Risk management is crucial – but does it really help us? – And, how can it support our needs in these tough times?

Risk management has paved the way for many important advances in human history and it is engrained in the way we conduct ourselves. When we think about what could go wrong and what to do about it, we are essentially identifying risk, assessing and treating them. The management of risk in projects is becoming increasingly important for society as more and more organizations engage in projects. In recent years we have witnessed multiple failures attributed to poor risk management such as the Niels Bohr institute or the super hospitals and organisations often struggle with managing risk. Most recently the risk management of some aspects of the corona crisis are highly questionable. Project risk management is a key part of projects, but it can easily end up as a "tick the box" activity which does not create value. This Ph.d. project focusses on examining and improving project risk management through Lean Thinking principles. During the Ph.d. project we discovered multiple issues with project risk management research and practice. Project risk management systems are often not designed with the users in mind and therefore appear a bit like computers in the 80's where you had to be a programmer to appreciate and use the PC's. Sometimes risk management does not create value, and it can even end up destroying value! Part of the problem is that there is no 'one size fits all' risk management process, yet it is often treated as such. Many promote "best practices", but in reality, there is limited knowledge about which risk management practices work under which circumstances and it has not been a focus of the research. This is at the heart of the problem and when we investigate what happens in the real world of project risk management we find that it can easily fail to create value. However, we also find that it can create many different types of value for stakeholders in different contexts, for example: being on economic or schedule targets, reducing risk, improving decision making, enabling other processes to function better, help explore how to solve a problem, act as leverage in negotiations, help prioritize what to work on, win tenders, enable fast tracking of projects, create traceability of errors, the list goes on. The question is how do we reduce the problematic effects of poor risk management and enable it to create value in the way we need?

The research approach

In order to get a deep understanding of project risk management I conducted case studies where I interviewed project workers, observed their work, reviewed their documents and participated in the project risk work. It was important that we gathered information in different ways because people don't necessarily say what they do, or do what they say. Therefore we asked both direct questions, indirect questions and used observations to uncover if the project workers "practiced what they preach" or something else was going on. We found that in reality it can happen quite different than what you would imagine. I took the results from the case studies and investigated if the results could be relevant in other industries and companies through broader studies and focus groups.

The analysis provided four surprising results:

1. There are almost as many different answers to the question "what is value of risk management" as the amount people you ask. In addition, the same people provide very different answers when asked directly about the value of risk management compared to when asked about examples their own experience or when they are observed, sometimes

completely contradicting their own statements completely. For example, one of the risk managers stated that being open and honest about the risks was one of the most important ways risk management creates value. 10 minutes later he was explaining how he had left out risks from a risk register (effectively suppressing information) in order to win a tender. A similar picture emerged across the case studies, interview studies and focus groups. Project risk management creates value in many different ways, sometimes going against what is recommended as “best practice”, even by the same people recommending it. They don’t do what they say, and they don’t say what they really do.

Figure 1: Examples of different answers to the question "What is the value of risk management?"

2. The empirical evidence base of project risk management research has important gaps, which means we often teach or demand the use of methods we do not exactly know if, or why they work. The research is often based on questionable empirical research or none at all. The most common research topic regarding the value of risk management is to try to prove that it improves the chance of project success by saving cost or keeping a project on schedule. However, the studies that try to establish this link produces conflicting and inconsistent results. In fact, it is very difficult to prove that risk management creates a better chance for project success, and even more difficult to prove what practices objectively creates value because:

   a) We are dealing with uncertainty therefore a risk may end up not manifesting/not having any effect unrelated to the activities of a project.
   b) Given the complexity of project management, it is difficult to know whether the risk management activities have influenced the manifestation of uncertainty, or if it were other factors.
   c) Project risk management create value indirectly by enabling other processes in the organization that in turn can influence a project’s outcome and output.
   d) It is difficult to repeat an experiment (which is necessary for objective results) as it is not possible to obtain a sample large enough to exclude chance, because each project has unique characteristics and is practically unrepeatable.

e) Beyond these challenges, there is also the larger question of how to define and measure project success, which is problematic in itself.

So we face a situation where many practitioners and scholars are using and teaching methods that nobody really knows for sure if and how they work, or under which conditions.

3. There is a lot of "waste" in risk management. For example, I found examples of risk management executed as a "tick-the-box" activity where people do not actually carry out the process but rather fill in something in order for it to appear as though they did. In those cases risk management does not create any value, in fact, it can even destroy value when it is used in decision making. There are many types of waste in risk management, and in this Ph.D. project I collected the different ways in which risk management can be wasteful and value destroying. If risk management results are full of bad information or the people do not really carry out the process properly, it can provide a false sense of security.

4. When we study what happens in practice we find that it is much different from what is described in theory. The management of risk often happens outside the formal explicit risk management process. However, there is a need for awareness of this because it creates challenges for academia and practice. For academia it means that many studies can be considered problematic because they did not take into account how risk are *really* managed. The management of risk is not limited to the risk management process and when researchers only study the formal risk management process they leave out important aspects which also serve to manage risk in practice. For example, how do you draw conclusions on studies of the risk management process if, for example, another process running in parallel is fulfilling part of the same purpose?

   For practitioners this means that it is difficult to know what really works under which conditions and thus ineffective risk management is more common that most people want to believe. Just take a closer look at recent failures of risk management such as the Niels Bohr project or the super hospitals, where even the auditing consultants made some of the same mistakes that they were there to fix.

Perspectives

The results are interesting in multiple ways. First of all, they can help project practitioners gain a critical view on the methods they use to manage risk. They can use the frameworks provided in the Ph.D. to gain insight on how risk management create value and what might be missing or problematic in their context. The frameworks can assist in evaluating, improving and designing project risk management systems and many examples are provided of how risk management can create value, or fail to do so. The frameworks can be used to systematically map out what manages risk in a company or project and look for opportunities for creating value through risk management as well as identify "bad risk management". We aim to assist both researchers and practitioners by enabling questions such as: What is really the evidence of effectiveness of a particular practice? Are there adjacent processes which serve the similar purposes, or are there other factors in the management of risk we are overlooking? In addition to identifying value the results can help with identify non-value adding and value destroying project risk management in order to improve effectiveness and efficiency of project risk management. The mapping approach developed in the Ph.D. can be used to diagnose, improve and design project risk management in organizations and increase its ability to create value. Many studies on project risk management focus on discovering 'universals' and thus miss the variation which exist in practice. If best practices are really ‘worst practices’ in some contexts, we need practitioners and researchers to know more about the context and to examine what is really managing the risk!