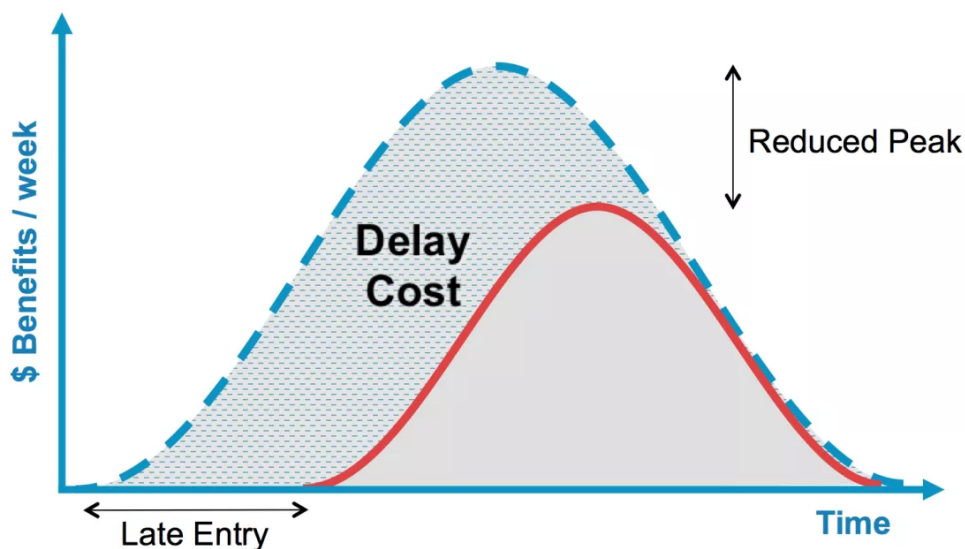
A brief introduction

A short introduction to the topic cost of delay

Cost of Delay – An Introduction from Joshua Arnold on Vimeo.

About urgency profiles

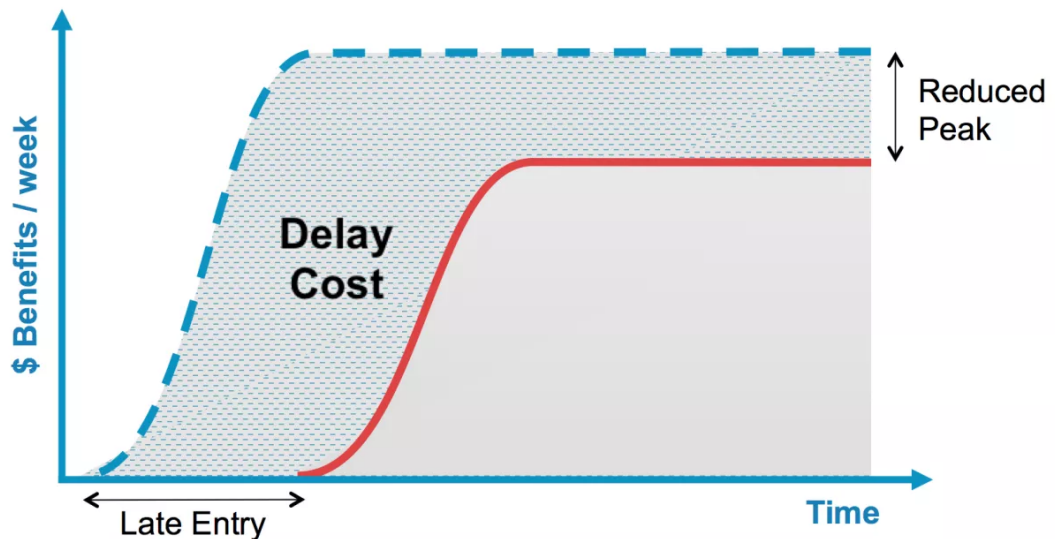> Urgency: Describes the development of value over a given timeframe

Short benefit horizon

Short benefits horizon, and reduced peak due to late delivery

- Fashion – late entry and you miss the market (eventually even completely)
- Season related areas (e.g. Christmas opportunities, easter,…)

Long life but smaller peak due to late entry

For ideas with a very long-life, with reduced peak due to later delivery

first market entry benefit of setting standards and earning highest shares. later entries are harder, cost more money and don't bring the biggest share

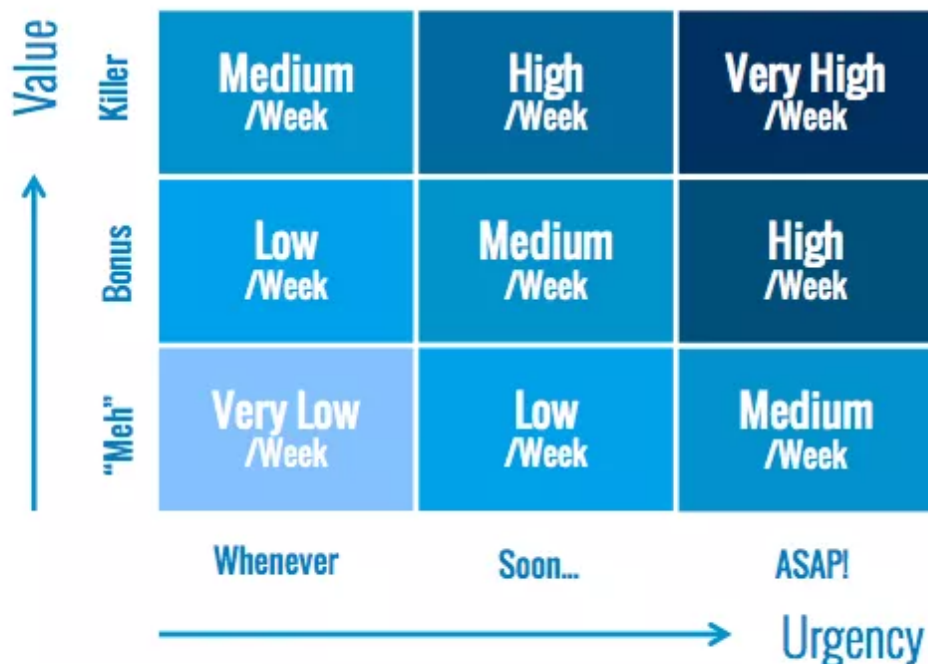## Long life , with peak not affected by delay
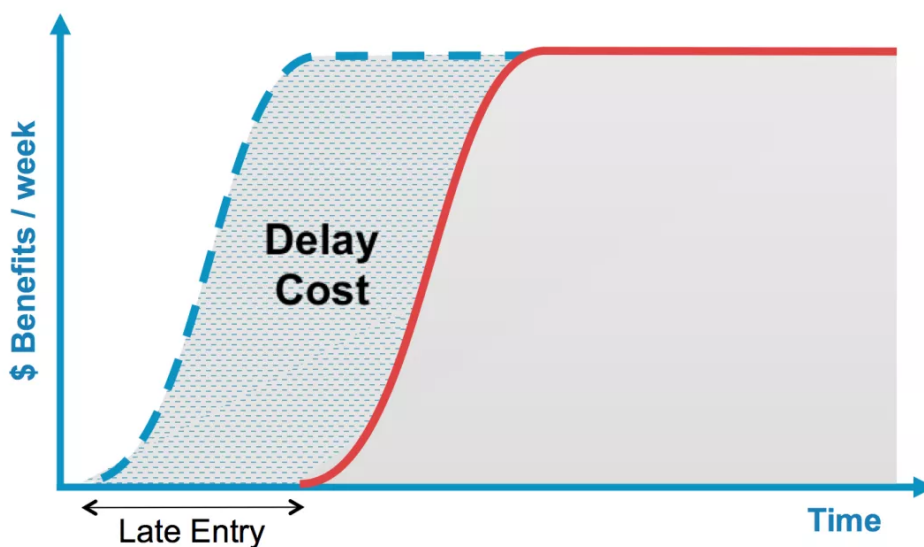
For ideas with a very long-life, with peak unaffected by delay

late entry with delay cost for missing the opportunities for some time but with no lowered margin afterwards

Welcome to the matrix

Blackswanfarming created a nice matrix to start with a qualitative classification of cost of delay.

Qualitative Cost of Delay

Value		Whenever	Soon...	ASAP!
Killer		Medium /Week	High /Week	Very High /Week
Bonus		Low /Week	Medium /Week	High /Week
"Meh"		Very Low /Week	Low /Week	Medium /Week

Urgency →

We just used it to quickly distribute a list of planned feature developments and figured out that many of them did not make it into the **high** and **very high** section.

While using the matrix I learned that it is difficult to differentiate between high urgency and high value. Many assume that if something is of high value it must be urgent at the same time. So the initial tendency to put something to the upper right section is something to be aware of (to avoid that you can use urgency profiles … see more details described next).

Meh, Bonus and Killer – about value

Meh

Represents the lowest total value band. The things that are still valuable and worth our time and effort doing, but they're not the sort of thing that customers are likely to rave about.

Bonus

Represents the middle band of total value. Customers will like it enough to give us money, or if they are already customers, to stay with us. The other way to think about it, would be that this is valuable enough that if we deliver this we'll grow revenues or reduce costs enough for us all to "make bonus" for the year!

Killer

Represents the highest band of total value. These are the few things where if we do them, we stand to make an absolute killing, or; if we don't do something, it will probably kill us.

Whenever, Soon, Asap – about Urgency

Whenever

Represents the lower band of urgency. • What this means is that the total value isn't massively affected by delay. Most cost-reducing initiatives would normally fall into this band. Other initiatives where there is little or no competition, might also initially fall in this band.

Soon

Represents the middle band of urgency. f we don't deliver this Soon, then the value will start to decline or the risk of loss increase – reduced market share, reduced opportunity size.

Asap

Represents the highest band of urgency. If we don't deliver this ASAP, then the value (whatever total value that might be) will quickly evaporate – someone will get there before us or the opportunity (however big or small) will be massively impaired.

Combine it with the mentioned urgency profiles

You can classify the urgency using the urgency profiles mentioned above. That helps to focus on urgency and not mixing this dimension with the value dimension.

Depending on your point in time e.g. the short benefit horizon can be mapping either to *soon* (if there is still some buffer) or *asap* (if time is up and you need to build it now, to get ready before the peak). The profile with peak unaffected by delay can be mapped to the *whenever* matrix section. Reduced peak due to late entry – goes to *asap* if you are short before the peak and *soon* if competitors are not yet visible.

What about value

A framework for thinking about value

Increase Revenue	**Increasing** sales to new or existing customers. Delighting or Disrupting to increase market share and size
Protect Revenue	Improvements and incremental innovation to *sustain* current market share and revenue figures
Reduce Costs	Costs that we are *currently* incurring, that can be **reduced**. More efficient, improved margin or contribution
Avoid Costs	Improvements to *sustain* current cost base. Costs we are not currently incurring but may do in the future

Every item would contribute to one or more buckets

> **Total value = Increased revenue + protected revenue + reduced cost + cost avoided**

Increase revenue

- add changes, new features, increase market share
- also the field for disruptive innovation

Protect revenue

- revenue that is currently achieved
- revenue that is currently achieved
- "sustaining innovation"

Reduce costs

efficiency and automation

Avoid costs

- costs currently not yet incurring
- fines, potential reputation loss

Risk to value conversion

You can calculate the **weighted risk value** by multiplying the **value of a risk x its probability to occur**

Example:

A failing oracle leads to a potential loss of 100k/week. The probability for failing is about 70%. This lead to the weighted risk of 70k/week that we can take as value part for our COD calculation.

Great questions for value

- What is the problem? Why should we work on it?
- Why should we solve this problem?
- Why does that matter?
- Why is that important?
- Why does that matter to our customers or users?
- Why does that matter to our organization?

The cost of delay canvas

Blackswanfarming's cost of delay canvasis a great way for one pager driving decisions. In include all relevant aspects regarding cost of delay.

Sequencing

In my previous post I introduced a small tool for finding „the best" sequence for feature development, when you have cost of delay already calculated.

Let's consider a simple feature constellation.

- Feature A: with a cost of delay of 5000€/week and an duration of 10 weeks to implement it
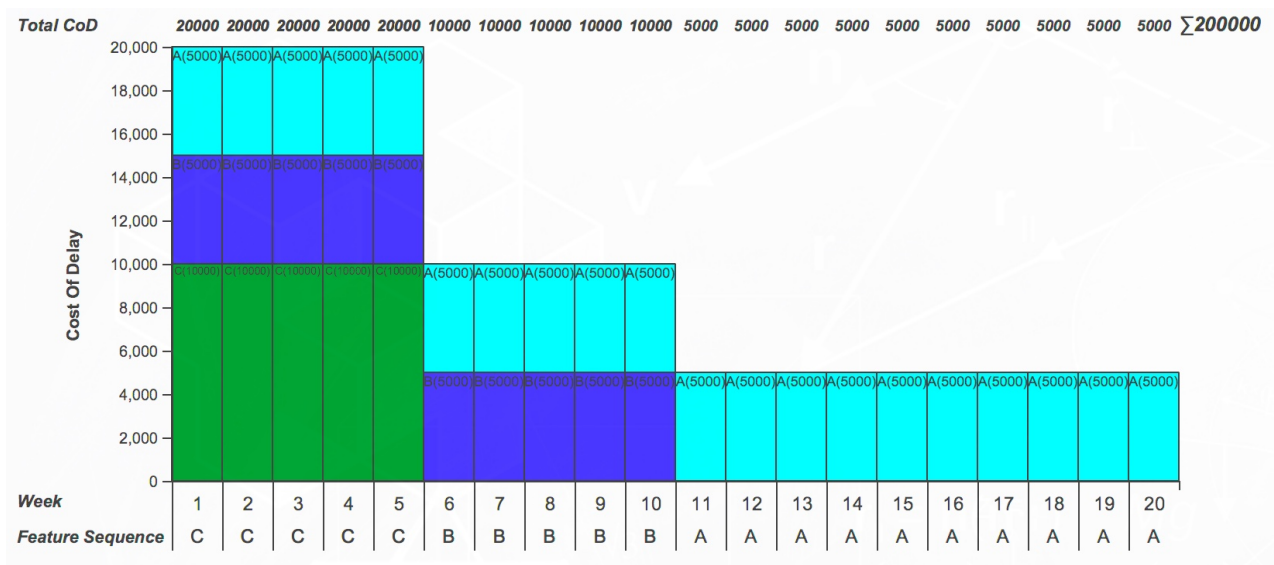- Feature B: with a cost of delay of 5000€/week and an duration of 5 weeks to implement it
- Feature C: with a cost of delay of 10000€/week and an duration of 5 weeks to implement it

With the tool you can provide this input like this:

It will calculate the best sequence to be C,B,A with a total cost of delay of 200.000€.

The cost of delay distribution looks like this:

Now compare it to the worst sequence being A,B,C with a total cost of delay of 325.000€ and a cost of delay distribution:
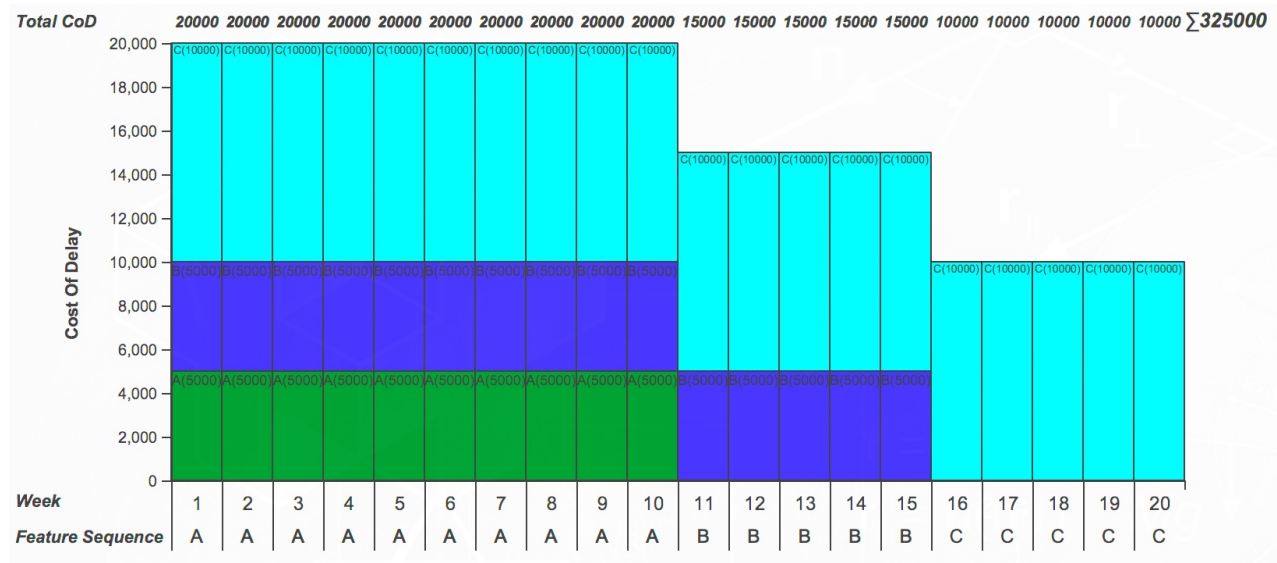
> What a dramatic effect of the wrong sequence choice!

So, as soon as you're able to quantify your cost of delay you have to think about proper sequencing. Have fun using my tool, available open source and for free.

Further readings

- Key take aways for Don Reinertsen's book: The principles of product development flow
- Deeper insights into cost of delay by Black Swan Farming

> Cost of Delay and how to find the best sequence for feature development