

Advances in Project Management Series¹

What are Opportunities in Projects? ²

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Based on Chapter 2 of “Capturing Upside Risk” (Taylor & Francis, 2019)

Most people accept that the concept of risk covers more than just threats, and there is a strong case for a broader definition of risk that also includes opportunities. Building on that insight, we can move on to consider how it might be applied to the world of projects. If the generic definition of risk includes both downside and upside, then it seems obvious that we should expect to find both threats and opportunities in our projects. This article explores the concept of “opportunity” in the context of projects.

WHY PROJECTS ARE RISKY

Anyone who has ever worked on a project will know that projects are risky. But why? There are three main reasons:

1. Common characteristics
2. Deliberate design
3. External environment

Common characteristics

All projects share a range of features which make them inherently uncertain:

- *Uniqueness*. Every project involves at least some elements that have not been done before, and the novelty and lack of experience with these elements introduces uncertainty.
- *Complexity*. Projects are complex in a variety of ways and are more than a simple list of tasks to be performed. There are various kinds of complexity in projects, including

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technical, commercial, interfaces, or relational, each of which brings uncertainty into the project. A project can be viewed as a complex system, and if we are unable to predict the way the system will react, then uncertainty is inevitable.

- *Assumptions and constraints.* Project scoping involves making a range of guesses about the future, which usually include both assumptions (things we think will or will not happen) and constraints (things we are told to do or not do). Assumptions and constraints may turn out to be wrong, and it is also likely that some will remain hidden or undisclosed, so they are a source of uncertainty in most projects.
- *People.* All projects are performed by people, including project team members and management, clients and customers, suppliers and subcontractors. All of these individuals and groups are unpredictable to some extent and introduce uncertainty into the projects on which they work.
- *Stakeholders.* These are a particular group of people who can influence the project to a greater or lesser degree. Stakeholder interests can be varying, overlapping and sometimes conflicting, and the position adopted by stakeholders towards the project can change with time, making them a common source of uncertainty.
- *Change.* Every project is a change agent, moving from the known present into an unknown future, with all the uncertainty associated with such movement.

Any uncertainty arising from these characteristics that might affect project objectives should be considered as a risk. However, these characteristics are built into the nature of all projects and cannot be removed without changing the project. For example, a “project” which was not unique, had no constraints, involved no people, and did not introduce change would in fact not be a project at all. Trying to remove the risky elements from a project would turn it into something else, but it would not be a project.

Risk includes both threat and opportunity, so each of these sources of uncertainty might give rise to project opportunities as well as threats. For example, *unique* aspects of a project might present unexpected savings in time and cost as a result of having to use novel development techniques. Considering *complexity* may reveal areas of synergy that were not previously apparent. Where *assumptions or constraints* limit the degrees of freedom for a project, if these were to prove false or flexible, it might allow the project to operate more efficiently. Not all *stakeholders* are adversaries of the project, and friendly stakeholders might offer support that makes life easier for the project team.

So, the fact that all projects share characteristics that make them inherently risky also leads us to expect that all projects will contain opportunities.

Deliberate design

Any organisation seeking competitive advantage must recognise the relationship between risk and reward. Higher risk means potentially higher reward, though clearly there is also increased possibility of significant loss. By trying to make bigger changes more quickly, an organisation takes more risk in both dimensions—positive and negative. But the cautious organisation that takes less risk also reduces its potential for reward.

In project-based organisations, the role of projects is to deliver value-creating capabilities. As a result, projects are deliberately designed as risk-taking ventures. Their specific purpose is to produce maximum reward for the business while managing the associated risk. Because the existence of projects is so closely tied to reward, it is unsurprising that they are also intimately involved with risk. Organisations which understand this connection deliberately design their projects to take risk in order to deliver value. Indeed, projects are undertaken in order to gain benefits while taking the associated risks in a controlled manner.

Clearly, if we design our projects with risk in mind, we'll be looking to expose ourselves to as much upside risk as possible, positioning the project to take advantage of any opportunity that comes our way—as well as seeking to minimise and avoid exposure to threats. These aspects of managed and intentional risk exposure should form part of the design of the project.

External environment

Projects are not conducted in a vacuum, but exist in an environment which poses a range of challenges and constraints. This includes both the wider organisational context and the environment outside the organisation, and changes beyond the project's control can occur in both of these. Environmental factors which introduce risk into projects include:

- Market volatility
- Competitor actions
- Emergent requirements
- Client organisational changes
- Internal organisational changes

Each of these factors is subject to change at an increasing rate in the modern world. Projects essentially have a fixed scope which they are required to deliver within this ever-changing environment. It is not possible to isolate projects from their environment, so this represents a

common source of risk for projects. However, as for all risks, those arising from the external environment include both opportunities and threats. Markets can move in our favour, making our products and services more attractive. Competitor actions can also result in advantage to our project, perhaps allowing us to recruit skilled staff made redundant by others, or opening a new market that we can profitably exploit.

SYNONYM CONFUSION

If projects are risky, as everyone agrees, and if the concept of risk includes both threat and opportunity, then every project should be able to find opportunities. Unfortunately, when we start to look for opportunities in projects, we immediately encounter a problem with language. We use the word “opportunity” in at least five different ways when it comes to projects, and only one of these relates to opportunity as upside risk. The four non-risk uses of the word opportunity in the context of projects are:

- The “opportunity to add or change something in the project”, which generally involves a change in requirements or scope, either agreed or imposed.
- An “opportunity to act”, which is a simple decision or choice to be made about a course of action (perhaps in response to a risk), not an uncertainty.
- An “opportunity to succeed”, generally referring to a benefit or outcome that the project is intended to deliver.
- Our colleagues in portfolio or programme management roles might consider the project itself to be an “opportunity to deliver value”.

None of these uses of the word opportunity relates to it as a risk.

A commonly-used initial definition of risk is “uncertainty that matters”, and risks matter because they have the potential to affect our ability to achieve objectives. A project risk is “any uncertainty which, if it occurs, would affect achievement of one or more project objectives”. Threats have unwelcome or adverse effects on achievement of objectives, and opportunities have helpful or beneficial effects.

A project opportunity is therefore any uncertainty which, if it occurs, would have a positive effect on achievement of one or more project objectives.

When seeking opportunities in projects, we must always remember that we are looking for *uncertainties*, not choices or facts or requirements or decisions. Project opportunities must also *matter*, by making it easier or faster or cheaper to achieve project objectives.

LINKS BETWEEN OPPORTUNITIES AND THREATS

The definitions of risk contained in international standards and guidelines make it clear that threats and opportunities are essentially the same thing: They are both uncertainties that matter. The only difference is in the sign of the impact: Threats have a negative impact, whereas opportunities have a positive impact.

This similarity might help us to understand the nature of opportunities in projects, by considering the relationship between threats and opportunities. There are at least four ways in which opportunities relate to threats:

1. Some opportunities arise from the *absence of threats*. If the bad thing does not happen, we might be able to take advantage of something good instead. If the threat is described by answering a “What if . . . ?” question, then we might find a corresponding opportunity by asking “What if not?” For example, if poor industrial relations do not lead to a strike, parties on both sides of the dispute might be incentivised to enter discussions aimed at turning the situation round from negative to positive.
2. Other opportunities are the *inverse of threats*. Where a variable exists on a continuous scale and there is uncertainty over the eventual outcome, instead of just defining the risk as the downside, it might also be possible to consider upside potential. Most variability is double-sided, with possible values both above and below what is planned or expected. For example, where the productivity rate on a new task is unknown, it might be lower than expected (a threat), or it might be higher (an opportunity).
3. We should also remember *secondary risks*, which are introduced by implementing a response to another risk. Secondary risks can be either threats or opportunities, just like any other risk. Sometimes by addressing one risk we can make things worse (the response creates a new threat), but it is also possible for our action to create a new opportunity. Avoiding potential delays to my car journey by taking the train might also allow me to do some useful work during the journey.
4. Lastly, we must not neglect “pure opportunities” which are *unrelated to threats*. These are simply unplanned good things which might happen. For example, a new design method might be released which we can apply to benefit our project. Or a new recruit to the team may unexpectedly possess a skill needed to solve a problem. This type of opportunity needs to be actively sought out, requiring fresh thinking and awareness of how potential additional benefits might arise.

RISKS AND RISK

Before we leave the discussion of why all projects contain opportunities, there is one additional important topic to cover. This arises from the rather puzzling question, “What is the difference between risks and risk?”

When considering risk in projects, there are two levels of risk that should concern us.

- The first level comprises the *individual risks within the project*, which are specific threats or opportunities that could affect our project’s objectives. These are the risks that we record in our risk register, and they allow the project manager and team to answer the question, “What are the risks in my project?”
- Secondly, we need to understand the *overall level of risk exposure* associated with our project as a whole. When our project sponsor or client asks, “How risky is my project?”, the answer does not usually come from the risk register. Instead of wanting to know about specific individual risks, we need to communicate the level of overall project risk. This represents the effect of all forms of uncertainty on the project as a whole, including individual risks, but also taking account of variability and ambiguity.

These two different perspectives reveal an important dichotomy in the nature of risk in projects. A project manager and the team are interested in “risks”, while the project sponsor or client wants to know about “risk”. While the project manager looks at *the risks in the project*, the project sponsor looks at *the riskiness of the project*.

This distinction is included in two of the main guidelines on project management, published by the Association for Project Management (APM) and the Project Management Institute (PMI) respectively, as shown in Table 1.

SOURCE OF DEFINITION	INDIVIDUAL RISKS	OVERALL PROJECT RISK
<i>APM Body of Knowledge, 6th Edition. (Association for Project Management, 2012)</i>	An uncertain event or set of circumstances that would, if it occurred, have an effect on achievement of one or more objectives.	Exposure of stakeholders to the consequences of variation in outcome, arising from an accumulation of individual risks together with other sources of uncertainty.
<i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition. (Project Management Institute, 2017)</i>	An uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives.	The effect of uncertainty on the project as a whole, arising from all sources of uncertainty including individual risks, representing the exposure of stakeholders to the implications of variations in project outcome, both positive and negative.

Table 1: Risks and Risk in current guidelines

Given these two levels of interest, any approach to risk management in projects needs to be able to answer the questions of both project manager and project sponsor. An effective project risk management process should identify individual threats and opportunities within the project and enable them to be managed appropriately, and it should also provide an indication of overall project risk exposure.

However, when we are thinking about the place of opportunities in projects, “risks” and “risk” are rather different.

- There will be *many individual risks* in our project, including specific threats and opportunities, each of which can be identified, assessed, and prioritised, and for which we can develop and implement targeted risk responses. Throughout the various steps of the risk process, we *consider individual opportunities and individual threats separately*.
- There is only *one level of overall project risk exposure* for our project at any one time. Overall project risk fits the “uncertainty that matters” paradigm, with the “uncertainty” dimension expressing the degree of confidence that we have in achieving the project’s overall objectives, and the “mattering” dimension expressed as the range of possible variation around each objective. In order to calculate these two dimensions of overall project risk, we need to take account of the combined effect of all individual threats and opportunities, as well as the impact of other sources of project uncertainty. The process of determining overall project risk exposure *does not consider threats and opportunities separately, but combines them together*. Chapter 7 describes how to calculate overall project risk in more detail.

ALL PROJECTS INCLUDE OPPORTUNITIES

We’ve seen that all projects are inherently risky, and because risk includes both opportunity and threat, then it follows that all projects have opportunities. Unfortunately, loose language often causes confusion, with the word “opportunity” being used in several ways in the context of projects. If we want to extend our risk management process to include opportunities, we need to remember that we’re looking for *uncertainties which, if they occur, would have a positive effect on achievement of one or more project objectives*. This definition gives us two key aspects that all opportunities in our projects share:

- *Uncertainty* . . . The first essential characteristic of all opportunities in our projects is that they are uncertain. They include uncertain future events that may never happen, as well as variability in planned activities that may turn out to be better than expected,

and ambiguous or emergent aspects of the project where we may be pleasantly surprised.

- . . . *that matters*. The second crucial element of a project opportunity is that if it occurs it will be good for the project. Opportunities that happen will result in saved time, reduced cost, enhanced performance, reduced hassle, improved morale or teamwork, better client relations, etc. A realised opportunity doesn't change the project's objectives, but it makes it easier for us to achieve them.

Example opportunities from real projects include the following, each of which meets the two "uncertainty that matters" criteria:

- Because the client has expressed an urgent need for our product, we may be able to insist on experienced resources to serve on the project team, which would lead to improved quality, cost, and schedule performance.
- As a result of the good history of collaboration with our supply chain, interface management may experience fewer issues than expected, which would have a positive impact on the schedule.
- Because many other large projects are being executed concurrently, we might be able to negotiate better terms with the current fabrication subcontractor and capitalise on economies of scale, which would lead to cost savings and improved schedule.
- Because we have to outsource production, we may be able to learn new practices from our selected partner, which would lead to increased productivity and profitability.
- Because we have an existing product range, a higher level of technology reuse than planned may be possible, leading to savings in effort and cost.
- As the project is planned to take place during the summer, we may be able to recruit additional skilled student labour, which would mean that time could be saved on all activities that take place over that period.
- Because there are three other projects taking place in the same time frame, we may be able to utilise skilled staff as they become available from another project, which would allow us to deliver early to the customer.

In each case, the project team were made aware of something that might or might not happen, but that would be helpful to their project if it did occur. That opportunity awareness turned into proactive exploration and action, some of which resulted in significant positive impacts for the projects. These project teams were not super-professionals with access to some kind of hidden wisdom. Instead they simply followed a structured approach to finding and managing opportunities in their projects, and they reaped the benefits.

Any project can expect to find similar opportunities, if they only know how to look for them. By adopting a proactive and structured approach to identifying, prioritising and capturing opportunities, project teams can ensure that they give themselves the best possible chance of success.

More information on how to include opportunities in the risk process can be found in David Hillson's latest book "Capturing Upside Risk: Finding and managing opportunities in projects", published in June 2019 by Routledge. Full details from <http://www.crcpress.com> (search for "Hillson risk"). Use the code ADC30 when ordering direct from the publisher for a 30% discount!

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Known globally as *The Risk Doctor*, David Hillson leads The Risk Doctor Partnership (www.risk-doctor.com), a global consultancy offering specialist risk services across the world.

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