# Audio file

[RedStone Guest Lecture 2020.mp4](https://caledonianac-my.sharepoint.com/personal/jad3_gcu_ac_uk/Documents/Transcribed%20Files/RedStone%20Guest%20Lecture%202020.mp4)

# Transcript

00:00:00

Hello, my name is Gareth Day. I'm a consultant at Redstone risk and this is a presentation that myself and my colleague will folds came up to GC you probably this time last year to deliver in person to the final year students. Obviously we'd love to come up and do that again, but at the moment this virtual voiceover is the best we can do so.

00:00:22

I hope I can do it justice.

00:00:26

So the theme of this presentation, and it is the same one as last year, is our take on operational and strategic risk, so I'll get stuck into that in a bit and talk about how we operate as a company, how we view the distinctions and similarities between these types of risks, and give you some practical examples from our real life projects through our case studies.

00:00:46

When we did this last year, we also finished with a group consulting exercise, which we're obviously not going to do. You're getting away with that, so breathe a sigh of relief. If that is not your bag, but it's probably worth pointing out you know if any of you are budding risk consultants, then do get in touch. We're looking to grow. We've got a good relationship with GC you and appreciate the value of the risk degree they offer so.

00:01:10

Check out the website if you want more information on that.

00:01:13

So who are we? What are our backgrounds and and why are you listening to us?

00:01:19

Will is the founder and director of Redstone risk. He set up the business over three years ago, now having had a successful consulting career for major defense contractors, he set up and run risk process is all over the world. His next been Monte Carlo risk analysis, among other things. His University background is in engineering.

00:01:39

He's gone, MSE with distinction in risk management as well. He's a Fellow of the Institute of risk management and was previously an external examiner for GC you. I'm sure we won't be saying that this, but he's extremely well respected risk consultant in our industries. I joined up with Redstone over two years ago now.

00:02:01

I'm coming up to six years kind of overall experience providing consulting services in the defence and nuclear sectors. Most of that comes from my time at Babcock, where I was a business analysis and digital transformation consultant. Answers on a postcard. If you know what that means. But before that I did a history degree. I dabbled a bit in law and then I did an OSC and management from Bath University.

00:02:26

Completed the APM PMQ and soon I'm going to be working towards achieving the Institute of Risk Management Diploma in enterprise risk management.

00:02:37

So Redstone risk, we provide trusted risk management, consulting, modeling and Analytics services to defence and NRG customers. Our primary aim is to make risk information useful. Now I know this sounds relatively straightforward, but trust me, we've worked with a lot of organizations where there's just so much confusion and complication and the risk process is an the way that.

00:02:57

In which they use that data. So what we do is help for these companies overcome those complications and start even fairly from their risk process is so that ultimately the decision makers in those organizations can make better informed decisions.

00:03:12

I've read some risk. We have three major capabilities that help us achieve those aims that I just set out in the previous slide. So the first one is consulting, second is modeling, and the third is Analytics. So consulting is basically our bread and butter and it includes things like setting up and running risk. Process is creating frameworks, strategy documents, etc.

00:03:34

And also training companies on all aspects of risk management.

00:03:38

Normally this activity kind of supports our second capability on modeling capability, which is in many ways are kind of specialism, so we undertake quantitative cost and schedule risk analysis on a whole host of really significant programs that help the directores of those programs understand and quantify their risk environment.

00:03:58

The final capability that we've got here is Analytics, and this is where basically we turn all the data from the previous.

00:04:07

Capabilities the previous activities, and we turn that into useful information. Useful insights for the directors of those companies so they can make better decisions. And we do that through relationships with software providers to create risk visualizations, and also a whole host of other kind of things that we do to improve the communication of risk data.

00:04:28

We've got a list of all the companies that we kind of work with. I'm not going to go into too much detail here. Some of this will be picked up in the case studies, but you can check it out on the website. Obviously we work in defence and nuclear we've got.

00:04:43

Links here with Babcock Rolls Royce. We've worked at D Ray up in the North of Scotland and costing AWE, which is a kind of big project of ours at the moment, which is helping to support and maintain the UK's nuclear deterrent.

00:05:01

As a small company we have strong values. We kind of pride ourselves on the relationships that we have with our clients. An the vast majority of our work has come from and continues to come from word of mouth.

00:05:13

Basically, people use an recommend us to other people because we're trustworthy, reliable, flexible, and we do have integrity. What we mean by that is we will always try and do what's right for our clients, and they know that they trust us to do that. Moving forward, we aim to maintain that reputation while.

00:05:33

Developing our capabilities and growing our team to be able to meet the needs of existing and future clients.

00:05:40

I'm going to speak a little bit about operational and strategic risk, but before I get too stuck in it's it's important that I frame this whole discussion by saying that this is our own take on things. This is our understanding of the world, and it is only one side of a debate that's probably going on at the moment. An there probably isn't even a right answer, so it's all open to interpretation.

00:06:02

I know that, especially in your course you would have been taught a lot of good theory about this kind of stuff, and that's all important. What this is hopefully going to do is kind of complement that theory with a bit of real world experience.

00:06:16

So what do we mean by the terms operational and strategic risks?

00:06:20

I know that there are lots of definitions of operational risk out there that relate specifically to the activities of for like financial services companies, but as you've seen from the introduction that I've just given, that's not what we do, so we work mostly for project based organizations, largely in defense in nuclear sectors where the end client is most often the Ministry of Defense.

00:06:41

So when we talk about operational risk, we are really talking about project level risk. This is project based risk so that is to say risks that affect the day-to-day achievement of Project Outputs or outcomes.

00:06:56

So lots of the processes involved in risk management at the project level are concerned with kind of collecting data ticking boxes, attempting to treat or mitigate risk exposure to keep projects on track.

00:07:09

It's probably helpful to have an example to help us decide what is a project output or outcome and what is the strategic objective here. So if you imagine for a second that we have a project to design and produce a new pen.

00:07:24

Um, in our terms, the final output of this project is actually the pen itself. You know, that's the output. That's what we've produced. We're creating a pen.

00:07:34

The outcome of the project to build a pen is the ability to write stuff, right? You know this is this is the kind of thing we're dealing with. We've produced a pen. That's our output. We are. We now have the ability to write stuff down on paper. That's the outcome. So these are operational or project level considerations.

00:07:55

If we move up to the strategic level, what we mean by strategic risk is enterprise risk. You know this is risk that affects the achievement of the organizations.

00:08:06

Objectives and its ability to deliver intended benefits.

00:08:10

So at this level, we're not too concerned with the impact on project level outputs or outcomes.

00:08:15

Um, instead we're kind of more focused on giving our directores the ability to make better informed decisions based on a high level understanding of our risk environments. So if we put this back onto our pen example, if the output is the pen, the outcome is the ability to write stuff the strategic objectives.

00:08:35

Going through this project would be something like delivering the best way of writing in ink for less than a pound, for example, and the overall benefit would be the ability to write more effectively than I can write with my current pencil. So for now when I say operational, think projects and Outputs.

00:08:56

And when I say strategic risk, think of the wide enterprise level. Objectives are fleshed out more in the following slides. We'll think about the answers to these two questions at the bottom here. As we go through.

00:09:09

Bit of a spoiler alerts, you know, I don't think it really is it this easy to define and potentially we shouldn't be dividing it like this anyway, but will come and look at that in a second.

00:09:21

So having presented operational risk as project risk, let's explore that in a bit more detail.

00:09:28

So I'm sure you're all familiar with this. It's the triple constraints or iron triangle, and it's a way of assessing projects. There are loads of variations of this, and its effectiveness is debated, but I'm not bothered about that for our purposes here. Is it just going to help us explain and frame project risk?

00:09:44

So.

00:09:44 Speaker 1

Fundamentally, it's basically idea that there's a constant trade off between these constraints. So if you want to fix one of them so they can't be moved, then you have to accept the partial loss of another. So as an example, if you want the absolute highest quality product, it's going to cost you more and take longer, most probably, so the tradeoff is time and cost.

00:10:05 Speaker 1

The problem is that often comes when you look at risk and uncertainty on this, so there's two of the main constraints in this triangle. Both time and cost, then normally built on estimates which are wrong most of the time and introduce a whole host of uncertainty. There's also discrete risk events that are going to come in and potentially throw you off one of these constraints, or all of the constraints, so it does get a little bit more complicated.

00:10:30 Speaker 1

This is.

00:10:31 Speaker 1

But fundamentally operational.

00:10:33 Speaker 1

Risk management is all about the process of identifying, assessing and treating risks to these constraints, right? So no matter what the category of risk is where it's supply chain, commercial finance or something like that.

00:10:47 Speaker 1

The risk will impact one of these constraints.

00:10:51 Speaker 1

This model this trip this triangle at the moment as it is represents a project, so it's standing alone. There's no framing of anything else. There's no wider considerations at play other than the impact on the project outputs these constraints.

00:11:06 Speaker 1

This is a simplification and Generalization coming up, but the project manager, this guy in the corner usually has a couple of key questions when looking at project risks. The first is how many risks are there on my project, right? So in this case he's looking at how many have I got the following questions from this are what type of risks have I got? How likely are they to occur?

00:11:29 Speaker 1

What's the impact if they did occur?

00:11:31 Speaker 1

The second question, and this is more kind of an inquiry question, is what's going to stop us doing what we're already doing. So the main concern in this case for the project manager is on the threats to maintaining their current project performance and delivering their intended outputs. So in our example with the pen example, the intended output is the pen.

00:11:52 Speaker 1

So using these kind of questions, the project manager is going to be thinking how many risks have I got against delivering my pen and what's going to stop us delivering the pencil with delivering, and how can we stop these risks happening or hurting us as badly as they will?

00:12:13 Speaker 1

So to help answer these questions for the project manager, what we normally do is is trying to help improve or introduce a number of risk processes and management plans that include risk assessments, risk mitigation, tracking, and all of that kind of day-to-day stuff that we are familiar with is usually fairly data heavy.

00:12:34 Speaker 1

And it's about capturing and assessing and then managing risk against Project Outputs and outcomes.

00:12:41 Speaker 1

The majority of what happens on a day to day basis kind of out there in the real world is is focused on this is operational and project risk.

00:12:51 Speaker 1

With that in mind, how does strategic risk differ from project risk? So we've already said that strategic risk meaning this kind of enterprise risk in the projects that we work on.

00:13:02 Speaker 1

And if we take our triangle that represents our project, everything is going to start to change once we in case that projects analogy with the wider considerations of the enterprise. So if we add on the strategic objectives of the business and the intended benefits that those projects or kind of portfolio projects are intended to deliver, we start to see a little bit.

00:13:24 Speaker 1

Prince picture building up here. So the main part of the triangle you know the the constraints. They're all the same, but now we're kind of cognisant of the wider picture in which our project sits.

00:13:36 Speaker 1

Often the difference between operational and strategic risk in the things that we kind of see on a day to day basis is.

00:13:42 Speaker 1

Actually, down to changing the question rather than saying You know how many risks are there in my projects like we did for projects.

00:13:51 Speaker 1

Project managers and directors I can and I asking how risky is my project, which is a completely different question. So the lens were looking through for our second question. The more inquiry question is no longer what's going to stop us doing what we're doing, but rather what's going to stop us going where we want to go. So there's a future element into this now, so we're looking more strategically.

00:14:14 Speaker 1

Let's say a strategic layer on our operational risk. We're looking at this through the lens of enterprise strategy. Everything is the same. We're just having a kind of a wider picture built.

00:14:25 Speaker 1

So for me, the operational kind of risk turns strategic when you ready operational exists within a wider context of enterprise strategy.

00:14:35 Speaker 1

This sounds quite simple and easy, but it's even easier and way more common for risk managers to keep operational once procedure separate. I don't think that's a good thing. We need to be thinking about the difference between operational strategic risk is just the difference in mindset rather than a fundamental difference in approach. I'm going to talk about this in our case study a little bit, but.

00:14:56 Speaker 1

Really, what we're kind of getting at here is that.

00:14:59 Speaker 1

The only difference is how you view it, right? Operational risk, strategic risk is kind of the same. We think that everyone really should have a kind of strategic mindset when they're looking at risk no matter at what level they're looking at it.

00:15:15 Speaker 1

You really can't have the strategic without the operational and we can't understand the importance of our operational risks without an idea of how they might affect our strategies. And this is something that we can see a bit more clearly in the data journey.

00:15:32 Speaker 1

So how do we make things easier to shift the mindset and become strategic risk managers that kind of every level?

00:15:38 Speaker 1

Um, obviously we still need to take off the kind of operational stuff we need. The project risk registers we need all that data, but we need to kind of always approach our projects with the strategic mindset we need to understand how they fit into the wider enterprise picture. One of the ways that we can do this, I'm just introducing the last slide is by having a clearer picture of the.

00:15:59 Speaker 1

Data journey through the organization. This is the kind of way and the direction that the data flows up from the lower levels of the organization up to the higher levels in the board.

00:16:10 Speaker 1

So let's have a look at this in a in a bit more detail, so as you can see from this triangle, so generally at the bottom you know you get a higher number of risks being managed, and then as you get to the top, the level of risk being manager kind of relatively small, but might have more kind of strategic impact.

00:16:28 Speaker 1

At the bottom, and this is another kind of generalization of some of the projects we work on. It might be different in other organizations, but this is largely what we see. So at the bottom level you've got the project risk registers. There's normally a few of them 'cause there's normally quite a few different projects going on in these businesses.

00:16:46 Speaker 1

And.

00:16:48 Speaker 1

This is where kind of lots of risks are recorded. Lots of risks are being managed by project managers or senior engineers, for example, who have a foot in the door of the day to day activities, and these registers are going to be focused on risks to Outputs. As we've already seen in the previous slides.

00:17:09 Speaker 1

As we move up, we escalate up the organization, so we kind of merge or escalate some risks into a higher level risk registers an these are normally.

00:17:21 Speaker 1

And responsibility of kind of more senior managers largely focused on achieving.

00:17:27 Speaker 1

Outcomes so you know kind of normal project management kind of hierarchy. Got their projects at the bottom, then their number of programs that manage their projects as we go up. Maybe there's a portfolio level there could be a couple of these levels. Highest kind of level strategic risk registers the board consider in their board meetings.

00:17:49 Speaker 1

Kind of portfolio or enterprise depending on how big the organization is.

00:17:53 Speaker 1

There might even be a chief risk officer on the boards. You know these days and their focus on understanding the impacts on their objectives and their benefits.

00:18:02 Speaker 1

So, as we've seen, with the kind of.

00:18:05 Speaker 1

A previous slide where we looked at the triangle and framed it with the wider.

00:18:10 Speaker 1

Considerations of the enterprise. Here we've got the same thing, so now we're at the strategic level.

00:18:19 Speaker 1

This is again this top of the top of our triangle. We've put the kind of customer and this is in our experience because largely there's a kind of big chain of of companies that will ultimately work for the Ministry of defense, so there could be varying levels of clients at here, but at this one we put.

00:18:39 Speaker 1

The customer risk register at the very top.

00:18:42 Speaker 1

Um, so they're going to be concerned with whether they will have their desired scope. So we saw that on the kind of.

00:18:48 Speaker 1

Drag the Triple Constraint.

00:18:50 Speaker 1

Um so.

00:18:53 Speaker 1

And whether they can deliver their final capability basically so when the data exists within the project at the bottom levels and it's created reported moved around the projects moved up to the program levels were talking about operational risk management as soon as it gets pushed up.

00:19:11 Speaker 1

To the executive, and is therefore used to help inform strategic decisions. We can help change our mindset to think more about strategic risk. Obviously it would be good if at the project, less risk register.

00:19:24 Speaker 1

There's already that mindset that what they're doing is kind of informing and helping the board ultimately make strategic decisions. But you know, that's something that we strive to do.

00:19:37 Speaker 1

It kind of needs to be easier. People need to make it easy to make the switch an the best case is actually there isn't really a switch in mindset. I can just said the strategic mindset is embedded from the start.

00:19:49 Speaker 1

Having just said that, the switch to thinking more strategically about risk at all levels needs to be made easier, there's a few ways that we can do that by looking at the data journey by kind of supporting and enabling the data along that journey.

00:20:03 Speaker 1

For risk managers means a few things so we can try and we do.

00:20:10 Speaker 1

Try not to use complicated language that only risk managers understand. That sounds like something that's again quite simple. But in multiple organizations that we've worked for, you know the language used is only understood by a few people, and it almost actively disengages other people from making the most out of the risks.

00:20:33 Speaker 1

One of the key things that we focus on is kind of making use of dynamic and visual data presentation methods. So moving away from kind of really heavy Excel based reporting basically really boring stuff and moving towards kind of more visual dynamic.

00:20:52 Speaker 1

Data presentations.

00:20:55 Speaker 1

Static data is something that is used quite a lot, like manual static data.

00:21:00 Speaker 1

And again, that's something that we need to kind of as a industry kind of get away from and move towards and embrace the kind of knew way that people want to make decisions. And that is not by looking at spreadsheets effectively.

00:21:16 Speaker 1

Um final thing on that list there is that we can kind of shift the focus. We can help shift the focus from compliance driven data gathering which we see all the time. You're managing a database. All you're doing is kind of just making sure that data goes in and we can move away from that to really start supporting strategic decision making an that's kind of.

00:21:37 Speaker 1

A process that we go through with the Analytics so you know overall talked about capability.

00:21:43 Speaker 1

How do we take the data that's gathered and turn it into like actually relevant, useful information that supports decision-making? So that's something that resident risk we're obviously really keen on focusing on.

00:21:58 Speaker 1

Um?

00:22:00 Speaker 1

Yeah, I mean this is the kind of picture of the you know what we're used to seeing. This is like the old way of displaying data. This is just a risk register effectively in Excel. Looks boring. There's probably too much data in there to actually make any real decisions on some of it isn't even quantitative, so you're just looking at qualitative scores, which.

00:22:20 Speaker 1

If anyone is really making massive business decisions based on a qualitative score scoring scheme, then you know they're doing the wrong thing. That's not, that's not good. That's not going to help anybody.

00:22:32 Speaker 1

The new so moving away from that. This is just an example of one of the software companies that we've used before in the past that we've worked with as a data visualization and kind of presentation software tool called sharp cloud. Just an example of how we can move towards this kind of new way of.

00:22:54 Speaker 1

Presenting data

00:22:57 Speaker 1

So basically as risk professionals, we need to kind of stop seeing ourselves as stand alone Department in the organizations as well. So we should be and we can be enablers and facilitators of strategic decision making through our day-to-day practices.

00:23:13 Speaker 1

And our strategic mindset, which is important. Ultimately this whole journey as risk managers to help make decisions for the board is helped by understanding as risk managers. The risk management isn't really about managing risks, right? Let's get that out. It's not really about managing risk as a risk manager. You don't manage any risks.

00:23:35 Speaker 1

It's all about enhancing performance by embedding risk, thinking into business decisions.

00:23:43 Speaker 1

Part one, my name is will Fowlds. I'm the managing director of Redstone risk and.

00:23:49 Speaker 2

When we gave this presentation before, I gave one of the case studies that was based on an actual project that that we worked on and I know there's another one that's coming in the second, but I'm just going to give a quick talk about this exact case study that we worked on, which was the risk process that we undertook.

00:24:11 Speaker 2

For Babcock, as part of their type 31 frigate competition, which actually was run last year, my specific role as I was the risk leading that and it gave too.

00:24:22 Speaker 2

Quite an interesting sort of experience, I guess in terms of the conflict between operational and strategic risk that I can't explain a bit in in a moment.

00:24:39 Speaker 2

OK, so just to give a little bit of context to what the tender project was all about. So back in 2019 there was a competition run by the Ministry of defense for the design and build of five gnu General purpose frigates for the Royal Navy and.

00:24:59 Speaker 2

This project was potentially slightly different to some other Mo. D procurement projects have happened in the past and this one was being run under a fixed price. So effectively what they're saying is for a value we want to get five frigates built to the following specification an effectively. The competition was then set amongst industry to come up with the best.

00:25:23 Speaker 2

Design an and best overall costs as much as was physically possible within that amount of cost, and this was slightly different in that a lot of traditional defence projects always run on the basis of, you know there's an aspiration of where we'd like to get to, but actually you would see then see quite significant cost overruns.

00:25:43 Speaker 2

As individual bits of kit are then added in the future and decisions are made and check you know changes are made and so on and so forth. This one was different. This one was saying We want as much bang for our Buck as possible for a an approximate price and in this case for context and the figure is publicly available was around 250 million pounds.

00:26:04 Speaker 2

Per vessel for five of them, and also to be delivered by a certain date.

00:26:11 Speaker 2

Now there's an important element to this in terms of the way the pricing is done as a fixed price and as part of the fixed price. One of the elements that that you would have to to show to the Mo D was your risk budget.

00:26:26 Speaker 2

And what that means is it's human nature that clearly when you're in competition to design A vessel that meets a requirement or exceeds the requirements as much as possible, then clearly the bigger the risk budget, the less money you've got for other things.

00:26:43 Speaker 2

And that sort of relatively simplistic and that, but that's just human nature. And then what it would do is it would manage it. It would mean that the project would be run and as part of the price there's probably less incentive. Let's say to have a big risk budget.

00:26:58 Speaker 2

Now, as you would have seen on what Gareth was talking about earlier on is you would have seen reference to this iron triangle.

00:27:06 Speaker 2

And what that's saying is clearly the amount of risk budget you would have would be driven and would drive and the benefits effectively that the project is going to deliver the overall cost and how long it's going to take. So for example, if you want it to come in quicker, it might end up costing more if you want to deliver benefits, it's probably going to take a bit longer, so on and so forth.

00:27:26 Speaker 2

And the reason this case study is relevant to this presentation is what we found. My experience was the interesting conflict, I guess, between strategic risk and operational risk, and that is strategic risk of both the Mo D and of the building company and also the operational risk of the building company and of the Mo D as well in terms of.

00:27:48 Speaker 2

The way the question set was asked.

00:27:51 Speaker 2

So there's those two elements, so in terms of let's look at operational risk. First of all, that tended to be sort of driven effectively by the particular question set from the customer. So, for example, these are bits of kit that we want fitted, so it might be there might be some risks around the availability of kits, the availability of getting bits of software off the software provider.

00:28:14 Speaker 2

There might be, yeah, availability of suppliers. There might be no changes to design things like that effectively. Items are really not easy to predict, but they're easier to predict their more tangible risks to come up with. So there would be that sort of operational elements in the question from the customer. Sort of fed down that process of being very analytical, so those risks are.

00:28:36 Speaker 2

You can put a probability you can put an impact cost against them and so on.

00:28:41 Speaker 2

So it's relatively straightforward, and that's who are very audited. Very sets process.

00:28:47 Speaker 2

The other elements is the strategic bit, and that's actually much more difficult to to to deal up well to deal with and in terms of pricing up because there's different elements at play here so.

00:28:57 Speaker 2

From a building company perspective, they will have their own view on the strategic risk that they would be willing to take on. So would there be strategic risks they'd be willing to share with the customer? There might be there might not. There will be strategic risk in terms of the Mo D in terms of what they're willing to take on things at the National Shipbuilding strategy.

00:29:18 Speaker 2

You know any potential changes to that an but effectively you've got this almost slightly more intangible elements of strategic risk that also needs to be factored in. This part of that cost as well, and what you find is when you're trying to generate that overall prices, you get this interesting mix of the two in terms of.

00:29:38 Speaker 2

At overall drive to reduce the overall price and therefore arguably reduce the overall risk budget, you're almost fixed in terms of the amount of operational risk that you might have because it is what it is. The project exists and there will be an element of operational risk and then you also have the more unknown uncertain elements of.