The Little Book of IMPEDIMENTS

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For Andrea - let there be no impediments between us.

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What is an Impediment?

> *"If you can find a path with no obstacles, it probably doesn't lead anywhere."*
>
> –Frank A. Clark

A Definition

Perhaps the definition of an impediment should be pretty obvious: it's any obstruction that gets between you and your goal. Here's one definition:

> **Impediment**: *1. An obstacle or something that prevents action. 2. Any structure that makes progress difficult.* Vocabulary.com[1]

So the obstacle could be something that stands in your way and blocks forward progress (a blocker). Or it could also be something that slows you down and keeps you from getting to the goal as quickly as you might have otherwise. Impediments can be externally imposed or they can be self imposed as well. They can be any financial,

[1] http://www.vocabulary.com/dictionary/impediment

technical, process, or personal obstacle that slows you down or impedes your progress.

That's a pretty broad definition, which is probably why impediments are both so ubiquitous and so hard to nail down sometimes. So let's try attacking the definition a different way. Impediments can be subtle. An impediment is anything that creates any sort of perceived resistance, friction or drag on a project. That friction can manifest itself as personality conflicts, slow software, network problems, or even technical debt. All of these problems can slow down a team's progress. Without them the team's performance would be improved by some small but important degree. Their jobs would be easier to do.

Other times an impediment can be much more dramatic. This isn't the wheel not being properly lubricated, this is the wheel coming right off the wagon! In this case an impediment is any obstacle or blocker for the project. Any sort of issue that gets in the way of the team's ability to deliver a project. Blockers are the kinds of things that usually get everyone's attention on a project. They are the critical missing resource, the unanticipated loss, the dependency that the team was counting on being there.

The important thing to remember here is that impediments cover a broad range of problems and they can be subtle and hard to see. Large or small, they will slow you down.

The River

Let's pretend that your project is a river. It's always moving: sometimes rapidly, sometimes slowly, working its way downhill toward some sort of goal. Along the way, the river encounters obstructions in its path. Some are large obstructions, perhaps a beaver dam, others are relatively small obstructions like a boulder. The river may be slowed by these impediments, but it finds its way around them.

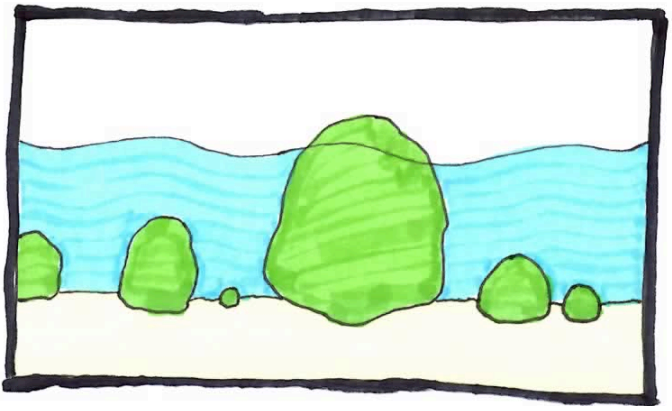
Our projects, like our metaphorical river, are shaped by the obstacles that they encounter. Our projects have obstacles that they can remove, and others that they can't - and we have to work around those. If we could visualize our project's progress over time, we might describe them as a winding river. They bend and twist, they rush and go calm.

What if you were to take away all of the obstructions in our river metaphor and just look at the water by itself? You would see this snaking tube of water that behaves in all sorts of strange ways for no obvious reason. If we follow the path of this watercourse (visualize it as hovering in the air) we would have many questions: Why does the water suddenly turn into a hectic spray here? Why does it slow down and turn into an enormous slow pool there?

Without seeing the obstacles, you would only be able to speculate what the causes of these phenomenon were. I believe that we treat our development work in the same fashion as this river. Typically we tend

to ignore the obstacles and only look at the work (the water). We don't see the boulders (impediments) that we work around every day. We wonder why the project is moving so slowly, or we marvel at the sudden, unexpected rush that we never saw coming.

We and our projects are shaped by the obstacles that we encounter every day. If you want to understand what shapes your projects, you need to understand the risks and impediments that impact it. If you are aware, and able to manage these issues, then you move from reacting to the obstacles to anticipating and mitigating their impact. You are able to change the shape of your project/river. You move from just swimming in the river to changing the river's course.



Where are your rocks?

Be Audacious

Ken Schwaber tells a story in his second book, *Agile Project Management With Scrum*, about a key contributor on a project who goes on vacation (hiking in Yellowstone park). Of course, as soon as he leaves, the critical component he is responsible for goes down in flames. The team is demoralized, the project is jeopardized, an impediment is born.

What would you do?

Apparently, you hire a former FBI agent as a private detective to go into Yellowstone and track down your missing developer and bring him back to the team to fix the problem

(see page 117 of Schwaber[2]).

How many project leaders do you know would have that kind of audacity? There is a lesson for us in that story. All too often we turn away from problems that challenge our teams because they seem too great, too daunting to face. Ken is trying to tell us that a certain amount of boldness is required to lead great teams. You have to be willing to slap down the credit card and make things happen. That's how you build a reputation for delivering success (and perhaps a little insanity). The story could easily have gone much differently, but I don't think anyone would argue that Ken was committed to the success of that team.

I think he's inviting us to be audacious too.

A Word of Caution Impediments can be a lot of things. They can be physical objects, they can be an absence of something, they can even be ideas. However, there is one thing that an impediment can never be - a person.

People are not impediments. Why not? Well there are a couple of good reasons why treating people as impediments is not a good idea:

1) When you call someone an impediment you immediately alienate them. Nobody likes to be called an impediment. You are not going to win friends and influence people by running around labeling people as impediments. You are just going to create more impediments.

[2] http://www.amazon.com/Agile-Project-Management-Microsoft-Professional/dp/073561993X/

2) While people may not be an impediment, everyone has impediments. I believe our job is to partner with people who have impediments and help them resolve them.

So when you encounter that guy who hates everything Agile, don't waste your time labeling him as the impediment. The better strategy is to get to know him and find out what impediments he is facing. Help him resolve one of those impediments and you will win yourself an ally rather than an enemy. There are few ways to be more influential than this.

Examples of Impediments

Still not sure what impediments really look like? Here are a few personal examples of impediments that I have run across and how I handled the situations:

XML Tool

I was working with a really fantastic team of project analysts once on a big government project. We were supposed to provide analysis and xml schemas that would be consumed by other teams as part of building the overall project. Very quickly we realized that the schema we were manipulating was big, really big. None of the open source tools could handle it. Of course being a government project, the process for provisioning the software we needed was liable to take weeks. Suddenly my team of total hotshots

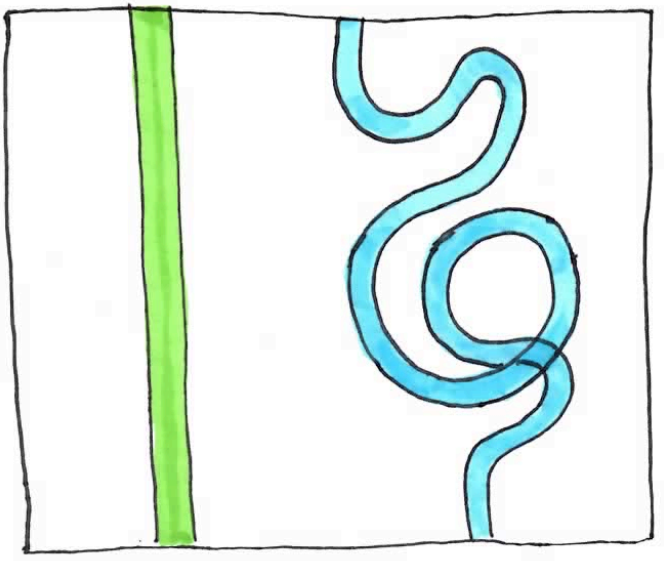
was looking at possibly idling for the next few weeks while we shepherded software provisioning requests through the byzantine requisitioning system.

So that night, I went home, pulled out my personal credit card and bought the software we needed. The next day the team was completely shocked! Instead of being blocked, they had everything they needed to move forward. They made astonishing progress and we were able to keep the entire workflow moving very smoothly. As for me, I had to spend about 2 weeks getting a reimbursement on my own, but it was well worth it.

Eliminating Status Reports

Recently a team I worked with had a long list of status reports that had to be updated every sprint. It was laborious information that had to be updated every sprint regardless of what the team was working on. It was the kind of soul sucking status reporting that has been made legendary by the movie "Office Space". Fill out your TPS reports! My goal: eliminate the status reports. Well, not eliminate exactly, but kill as many as I could. By eliminating the duplication and the tedium of writing many of the more irrelevant status reports, I felt I could free up the team's time for more productive pursuits. Of course status reports have a curious kind of stickiness once they have been introduced into an organization. They are singularly resistant to destruction. There must be something in a bureaucracy that adores a status report. Status reports are like crack

for managers. This was going to be real challenge to the impediment killer.



Eliminating the status reports required a fair amount of subtlety and persistence. It wasn't going to happen overnight. First, I worked to make the information in all the status reports hyper visible to all of the groups requesting them. I was careful to highlight all the duplication that was present. Then I followed up by testing the actual application of the status reports. Does anybody actually read them? Why? What useful decisions have been made based on the status reports. In this case we had nearly a half dozen types of overlapping status reports and status meetings. I began

to ask questions about the value of a document compared to a face to face meeting. If we do both, which do you value more? Obviously this took a lot of time, and I had to document much of what I learned and share it with key stakeholders. Eventually, I reached the critical mass required to get the managers to agree to eliminating entire reports as wasteful.

Impediment Sensitivity

There are times when I can be downright "impediment deaf". Impediments go whizzing by left and right and I'm totally clueless. When I notice that happening, there is a simple trick I use to help hone my impediment sensitivity: Every evening I make a list of all of the impediments that I encountered that day. I make the list as exhaustive as I can. It doesn't matter how mundane or trivial the issue may have been. If it got in my way, I write it down. I've noticed that each day I do this my list tends to grow longer. My ability to identify and recall impediments improves with practice.

What is a Risk?

There is a rather extensive body of project management literature that is all about how to manage risks. They have a wealth of convoluted calculations that can be performed

to help justify the investment of resources (yeah, I mean people) in one risk versus another. You're not going to find any of that here. First things first, we need to understand what exactly a risk is. If you go dust off the latest copy of Kerzner, Project Management: A Systems Approach[3], you will find a definition of risk that looks something like this:

> *"Anything that jeopardizes project quality, schedule, cost, etc."*

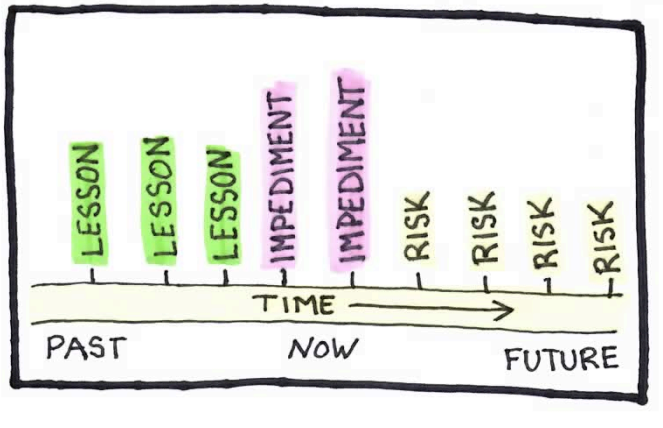
Now, as definitions go, that's all fine and dandy, but I think it could be substantially improved. You see, I think we don't need to refer to all that crufty "quality, schedule, cost" dreck. Instead, I prefer another definition of risk:

> *"A risk is just a potential impediment that hasn't happened yet..."*

That's right, a risk is just an impediment waiting to happen. It's not guaranteed to happen. You might get lucky and dodge that bullet, but if you aren't lucky then you are going to be dealing with what we all think of as an impediment - some sort of obstruction that slows down or otherwise impedes the otherwise smooth progress of the team. The good news with risks is at least you get to see some of them coming! This means at least you have some chance

[3] http://www.amazon.com/Project-Management-Approach-Scheduling-Controlling/dp/0470278706/

of averting the problem before it impacts your team. That's fantastic news! It means that if you are diligent, and you are keeping a weather eye out, you just might be able to detect a few risks and mitigate them without hurting the teams productivity. Of course, with all that being said, none of us has a crystal ball. Just because you are watching out for risks doesn't mean you are going to detect them all. You're bound to miss a few, and those will conveniently announce themselves to you as impediments (groan) but at least you are watching.



The Risk in Context

There is a sort of hierarchy of competency when it comes to dealing with risk and impediments. At the lowest level you have those who don't do anything to manage risk and impediments. These people are left to the vagaries of fate. Maybe their project will go well or maybe it won't. The

attitude is: nobody knows why some projects are easy or hard.

Then there are those who aggressively take action to remove impediments. They are sort of the next step up the evolutionary ladder. These teams at least know there is a problem and deal with it. They address the impediments and if they are really good, they might try and learn from their mistakes (lessons learned).

Finally, there are those who go one step further. These are the teams that are scanning the horizon, watching for the storm clouds of impending impediments. These are the teams that by being on the lookout for risk are able to sometimes avoid the adverse impact of some impediments altogether. Even if they do get hit with an impediment, this is a team that is dealing with a clear awareness of the situation and doing what they can to minimize the impact.

Risk Management

Of course the study of risk is intimately tied to predicting the future. In fact, risk is all about trying to predict the future and hedge against the vagaries and uncertainties contained therein. Risk is about trying to assess the likelihood of a future event occurring and assessing the impact if that event actually comes to pass. That's why much of our current science and mathematics of risk owes its origin with gambling! That's right, much of the early mathematics of risk were basically born of analysis of gambling

strategies done with an eye toward gaming the system and getting rich! I find this particularly ironic given our current high tech economy that worships the entrepreneur. After all, what is a software development team doing when they take on an ambitious new project? They are making a big gamble that they have the right combination of smarts, talent and hutzpah to bring a brand new, untested technology to market in a given period of time, *and* that there will be a long line of customers waiting to pay for it. When you look at all of the uncertainty present at the beginning of almost any decently ambitious software project, it's actually hard to imagine how any team will manage to succeed.

Of course it helps if you can break down the risk a bit into different categories. At least it helps to make the risk seem a bit lest daunting if you break it down into smaller pieces. One categorization I have seen works like this:

Business Risk
: Any risk to the business, including market influences, customer impact, competition, etc.

Technical Risk
: This includes unreliable technology, hardware and software failures, breaches, third party failures, etc.

Logistical Risk
: Risks that include threats to delivery or the ability to provision the product or service.

Another way to categorize risks is by the phase of the project that you are currently in. For example:

- Identification
- Planning
- Monitoring and Controlling
- Response Planning
- Analysis

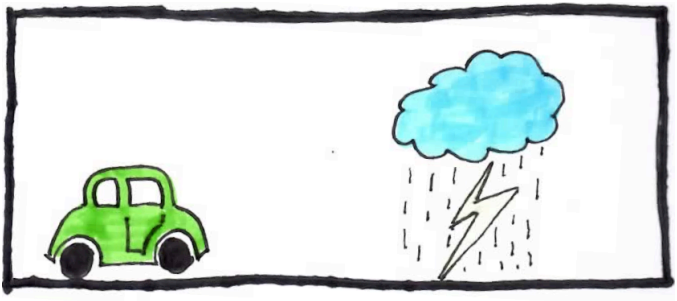
Categorization can help us think about risk in ways that enable us to apply patterns and corresponding solutions that are appropriate to the risk at hand. The categories provide a framework that helps us think about and understand the risks that we face.

Risk/Impediment Lifecycle

> Risks + Impediments + Lessons

Risks are potential threats to our projects that lie in the future. Once they manifest themselves in the present, we call them impediments. And once impediments are resolved and we move on, they become lessons. I'm intentionally not referring to them as "lessons learned" because I'm not sure we always learn from the experience.

So risks exist in the future, impediments exist in the present, and lessons exist in the past. I like the relationships and the terminology - it helps me to understand how to deal with these creatures. So a good team will always keep a vigilant eye to the horizon, keeping a lookout for new risks. They will call out those risks, sort of like the behavior of a colony of prairie dogs when they spy a hawk. They may take action to mitigate those risks so that the risk never becomes a significant impediment for the team. They would review the risks periodically and re-assess whether or not their mitigation strategies are effective.



Sometimes a risk can't be anticipated or avoided and then the team has an impediment on their hands. If they're really good, I would expect one or more of the team members to address the impediment and resolve it. Perhaps they take it to the executive team for resolution. Maybe they take care of it themselves. Again, they review the impediments they have encountered and they assess the impact and the actions they have taken to address it. This is where more

learning takes place. How do we avoid this in the future? The team that has truly learned from the experience will deftly avoid the problem the next time it comes along. The team that hasn't learned is doomed to blunder into the same impediment again.

In a really highly functioning organization, I would expect that at some level, perhaps only informally, these lessons might be shared between teams. That way teams actually learn from each other.

The Virtuous Cycle

When teams have the discipline to look for and track risks and impediments as well as changing to adapt to lessons learned, then they are putting themselves in a virtuous cycle. If they see the risks they have a chance of avoiding the impediment. If they see the impediment, they have a chance to quickly mitigate the impact. And if they take the time to learn the lessons from the impediments they encounter, then they are much less likely to encounter those impediments again - and if they do, they will recognize them earlier and be better equipped to deal with them.

The Vicious Cycle

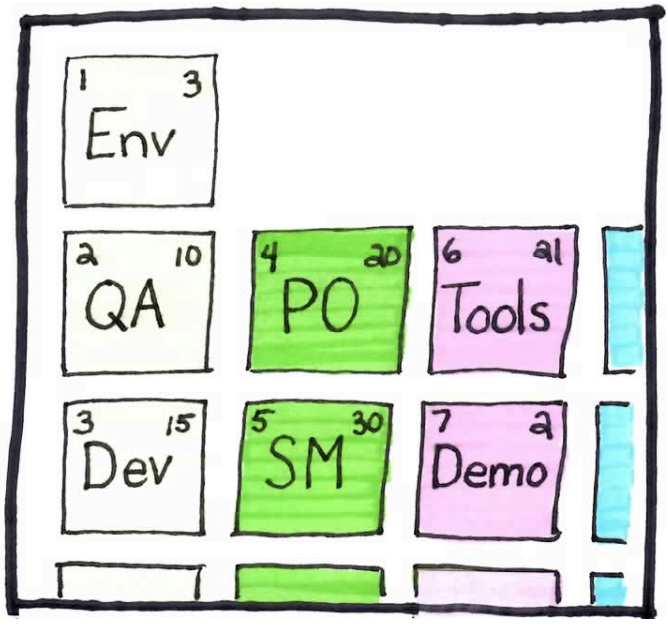
Of course there is a flip side to this cycle that is not so desirable. Teams may ignore risks, thereby missing an opportunity to avoid them. Then they may not even address

the impediments that they encounter. At this point it's hard to say that any learning has taken place, so they are likely to do it all again. Over and over again. To me, that doesn't sound like fun, that sounds like my idea of hell.

Understanding this cycle is important for a couple of reasons. First, it increases your awareness of how impediments come about and how they evolve. Second, it helps to incorporate risk into the Agile frameworks, which typically have not had a model that directly addressed risk. This model does that. It provides a model that helps teams to anticipate and cope with the consequences of impediments on their projects.

Classification

After tracking impediments for a while it is very likely that you will start to see patterns in the types of impediments that you encounter on a regular basis. Often these impediments are a reflection of the culture or environment within which you work. For example, organizations that are very command and control oriented are going to present impediments that reflect the nature of organizations where control is centralized and not easily obtained. In an organization like this you are much more likely to encounter stronger change control mechanisms, more approval processes and all of the attendant waiting and waste associated with these sorts of activities.



William Wake created a catalog of impediments that categorizes impediments along the following dimensions:

- Environment
  - Structure
  - Policy
  - Technical
  - Resources
- People
  - Groups
  - Management

- Process
  - Skills/Practices
  - Quality

His catalog can be found at http://xp123.com/xplor/impediments/

Categorizing impediments can help you to identify common groups or themes within the impediments that you encounter. If there is a common theme among your impediments, then there may be things that you can do that can help address an entire category of impediments, rather than just tackling them one at a time. In addition, when you see repeating impediments, perhaps with slightly different variations, you should be aware that you probably are not getting at the real root cause of the problem with whatever resolutions you are trying to apply to those impediments.

Summary

Overcoming impediments is not for the timid. It requires a single minded purpose, a completely uncompromising attitude, in order to overcome the obstacles that face your team. For the scrum master, it is the impediments that you face that will define your skill and ability as a team leader. Every impediment that you fail to address reduces your value to the team. Every impediment you are able to remove increases your value to the team. It's really that simple. Remember that the next time you face a daunting impediment that blocks the team's progress.

Try This

Using the list of impediments you created at the end of the introduction, try categorizing them. You can use any list of impediments you like. Perhaps your team keeps a list of impediments - use those. What categories of impediments do you see? Are there patterns in your list? Do certain impediments re-occur over and over again?