




CRITR

Critical Risk Identification
and Transfer Review



As the world transitions to a low carbon future, significant investment in new, often 'first of its kind' technology, and associated new or existing infrastructure integration is needed.

With such evolution comes new and emerging risks at both individual project and organisation level within companies who are either transitioning themselves or a NewCo established to deliver new technology and infrastructure.

In all cases, insureds need a risk and insurance adviser who understands the exposures involved, and has a diverse knowledge of different transfer solutions and insurance market requirements.

Miller's Renewable Energy and Environmental Technology team can assist clients via our Critical Risk Identification and Transfer Review (CRITR) process to capture risk information for new projects, wider infrastructure investment or transition programmes, and quantify and review the transfer options available to make the proposition more investable or financeable.

This can provide a key early-stage input into project delivery planning and shape the transfer and management of new and emerging risks.



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Why is risk management important?

As history has shown, when the boundaries of technology are pushed, things don't always go as planned. Risk management is a fundamental step in preventing possible disasters.

Known unknowns

The risk management process can shine a light on new and emerging risks, giving visibility around 'known unknowns' within a project.

Identify issues early, time to develop solutions

Risk transfer is often an afterthought. If risks are identified early then transfer solutions can be designed ahead of the risk materialising and lessen delays in project delivery.

Small adaptations sometimes make large differences

Think of the canary in the coal mine and the Davy lamp.

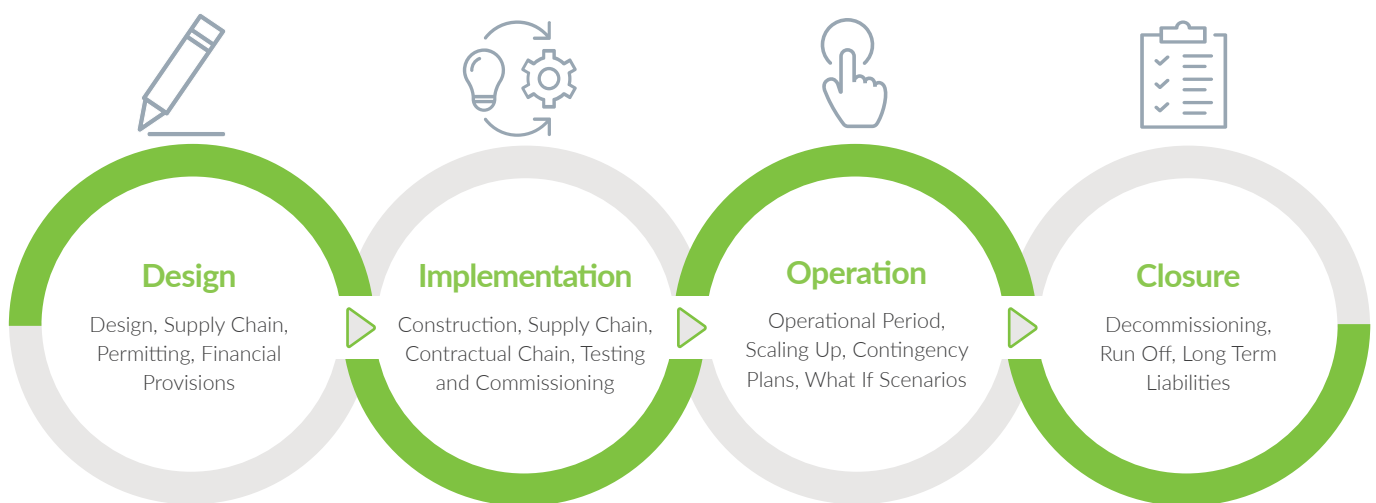
Disasters can be terminal for technologies

Think of the Hindenberg explosion; the last time Hydrogen was the next big thing.

Miller's Critical Risk Identification and Transfer Review

Miller's Critical Risk Identification and Transfer Review (CRITR) is designed to assist your technical and commercial teams to identify and quantify risks that can be transferred via supply chain/contractual risk allocation, traditional insurance or one-off risk transfer and hedging products.

The process can be applied to a single project, programme or organisation-wide basis and is a valuable tool during all stages:



Methodology

Our risk engineers and renewable energy and environmental technology experts would work hand in hand with your project team, management staff and other advisors to fit into existing risk management methods as appropriate. Alternatively, we can assist in framing your risk management process and co-ordinate other inputs into an overall CRITR process for all project risks.



Delivery outputs

Following the review process, our experts will produce the following four outputs:



1 Risk Matrix

Risk identification, quantification and prioritisation



2 Risk Mapping

By project stage, locations and inputs/ outputs



3 Risk Mitigation Plan

Targeting impact and likelihood to reduce risk exposure



4 Risk Transfer Plan

Identification and recommendation of transfer mechanisms



1. Risk Matrix | Risk identification, quantification and prioritisation

| Risk | Likelihood | Impact | Score |
|--------------------------|------------|--------|-------|
| Supplier A fails | L | M | L ● |
| Supplier B fails | L | H | H ● |
| Failure to secure permit | L | H | H ● |
| Failure to supply | M | M | M ● |
| Failure to perform | M | H | H ● |



2. Risk Mapping | By project stage, locations and inputs/outputs

| Input | | |
|---------------|---|--|
| Raw materials | ▼ | Raw materials Failure to secure raw materials |
| Suppliers | ▼ | Suppliers Insolvency/ physical risks |
| Utilities | ▼ | Utilities Failure of energy supplies/grid |
| IP | ▼ | IP Breach, failure to secure |
| Transit | ▼ | Transit Interruption and delay |
| Technology | ▼ | Technology Scale up failure |
| Design | ▼ | Design Risk mitigation missed |

| The Project | | |
|---------------|---|---|
| Output | | |
| Products | ▼ | Products Failure to meet output specifications |
| Customers | ▼ | Customers Failure to supply, customer failure |
| Energy/output | ▼ | Energy/output Failure to meet output spec, failure to supply |
| IP | ▼ | IP Failure to protect |
| Transit | ▼ | Transit Interruption and delay |
| Technology | ▼ | Technology Failure to perform |
| Services | ▼ | Services Failure to meet contractual requirements |

It is often useful to map out graphically the risks, this can be a simplistic form which often works well as an overview to show critical risks at different stages of the project. Mapping can be in the form of a risk distribution showing the spread of risks by likelihood and impact scoring to highlight key project risks and challenges, or it can be a simple project stages key risks flow: we have found this is a good mechanism for complex projects such as CCS where there are multiple 'links' in a chain and complex one of a kind/first of a kind projects with untried and tested parameters.





3. Risk Mitigation Plan | Targeting impact and likelihood to reduce risk exposure

In holistic terms, we identify risk mitigation under the 5 Ts:

Tolerate

The risk is at a low enough level to be tolerable to the project/organisation without significant further management, or alternatively the project/organisation has no option but to tolerate the risk (forewarned is forearmed).

Treat

The risk requires risk mitigation plans to be implemented to ensure prevention from occurring or that impacts are mitigated. Typically, this is a combination of management procedures and processes or physical risk controls.

Transfer

The project/organisation needs to transfer the risk away to other parties, either better placed to manage the risks or financially better placed to deal with the consequences (e.g. a supplier/contractor/customer/stakeholder or insurer/insurance policy or financial instrument e.g. hedging product).

Terminate

If a risk is identified which is not tolerable and with no potential for mitigation or transfer, either the risk can be terminated (e.g. complete redesign of a process/technology/component to avoid the exposure completely) or under extreme circumstances, the entire project might be terminated.

Take

Alternatively under a 'no risk no gain' scenario, the project team, board or organisation could actively decide to take a risk for commercial gain, in the knowledge that doing so gives a certain level of exposure (even to the extent it may terminate a project investment at a later stage). This may be an appropriate option where an organisation is undertaking rapid change to adapt, which in turn may be appropriate to a low carbon transition process for a number of reasons. However, taking the risk needs to be from a position of knowledge of the potential consequences (negative or positive).



4. Risk Transfer Plan | Identification and recommendation of transfer mechanisms

Miller's strength comes to the forefront when designing risk transfer solutions

These can include insurance programmes, contractual requirements/risk allocation and contractual insurance requirements, one-off deal enabling insurance/hedging type products, parametric risk insurance, Alternative Risk Transfer (ART) products and business interruption and contingency planning reviews.

Why Miller?

A solutions based company

We believe in assisting our clients with their own risk management approach, identifying solutions and deal enablers to ensure that projects can proceed with the right risk balance to satisfy owners, investors, lenders and the contractual supply chain.

Industry experts

Our specialists are leaders in their fields. With extensive expertise across all aspects of Renewable Energy & Environmental Technology, having operated within the industry and in the London insurance market, we understand your business inside out. This allows us to propose risk solutions to both protect and enhance your projects.

Collaboration

Teamwork is in our DNA. We work in partnership with our clients to identify and understand your problems, and together as a team to deliver solutions. We always act in your best interests, without exception.

Client-first service

We place our clients at the front and centre of everything we do and believe in building long-term partnerships. Our service model, based on this ethos, is what differentiates us from our peers.

Proactive claims advocacy

We never overlook the importance of a prompt and helpful claims service and the peace of mind this can offer. As a result, we have built one of the strongest claims teams in the industry, where our construction claims specialists work alongside our placing brokers and technical teams for maximum efficiency.



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