Arthur D Little

Technology and Innovation
Management Viewpoint

Manage Risk for Product Launch

Actively manage risk to deliver the right products on time!

Risk management is a well-established notion in hedging and safety related issues, but what about in product development? A development project going wrong, not managing its risk can bring a company to its knees. Not realizing and mitigating risks to delivery, quality, feature fulfillment and budget can at the extreme lead to significant business losses, putting an entire company at risk. We argue that project risk management is central to secure successful product delivery.

Project risk management can and should be used as a key lever in:

- bringing a balanced perspective to the management of complicated issues in complex organizations
- prioritizing work in a rapidly changing context with an anticipated approach that is better than simple intuition and that facilitates communication between people
- identifying knowledge gaps and actively closing these gaps
- the active management (and not the avoidance) of risk by being alert and prepared

Project risk management matters!

Take a minute to think of the risk the development projects you are currently running are exposing your business to. What would for example a delay in the launch cost you in terms of higher development costs and loss of sales? Well, to Airbus, the delayed delivery of its A380 by one year was estimated to have cost €4,8 bn[1]. What would it imply if feature and quality expectations were not fulfilled? Well, for BEA Automated Systems, constructing the DIA baggage systems, it meant increased modification and repair costs by $1 million per day during months before the system was finally scrapped and the company was acquired by a competitor[2].

Source: 1. BBC, Q&A: A380 delays, 061030
2. The New York Times, Denver airport to mangle last bag, 050827

The risk level in product development projects increases as projects are put under pressure to deliver more complex products, in shorter time, with distributed resources and increased need for interaction between projects due to platform synergy requirements. And we argue that proactive risk management is essential in order to address these challenges and help projects succeed in terms of delivering quality assured products on time and on budget that fulfills customers' expectations:

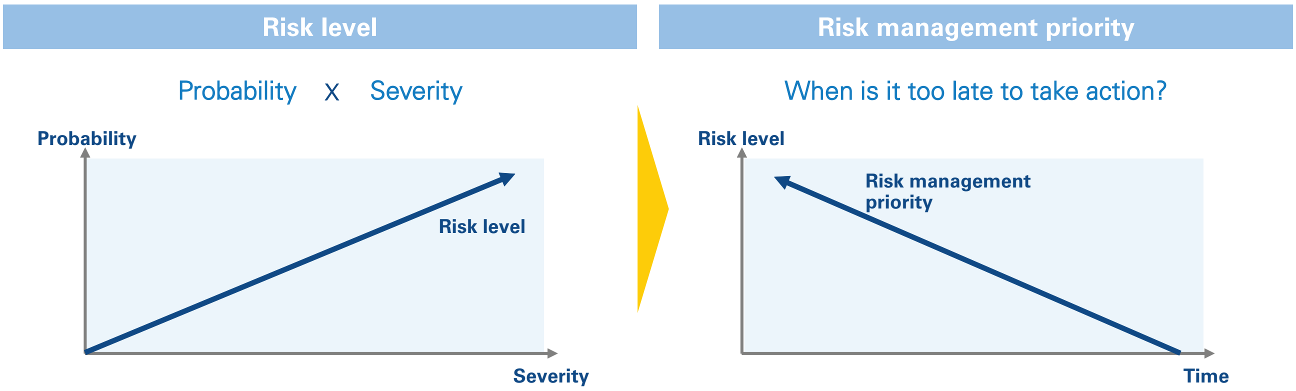
The basics of project risk management

"All of life is the management of risk, not its elimination".

Risk management is not the total avoidance of risks but rather the reduction of the negative deviation from plan and put emphasis on business opportunities. Focus is on anticipating future potential issues and taking a conscious decision on whether to:

1. Avoid the risk – choosing an option that eliminates the risk
2. Control the risk – decreasing either the probability of the occurrence of the risk or the impact were the risk to happen
3. Accept the risk – taking a decision to take no action with regards to the risk
4. Transfer the risk – transferring the risk to another party
5. Investigate the risk – creating consensus on a risk not yet fully understood

Figure 1. Risk management priority



Source: Arthur D. Little

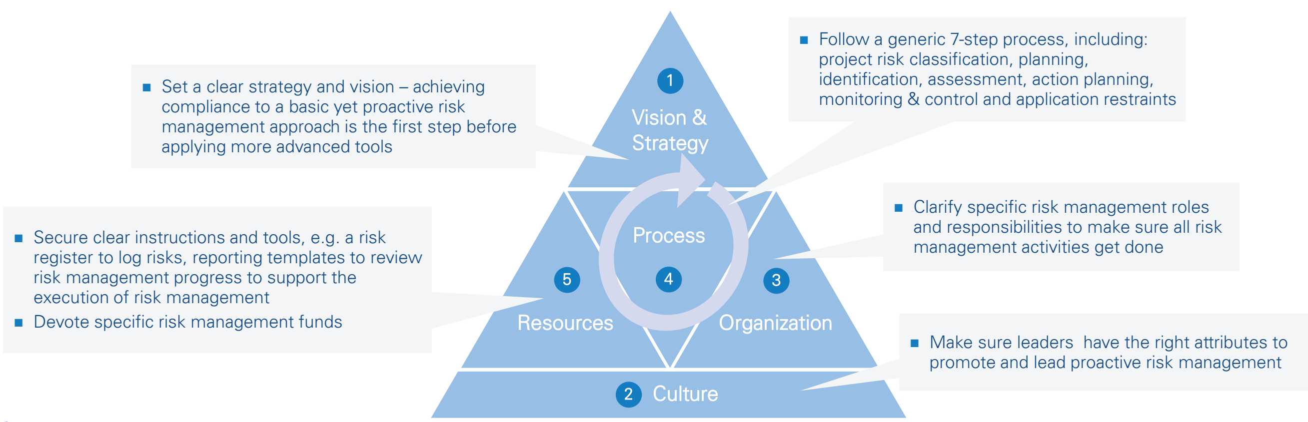
To be able to make conscious decisions and arrive at a conclusion on mitigation measures the risks needs to be identified and properly assessed. For risk identification it is essential to promote a climate where it is encouraged to raise and discuss risk, not just within the project focusing on technical aspects, but also involving all business areas to address business risk in, for example, production and aftermarket. For risk assessment it is necessary to understand how large the potential impact of the risk is as well as how likely it is to happen in order to make the correct estimation of the risk level the risk is exposing the business to. What is also crucial, but in many cases forgotten, is assessing the time you have to solve the risk before it is too late. Combining the risk level with the time a project has to take action before the risk potentially will hit them will allow a project to define a useful risk management priority for each risk enabling the timely management of risk and avoidance of unpleasant surprises and pitfalls on the road to product launch.

The building blocks of successful project risk management

To achieve proactive risk management in development projects five building blocks needs to be in place: a clear vision and strategy, a pro-active risk management culture, an established organization, clear processes and devoted competent resources, see figure 2.

Good project managers recognize the importance of proper risk management, which in fact ultimately is their job. But all project managers certainly do not have that insight and they are often more focused on problem solving instead of problem prevention, as it is more tangible and personally rewarding. Therefore these building blocks are needed to underline the importance of risk management in a company and create the prerequisites to execute project risk management effectively and efficiently.

Figure 2. Project risk management in the High Performing Business Model



Source: Arthur D. Little

Case study: Achieving proactive risk management

What would you do if you found yourself in a situation where you had numerous product development projects running with ever more complex technology content and hard deadlines to meet to secure future business success? Well, a global automotive company in this situation chose, as one key activity, to improve project risk management in order to help secure product deliveries.

The company was in a situation where proactive risk management was not encouraged by management, who instead made heroes of people solving problems. There were procedures for project risk management in place but the culture together with poor competence around risk management led to weak compliance to these procedures. Risks were in many cases identified but little effort was made to mitigate and actively manage them.

To come to terms with the situation the company embarked on a journey to improve project risk management across its organization. It was recognized that leaders had to change what they said, how they acted, and what they measured and prioritized. At the same time there was a large need to increase the competence of the organization and make projects realize the value of doing good risk management and how it could be done effectively and efficiently. All in all a solid change management effort was called for and initiated, where management was equipped to ask the right questions and the projects were equipped with the means to answer those questions promoting a good discussion of risks in meetings and to focus on mitigation measures.

Results

After a change initiative that included the largest, most critical ongoing projects in the company, both project resources and top management now recognize the value in project risk management and a behavioral change towards proactive risk management can be seen in the organization where actions now are taken to reduce risk and avoid future potential roadblocks to success.

Leverage project risk management in decision making

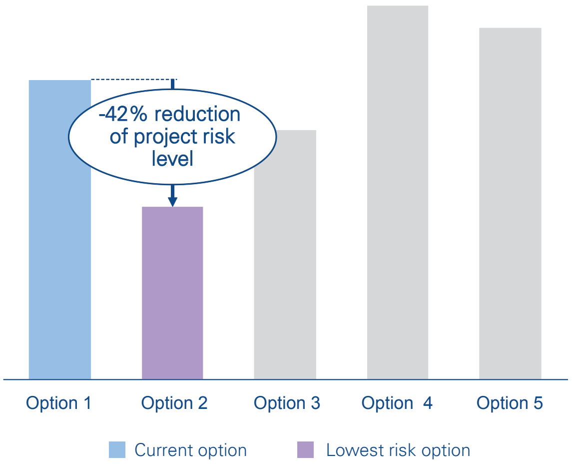
For many, project risk management is just another administrative burden. If they are just making the effort to identify and assess risk so as to have something to report then yes, the value of risk management is limited. It is only when you proactively take measures to mitigate the risk that you will see the benefit. This requires a project to take conscious decisions on appropriate mitigation measures based on cost/benefit analyses and then actually delivering on those measures.

Information generated in project risk management can and should also be utilized to inform central project decisions such as concept selection. If facing a situation where a decision needs to be taken to change the content/scope of a project, the decision should be risk based, which easily can be done through a structured exercise utilizing the information already available from continuous risk analysis, to understand which option at hand would be less risky and for what reason.

Figure 3. Project risk management strategy and vision

Source: Arthur D. Little analysis

Figure 4. Illustration of optioneering informed by risk



Source: Arthur D. Little analysis

Furthermore, we recommend classifying each project based on an evaluation of a number of features affecting the overall risk level of the project to be able to understand each project's risk profile and thereby secure the right level of risk management in the projects. Aggregating the classification on each project on a portfolio level will then enable a discussion on risk appetite. Understanding how many high risk projects are taken on at any one time and the risk profile of these projects is the first step towards calibrating and deciding an appropriate level of risk exposure in a project portfolio.

Insights for the executive

Project risk management is an iterative process with continuous planning, identification, assessment, action planning, and monitoring and control of risks. It is not a one off activity in the beginning of the project nor a paper chase to document risk to be able to, in the end, say "I told you so" when the risk comes true. It should be a mindset in any project and be included in day-to-day work to manage risk in a timely manner and by doing so dramatically increase the likelihood of delivering the right products on time!

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