Global Infrastructure Practice

# INFRASTRUCTURE DEVELOPMENT

SOLUTIONS…DEFINED, DESIGNED, AND DELIVERED.

MARSH & McLENNAN COMPANIES

# 1. INTRODUCTION

Infrastructure development is a powerful force in today's global economy. Hundreds of billions of dollars are being spent every year improving transportation, power, ports and terminals, and energy capabilities. As countries seek to repair, replace, or build new infrastructure, they increasingly are looking to the private sector to help finance the huge required investment.

Infrastructure funds, developers, contractors, banks, accounting firms, law firms, consultants and more are positioning themselves to participate in what is generally perceived as the greatest growth opportunity in the world.

Touching on politics, public policy, law and regulations, finance, engineering, construction and operations the global infrastructure sector is time, labour, and capital intensive. And it involves a significant amount of risk. Appropriate risk allocation and risk sharing are critical factors to the success of any infrastructure project, which typically involve long-term contracts that make it difficult to plan for every contingency. Risk, however, is a natural corollary to a return on investment, or to the intended public benefit.

Effective risk management generated by thorough assessment, mitigation and transfer, will have a positive effect on a project's development and ultimate operational efficiency. Well managed and optimised risk goes hand in glove with opportunity. At both the project and participant levels, risks are critical, complex issues and have the potential to adversely impact specific assets, valuations, capital structure and volatility of cash flows needed to service fixed obligations and underpin yield over the period of an investment.

As the only insurance broker and risk adviser that is part of the global infrastructure value proposition, Marsh understands the nuances of risk as they relate to infrastructure project finance. Our team is uniquely positioned to discuss strategies aimed at reducing the volatility inherent in large infrastructure projects.

# 2. THE MARSH COMMITMENT

Marsh provides clients with a best-in-class client-service approach and insights into emerging risks. Our work with the World Economic Forum (www.weforum.org) on the annual Global Risk Report, for example, continually challenges business assumptions regarding emerging risks.

Marsh's Global Infrastructure Practice collaborates with our industry practices to offer solutions tailored specifically to the development of projects in:

- Power (carbon, nuclear and renewables).
- Transportation (high speed rail, airports, roads, bridges, tunnels, ports and terminals).
- Utilities (electricity, gas, water).
- Energy (oil, gas – including refining, transportation and storage).
- Social infrastructure (hospitals, schools and accommodation).

Each of Marsh's Industry Practices is pre-eminent in the design and delivery of innovative risk and insurance solutions, addressing the often complex risks inherent to infrastructure development and operation.

Consistency is a key to serving clients in a multi-stakeholder environment. Marsh 3D, our dynamic strategic risk planning methodology, allows us to achieve that consistency by enabling Marsh to provide a comprehensive and bespoke service to clients worldwide, helping clients maximise the return on their risk management investment.

# 3. STAKEHOLDERS

The risks inherent to the infrastructure sector can be challenging and have far-reaching consequences for every stakeholder. In many cases, the stakeholders in an infrastructure investment will be largely aligned in their perception of risk. However, differences in risk tolerance can lead to divergent approaches to risk allocation and mitigation measures.

Marsh helps clients meet their infrastructure project objectives by applying a highly structured approach to understand the individual risk profile of a development or investment, ensure the contractual structure agreed between all stakeholders provides an equitable allocation of risk resulting in an optimal and cost-effective balance of risk retention and risk transfer solutions throughout an investment or asset lifecycle.

Our global infrastructure experts help clients negotiate and execute contract structure, design and build, operations, maintenance, and refurbishment, whether for a construction project, a secondary purchase and sale of an asset, public and/or private financing, or related capital raising. Our experts can help in all phases, from the analysis of project risk, project governance, schedule, and budget review and support to loss control, insurance placement, and claims assistance for both insurable and non-insurable risks.

We understand the particular issues facing each stakeholder in infrastructure projects, and design solutions to enable each to participate effectively:

## PUBLIC SECTOR

- **Responsibility:** Protect the public interest and government assets through the lifecycle of major projects.
- **Delivery:** Managed mitigation and reduction of public sector risk to projects resulting in successful deployment of equity and public private and debt capital, improved contractual protection, project delivery, and operational oversight.

## EQUITY INVESTORS

- **Responsibility:** Gain a competitive edge while protecting investors' interests and satisfying contractual requirements imposed by governments and capital providers.
- **Delivery:** Identify and quantify the pricing and transfer of risk to improve valuations, protect assets, and reduce the volatility of cash flows needed to service fixed contractual obligations and debt repayment.

## LENDERS

- **Responsibility:** Obtain comfort that an in-depth risk review has been undertaken assessing long-term suitability of borrower risk retention and transfer strategy to protect lender interests.
- **Delivery:** Identify gaps between project risks and the borrower's risk retention and transfer arrangements; facilitate ongoing lender protection through borrower risk and insurance compliance provisions in finance and project documentation.

## CONTRACTORS

- **Responsibility:** Deliver a project within time and budget, managing contingencies and controlling cost of capital.
- **Delivery:** Adopt a highly structured approach to the identification, evaluation, allocation and management of significant and emerging project risk issues, develop an optimal and cost-effective balance of risk retention and risk transfer, supported by authoritative market knowledge and benchmark data.

## PROFESSIONAL SERVICE PROVIDERS

- **Responsibility:** Deliver architectural, engineering, and design consultancy with confidence in managing contractual, reputational, and geographic risks.
- **Delivery:** Provide the most thorough and bespoke range of professional indemnity policy cover available in the global marketplace coupled with superior claims handling service capabilities.

# 4. RISK THROUGHOUT THE PROJECT LIFECYCLE

| DEVELOPMENT/CONCEPT | PLANNING/DESIGN |
|---|---|
| DUE DILIGENCE | |
| PROJECT GOVERNANCE ASSESMENT SERVICES | |
| PROJECT PERFORMANCE REVIEW SERVICES | |

### KEY RISK (DEVELOPMENT/CONCEPT)

- Objectives, experience and sophistication of public sector partner.
- Jurisdiction and legal system.
- Regulatory system and conditions.
- Industry sector risk.
- Quality of technical advisers.
- Environmental risk.

### KEY RISK (PLANNING/DESIGN)

- Country and political risks.
- Jurisdiction and legal system.
- Industry sector risk.
- Technology/supplier risk.
- Regulatory system and conditions.
- Contractual risk.
- Quality of technical advisers.
- Professional liability.
- Environmental risk.

## DESCRIPTION OF SERVICES INCLUDED IN THE TIMELINE

### CONSTRUCTION ALL RISK

Construction all risk indemnifies the insured against all risks of direct physical loss or damage to the insured property occuring during the period of insurance.

Delay in start-up indemnifies the insured for loss of gross earnings, loss of rental income, debts services only or other additional delay expenses incurred during the period of delay after the scheduled date of completion.

### DISPUTE RESOLUTION SERVICES

Guides clients through the issues most common to construction disputes, schedule delays, cost impacts and project contract compliance.

### DUE DILIGENCE

Assisting the public entry, consortium or lenders throughout negotiation and execution of contractual structure, design and build, operation systems, maintenance and refurbishment, including where risk must be dealt within the context of public and/or private financing, sale and purchase, and related capital raising.

### INSURANCE CLAIMS SUPPORT SERVICES

Provides schedule and cost analyses and proof of loss documentation to help maximise the recuperation of losses in an insurance policy related claim.

### MARINE CARGO

Placement and servicing of global cargo programmes, providing complete brokerage, administrative and claims services to meet your insurance requirements.

### PD/BI

Identification and treatment of insurable risks impacting an asset including review and quantification of Estimated Maximum Losses, exposure to natural catastrophe, and the structuring of business interruption coverage to manage supplier and customer risk exposures.

Marsh's infrastructure risk approach is organised around lifecycle risk, which refers to the changing pattern of risk profile from project development through planning, design, construction and operation. By acknowledging that the challenges and risk profile of an individual stakeholder changes throughout the lifecycle, our approach provides deeper insight into how risk issues and solutions can span multiple phases of the project.

## CONSTRUCTION/EXECUTION

## OPERATIONAL/MAINTENANCE

CONSTRUCTION ALL RISK

MARINE CARGO

DISPUTE RESOLUTION SERVICES

INSURANCE CLAIMS SUPPORT SERVICES

SURETY

POLITICAL RISK

THIRD PARTY LIABILITY

PD/BI

REPUTATIONAL RISK SERVICES

### KEY RISK

- Completion and delay risk.
- Performance and technology risk.
- Industry sector risk.
- Supply chain risk.
- Natural hazard risks.
- Environmental risk.
- Country and political risks.
- Property damage arising out of construction.
- Marine transit exposure.
- Liability exposures arising out of construction.

### KEY RISK

- Industry sector risks.
- Crisis and reputational risk.
- Macro economic risks
- Revenue and market demand risk.
- Country and political risk.
- Property damage arising out of operations.
- Liability exposures arising out of operations.
- Supply risk – commodity pricing.
- Natural hazard risks.
- Refinancing risk.
- Tail risk (decommissioning, hand back/exit strategies).

### PROJECT GOVERNANCE ASSESSMENT SERVICES

Identifies critical issues and project-specific risk factors to develop a customised, systematic, and project-integrated solution that gives executive management the tools needed to make appropriate and timely decisions on high risk projects.

### PROJECT PERFORMANCE REVIEW SERVICES

Gives an organisation's project management team the tools and data needed to keep a project on track.

### POLITICAL RISK

The pursuit of global growth exposes companies to political risks that they do not normally encounter in their native companies. Host-country instability and adverse government actions are among the examples of political risks that should be properly assessed and managed, especially when projects are located in emerging markets.

### REPUTATIONAL RISK SERVICES

Crises or adverse events for construction risks can include regulatory inquiries, litigation, labor concerns, physical events, and natural disasters. Marsh offers crisis management support and expert advice for the three distinct phases of an adverse event or crisis: before, during, and after by performing assessments, planning, training and exercises.

### SURETY

Project analysis, contract review and day-to-day construction bond execution services to satisfy contractual requirements and comply with governmental regulations.

### THIRD PARTY LIABILITY

Mapping of liability risk exposures through the life-cycle of an infrastructure asset. Advice regarding allocation of these exposures between stakeholders to a project or asset. For brownfield assets, review of historical liability exposures and audit/archaeology of the appropriateness of past insurance cover to address these risks. Structuring of liability insurance programs to provide best economic value to the owner/operator of an infrastructure asset.

# DEVELOPMENT/ CONCEPT

The opportunity to manage risk efficiently decreases as the project lifecycle advances; thus a project's development/concept phase is important to facilitate timely and effective risk management. It is important to address risks early in the project lifecycle and understand the magnitude of risk as it relates to the project size and complexity.

Although each infrastructure project is unique, some risks are common to the development/concept phase of most every project, including:

- Poor scoping documents and lack of stakeholder input to project objectives.
- Insufficient time or budget allocated to feasibility studies.
- Inadequate site investigations resulting in uncontrolled cost growth.
- Insufficient information in pre-design packages.

Other risks that are more specific to risk management plans are unique to organisations and are not necessarily typical infrastructure project risks. However, to ensure they are allocated to the parties best suited to address them, they should be addressed in the development/concept phase, including:

- Lack of a structured risk management framework to identify and manage risks.
- Lack of transparency in key decision process.
- Project objectives not aligned with risk management plan.
- Undefined risk appetite for pre-design concept studies.

# PLANNING/ DESIGN

This planning and design phase in the lifecycle involves many issues that can be attributed to the complexity of collaboration between multiple stakeholders. The assumptions made here will be proven—or not—later in the project. This phase may also see a project halted or cancelled if a financial close cannot be achieved, the procurement process fails, or technology risks are deemed too high.

The risks applicable to most stakeholders in this phase include:

- Insufficient information to quantify the risk and calculate risk/reward.
- Inability to systematically identify high-risk bids during the procurement process, and inclusion of legal and technical risks in the vendor selection.
- Procurement strategy not in line with risk transfer in insurance contracts.
- The use of unproven technology and/or suppliers.

Sufficient time must be allocated to analysing these risks to allow a bespoke risk transfer programme to be structured and marketed before construction begins.

# CONSTRUCTION/ EXECUTION

Major risks that need to be identified, quantified, and managed are driven by the various project agreements as outlined in phases 1 and 2 of the project lifecycle. Advice on such agreements and associated risks is most appropriately given during the bidding process and the pre-construction stage immediately before project commencement.

The key agreements that address allocation of risk are typically:

- Finance agreements.
- Concession agreements.
- Construction contracts.

Once the agreements and contracts are negotiated and signed, the development stage risks requiring management can be categorised as:

- Design.
- Environmental.
- Financial—cost and revenue.
- Technology.
- Procurement—materials and services.
- Health and safety.
- Political and economic.
- Construction and installation.
- Operational interface.
- Programme.
- Quality assurance.

Depending on the risk appetite of the project parties, the aim is to pass the majority of insurable risks to the commercial insurance market (and/or a captive insurer) on the most commercially advantageous basis and to the satisfaction of all parties.

# OPERATIONAL/ MAINTENANCE

Infrastructure projects and assets requiring extensive capital investment are often high profile, high value, and politically important, demanding stability of long-term financial performance throughout their lifecycle. Loss or interruption to performance of an asset can create far-reaching economic and reputational issues for the owner, operator, regulators, and government, not forgetting the impact upon users.

Protecting both physical assets and continuity of their revenue stream from fortuitous loss is a significant aspect of managing any infrastructure investment, and can represent one of the largest areas of operational expense. Understanding a project or asset's specific risks and the options for successful mitigation is a key to successful management of equity and debt participation in an investment.

Key risks that operational assets are exposed to include:

- Industry sector risk.
- Crisis management and reputation risk.
- Macroeconomic risks.
- Revenue and market demand risk.
- Country and political risk.
- Property damage arising out of operations.
- Liability exposures arising out of operations.
- Supply risk—commodity risk.
- Natural hazard risk.
- Refinancing risk.
- Tail risk (hand back/exit strategies, decommissioning).


12
14

# 5. RISK AND INSURANCE SOLUTIONS

## RISK ADVISORY SERVICES

Marsh's dedicated advisers help our clients manage the complete cycle of risk. We offer innovative risk solutions that help our clients:

- Assess, quantify, and mitigate risk to improve economic outcomes.
- Optimise insurance and risk financing investments.
- Meet strategic objectives.
- Fulfill governance demands.

Our advisory capabilities are organised around the following areas of expertise:

- Risk and insurance due diligence services.
- Project advisory services.
- Construction risk and dispute resolution services.
- Quantification, litigation support, and expert testimony.
- Insurance claim support services.
- Reputational risk and corporate resilience services.
- Capital project risk management services.
- Supply chain risk consulting.
- Political risk services.
- Surety, project analysis, contract review, and day-to-day construction bond execution services.
- Health and safety advisory.
- Physical risk services.

## INSURANCE SOLUTIONS

Marsh transacts risk issues as an advocate and intermediary for our clients in the insurance market. Our market presence and global reach ensure that our practitioners have access to cutting-edge knowledge, innovations, and solutions. Our capabilities are applicable to a variety of project delivery methods from design-bid-build programmes to a variety of public private partnerships (PPP) and privatisations.

With specialist teams across the globe focussed on design and delivery of bespoke insurance cover to meet specific requirements of a project or investment, Marsh provides cover to address:

- Professional risks of architects, engineers and other professionals engaged in project development.
- Project construction risks including delay in start-up and marine transit, whether insurance arrangements are owner or contractor controlled.
- Operational infrastructure assets, revenues and liabilities throughout lifecycle.
- End of life decommissioning of assets.
- Surety risk.
- Weather risk.
- Environmental risk.
- Political risk.

## INDUSTRY SPECIALISATION

Marsh's approach consolidates our expertise by industry and according to the phase of the infrastructure lifecycle. This industry framework allows us to provide high level and consistent delivery of solutions and services to organisations that operate in multiple geographies and/or on diverse investment projects.

# 6. INFRASTRUCTURE SPECIALTY SERVICES

## ENVIRONMENTAL

The regulatory approval process for major infrastructure development projects will include the undertaking of a detailed environmental impact assessment. In addition, environmental monitoring will be required during construction and operation. Marsh's Environmental Practice works with infrastructure project stakeholders to secure coverage for environmental risks and potential pollution related liabilities.

Contractors pollution liability (CPL) insurance is used for construction projects, and can be structured as an integral part of an owner controlled insurance programme (OCIP), with a view to covering the potential for pollution or environmental damage to be caused during construction, commissioning and operation of the infrastructure.

## POLITICAL RISK

The demand for infrastructure investment can be immense in developing economies, particularly in sectors such as water and sanitation, power, transport, and telecommunications.

Recent challenges for infrastructure investors include the global credit crisis, the eurozone sovereign crises, and political instability throughout the Middle East and North Africa. In addition, investors and lenders into emerging market infrastructure projects face the risks of managing long-term equity and debt participation in developing market projects. Many of these projects are vulnerable to regime change; contract and regulatory challenges; property-related physical damage of terrorism, war, and political violence; expropriation of assets and other forms of government interference, either direct or creeping; currency inconvertibility; and inability to transfer dividends/funds offshore.

Marsh's Global Political Risk and Structured Credit Practice includes specialists with broking, private and public sector underwriting, banking, and legal backgrounds. Our experts are well-placed and understand the differing interests of equity and debt, and private and public sector co-operation.

## SURETY

To comply with governmental regulations and to satisfy contractual requirements, construction companies typically need a variety of surety bonds, a form of credit similar to a line of bank credit. Upon issuing a bond, a surety company guarantees a client's performance of a specified obligation. Before issuing a bond, the surety company underwrites the contractor's capabilities, financial condition, and the contract being guaranteed. Marsh's surety professionals guide our clients through the process and help obtain the required surety bonds.

The construction industry requires surety bonds to meet a variety of contractual and legal obligations including:

- Performance guarantees.
- Subcontractor payment guarantees.
- Bid security.
- Release of mechanics' lien fillings.
- Licence and permit requirements.

## WEATHER RISK

Weather risk is an increasing cause of concern for investors, lenders, and developers of infrastructure projects. For example, according to the National Research Council, 25 percent to 42 percent of US gross domestic product is affected by weather. But blaming poor results on weather is unlikely to appease stakeholders. A company that is materially exposed to weather should protect against the risk.

Key parameters of weather deals include the following:

Weather peril
- Type of weather that affects the business.

Risk period
- Timeframe that the business is most vulnerable to the weather peril.

Location
- Where is the weather risk?

Weather threshold
- Amount of weather that defines the risk.

Coverage
- Compensation required by the business if a defined weather event occurs.

Working with the parameters above, Marsh's Weather and Energy Speciality Products specialists will tailor a solution to a client's individual exposure, providing a settlement only when needed, thereby avoiding the extra cost and earnings volatility that result from a standard commodity hedge. We can assist clients with wind, hydro/precipitation, and solar solutions customised to individual project parameters and risks. These products provide both price and volumetric protection, optimising the project risk/return profile and potentially ensuring better financing terms.

# 7. INDUSTRY SPECIALISM

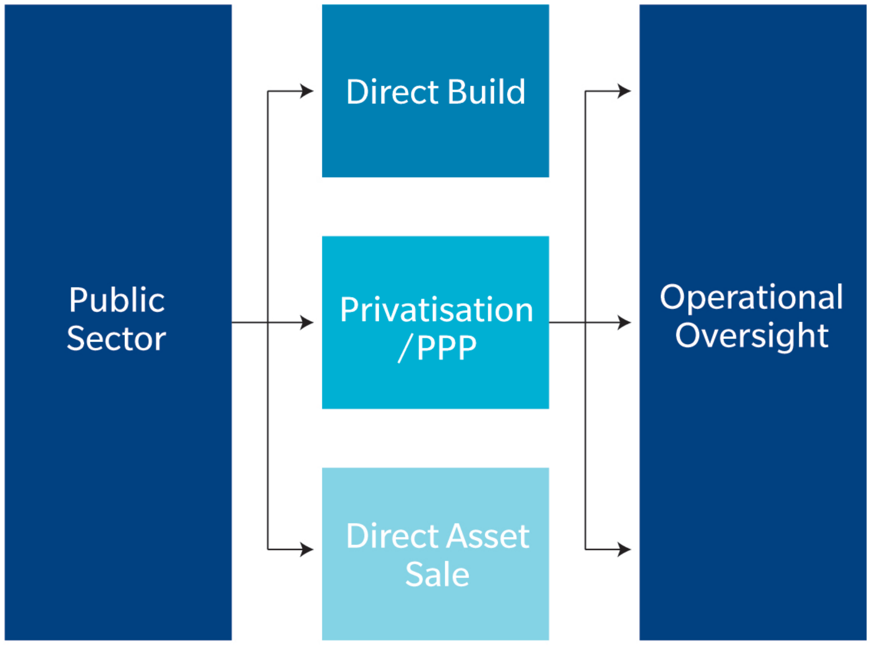
In this brochure we have described our overall approach to infrastructure clients and highlighted some of the specialty services that we can offer. However, we appreciate that relative to the industry sector you operate in, more detailed information is necessary on our capabilities.

To be able to serve the demands of infrastructure investments in specific industry sectors, Marsh has additional information on the following, available upon request:

- **Transportation:** Marsh's transportation expertise encompasses specialist practice areas including aviation, rail, ports and terminals and the construction/operation of roads bridges and tunnels.
- **Energy:** Our Energy Practice is primarily organised around three specialty product lines: upstream, downstream and renewable energy. Our wealth of expert knowledge is augmented by market leading risk engineering, project risk management, and claims advisory services.
- **Power and utilities:** Marsh's Power and Utilities practice provides industry consultation and risk management services for gas, water, electricity and telecommunication networks, nuclear power generation and the independent power sector.
- **Social infrastructure:** Marsh works with all parties involved in social infrastructure projects, whether an authority, equity investors, lenders, contractors or professional service providers. We provide services throughout the entire project lifecycle from planning, development, construction, operations to de-commissioning and to all social infrastructure project sectors: education, healthcare, waste, defence, social housing, prisons and government accommodation.

# 8. ISSUES AND SOLUTIONS

## PUBLIC SECTOR




Providing clear economic justification and an investment rationale for a project, while demonstrating public responsibility and accountability to protect both the short-term and the long-term interests of tax payers and voters remains the main focus of a public entity. However, the notion of value at risk, next to the value for money, seems more and more accurate as public entities are increasingly pressured to avoid cost and delay overrun.

Marsh's Public Entity practice assists central and regional governments, along with other public sector authorities in the project risk management process. Marsh's differentiator lies in an asset class and project specific risk allocation and quantification, creating best practice insurance requirements for all project stakeholders.

### PUBLIC SECTOR NEEDS

- Demonstrate their public responsibility and accountability while trying to develop and/or monetise the value of certain assets.
- Make their projects more attractive to rating agencies, potential lenders and investors.
- Provide economic justification and investment rationale for the project.
- Protect the public sector's interest against delays, cost overruns and major claims, both contractual and/or insurable.
- Protect community interests in relation to operation and maintenance and ongoing responsibilities of operational assets throughout a concession period lifecycle.

### KEY RISK ISSUES

- Identify, evaluate and manage risks across the different phases of a project, including risk management gap analysis.
- Desktop review of project insurance costs for inclusion within the public sector comparator.
- Quantify project risks, measure impact and value of mitigation strategies both pre and post bid submissions, advising on optimum risk transfer.
- Undertake a thorough review of the project risk register and site exposures to identify insurance solutions required to underpin financial security of project delivery counterparty and enhance the public entity's risk position.
- Ensure that the public sector's interests are properly protected including loss payee provisions.

- Advise on need for uninsurable risk indemnities or where it would be relevant to terminate the agreement.
- Ensure minimum security ratings for approved project insurers within contract documentation.
- Formal due diligence for the public entity to ensure insurance costs are reasonable and enable these to be fixed at bid stage.
- Where lenders require a "head for the hill" clause advise on possible thresholds where necessary.

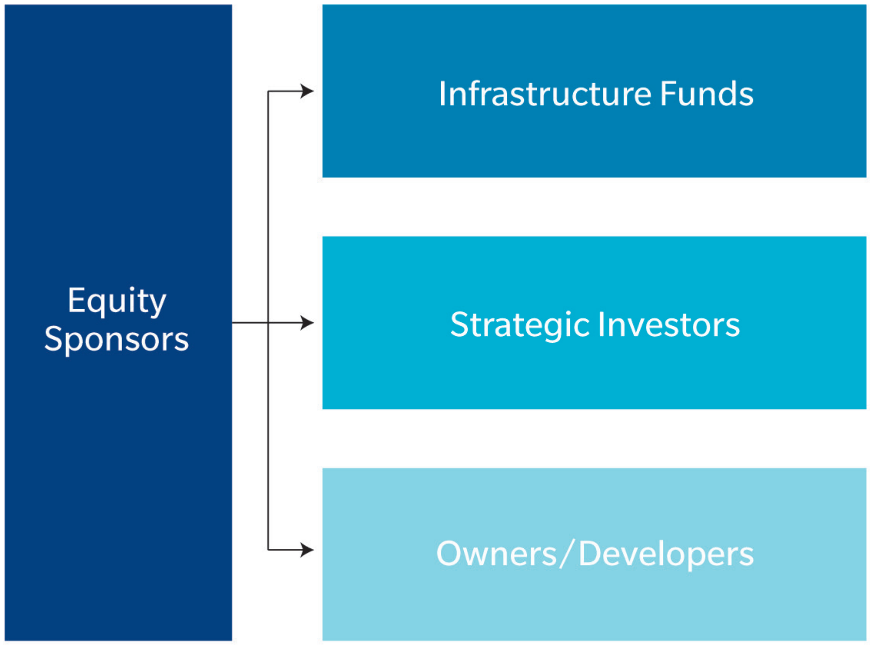
## PROTECTING PUBLIC SECTOR INTERESTS

- Identify all risk exposures relative to a project to enable optimum transfer of risk.
- Quantify project risks and determine if the contractor/operator can afford the risk transferred to them.
- Understand what insurances the contractor/operator should be required to effect and maintain for the project.
- Determine how to protect the public entity's financial interests within the insurances maintained by the contractor/operator.
- Understand what happens if a required insurance risk becomes uninsurable.
- Establish whether the contractor/ operator is procuring project insurance from a suitably rated insurer.
- Understand what control over litigation arising from the project the public entity has to avoid adverse publicity in the event of contentious claims.
- Determine responsibility for the cost of deductible related losses.
- Ensure that the contractor/operator's insurance costs including any insurance contingencies are reasonable.
- Understand how the project insurances will interface with the public entity's own annual insurance arrangements.
- Establish whether the public entity can make a claim under the project insurances maintained by the contractor/operator.
- Ensure that the public entity can use the contractor/operator insurance proceeds to effect reinstatement of the project assets.
- Establish whether lenders take claims proceeds and leave the public entity with a damaged asset.

# EQUITY INVESTORS

The ability to identify, quantify and manage all risks, both insurable and uninsurable, will largely influence an equity investor's potential to formulate a winning bid, and to provide the protections and return on investment demanded by your management team, investors, lenders, governing bodies, insurers and the owner.

Marsh provides equity investors with confidence to successfully meet their investment objectives. We help clients gain a competitive edge while protecting investors' interests. In addition, we help clients satisfy contractual requirements imposed by providers of capital and governmental counterparties . We do this by understanding inherent risks over the life cycle of greenfield projects and operational infrastructure assets.




## EQUITY INVESTOR NEEDS

- Achieve bankability of project or asset investments.
- Obtain a clear and in-depth understanding of the project or asset risk profile in order to achieve optimum transfer of risk.
- Understand assumption of future risk allocation and historical liabilities.
- In secondary acquisitions of operational infrastructure assets, understand whether insurable risks have been correctly mitigated through insurance purchase and planned risk retention.
- Secure financing required and to protect future revenue streams of a project or asset.
- Make projects more attractive to potential lenders' co-investors and rating agencies.

## KEY RISK ISSUES

Marsh works with investors to target concerns that affect deal negotiations and the ultimate success of the transaction, whether a greenfield, public private partnership, brownfield secondary acquisition or refinancing of an existing infrastructure asset.

Working with the client's deal team and other advisers we:

- Identify, prioritise and price the inherent risks.
- Identify parameters for risk tolerance at both the project and participant levels.
- Provide advice and expertise in the "contractual" risk allocation process.
- Outline a project or asset's risk profile to improve insurability and insurance syndication of the risks.
- Design and implement insurance programmes to satisfy the unique requirements imposed by governments, government agencies and providers of capital.

- Assist our clients over the asset life-cycle in protecting assets, capital structure and volatility of cash flows needed to service fixed contractual obligations and repayment of debt.

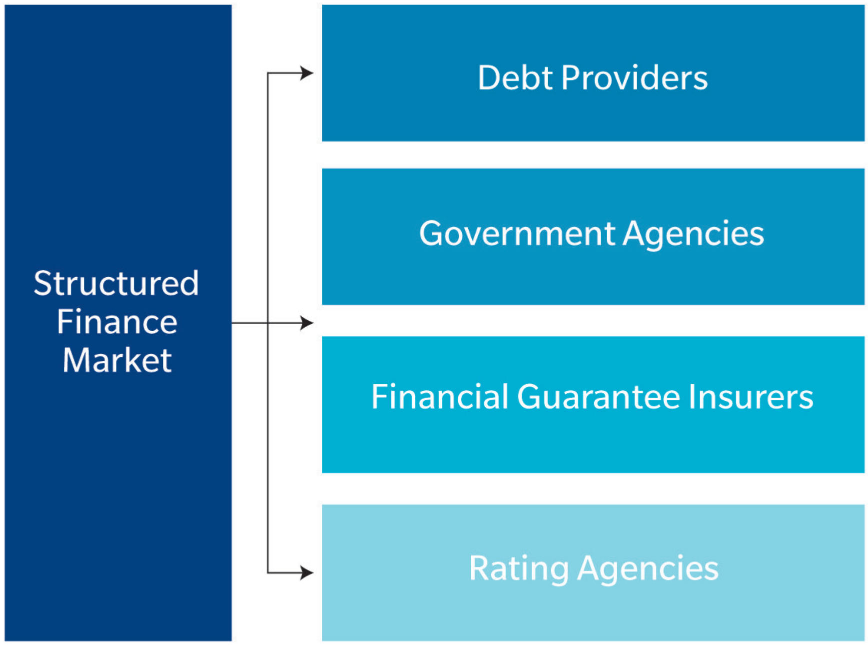
## PROTECTING EQUITY INVESTORS INTEREST

- Provide a clear indepth understanding of the project (greenfield) or asset (secondary acquisition) risk profile before entering into a long-term asset ownership.
- Understand whether risks are correctly allocated between project participants both on a forward basis and historically.
- Determine what historical liabilities may attach to a secondary acquisition and do current and/or historical risk financing arrangements appropriately address these.
- Ensure that historical known outstanding losses have been reserved at an adequate level, particularly where risk is retained on the balance sheet of a secondary acquisition target.
- Identify and quantify what collateral requirements may be inherited with a secondary acquisition either through self-funded liabilities and/or surety bonding programmes.
- Determine whether the overall cost of risk is optimised at present and how this can be measured.
- Establish if the target asset company's risk management philosophy appropriately addresses and provides management for all key risks that the asset is exposed to either through construction or operation.
- Identify how the risk of business continuity is currently addressed and are risk management processes along with any insurance provision appropriate for the scope and level or risk faced by a target asset company.
- Where project financed, determine whether a target asset company is in breach of banking covenants regarding scope and operation of insurance protection for the benefit of lenders.
- Provide a territory analysis to determine if insurance transfer of political risk issues can provide a cost /benefit enhancement to the target asset company's overall risk profile.

# LENDERS

Before agreeing to finance an infrastructure development or operational asset, lenders need to be reassured that all project risks associated with the venture have been identified, analysed and effectively controlled or transferred.

Marsh's Lender Insurance Advisory team works with project parties (legal, financial and technical advisers, sponsors' insurance broker and others) applying their technical knowledge and experience to assist in making projects bankable, while at all times fulfilling their sole duty of care to the lenders.




## LENDERS' NEEDS

Protection against:

- Project not completed or does not meet specification.
- Financial model inaccurate/incorrect assumptions.
- Failure of contractors.
- Legal irregularities.
- Uninsured loss.

## KEY RISK ISSUES

In conjunction with legal and technical advisers, undertake a risk review in order to:

- Identify significant project risks.
- Advise on extent of insurance cover proposed and available in relation to such risks.
- Recommend additional insurances as appropriate.

Review project documentation in parallel with risk review to determine how various insurance-related risks are allocated between the parties and whether the contractual provisions relating to such risks and other insurance obligations are appropriate. This includes a review of the contractual provisions relating to:

- Maintenance of insurance.
- Reinstatement obligations and treatment of claims proceeds.
- Unavailability of cover.
- Premium increases.
- Deductible costs.
- Extent of cover in respect of the contractual indemnities that are to be provided.

Review the borrower's insurance programme including the broker's underwriting presentation and draft policy wordings together with an audit of the proposed insurance programme, considering:

- Adequacy and scope of cover and compliance with contractual requirements.
- Continuity of cover during the transition from construction to operational phase (for greenfield projects).
- Adequacy of sums insured and limits of indemnity (in consultation with the project's technical adviser).
- Financial security of proposed insurers.

Commentary on suitability of budgeted costs as projected in the financial model and other insurance-related risk contingencies.

Provide a report to lenders on which they may have reliance and providing confirmation that evidence has been received demonstrating compliance with the lender's conditions precedent.

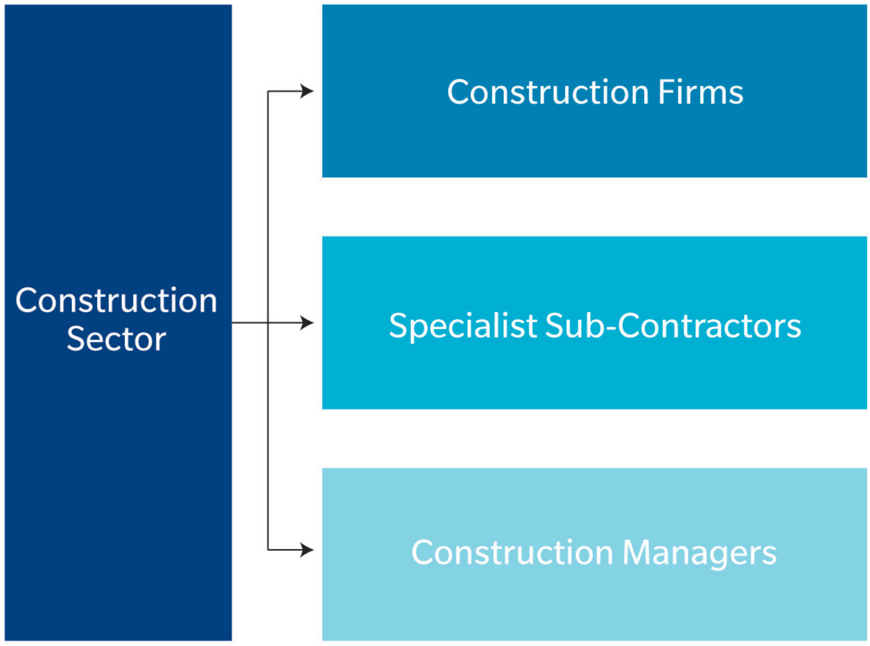
## PROTECTING LENDERS' INTERESTS

- Audit transition of cover from construction to operational phase insurances.
- Provide report to lenders commenting on compliance with the finance document and other project documentation requirements.
- Audit subsequent renewals of the insurance programme and provide ongoing reports to lenders on a similar basis for duration of the finance facility.

# CONTRACTORS

Marsh's Construction Practice delivers practical, innovative, capital-efficient solutions that generate yield and margin growth for our clients.

We define, design, and deliver these solutions through collaboration with clients on their strategies for deploying capital on project and enterprise risk. Marsh currently provides this service to more than 1,200 construction clients around the world, making us the leading broker for placements of construction insurance and surety premiums globally.




## CONTRACTORS' NEEDS

- Ability to identify risk exposures relative to a specific project.
- Understanding of the most appropriate risk allocation between project counterparties.
- Methodologies that ensure project delay risks are understood and mitigated.
- Optimised cost of risk to create project cost efficiencies.
- Confidence in the understanding and management of political risks.

## KEY RISK ISSUES

- Identification of all risk exposures relative to the project, enabling optimum transfer of risk to achieve best value for money.
- Understanding risk allocation between project participants.
- Identifying what insurances the contractor should effect and maintain for the project to ensure compliance with contract conditions.
- Contractual provisions in the event that a required insurance risk becomes uninsurable.
- How will liquidated damages be managed in the project.
- How risks of project delay are addressed and are risk management processes appropriate for the level or risk.
- Impact of financial model inaccuracies or use of incorrect assumptions.

- Risk of professional negligence claims.
- Consequence of financial difficulties of project counterparties.
- Political risk to either in-country assets or potential inability to transfer funds out.
- Potential for legal irregularities to impact contractual obligations and/or financial covenants.

## PROTECTING CONTRACTOR INTERESTS

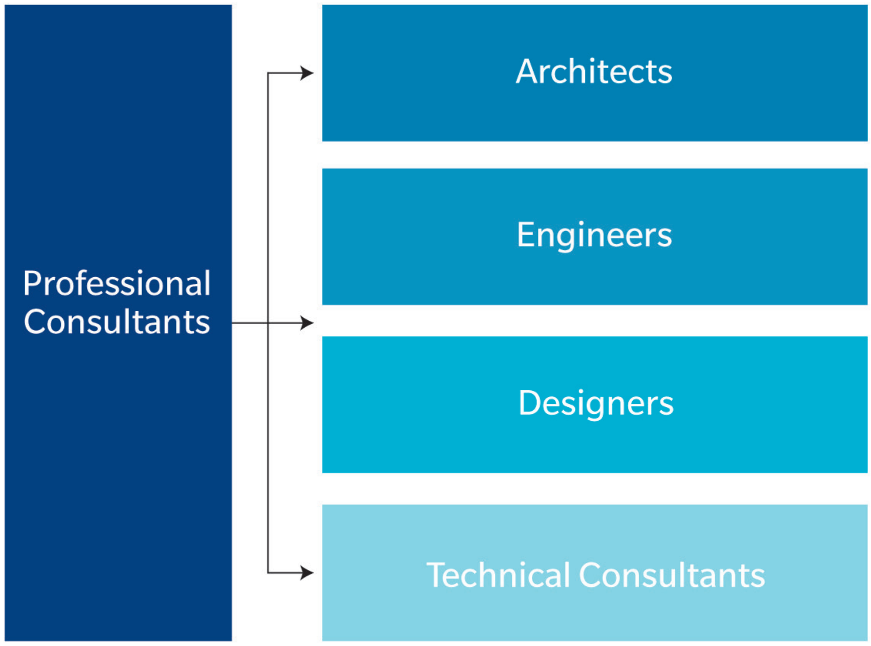
- Work with the project team to identify, evaluate, quantify and manage risk retention and obtain insurance pricing across the different phases of a planned project. Undertake a separate risk tolerance analysis to establish optimum risk transfer.
- Undertake a thorough review of the project risk register and site exposures to identify insurance solutions required.
- Undertake project contract review to confirm compliance.
- Benchmark risk financing arrangements and rating against a broad spread of peer group projects – by sector, size and geography.
- Provide a risk versus insurance "gap" summary and advise on alternative structures to manage any uninsured risk.
- Identify, quantify, assess and assist in the mitigation of business delay risk, taking account of liquidated damages provisions when structuring delay in start-up insurance for a project.
- Place insurance using wide market network to include project-specific long-term and annually renewable policies at most competitive cost.
- Ensure policies arranged include resource to dispute resolution protocols.
- Ability to audit a project's planned business model (service delivered through Marsh sister company, Mercer).
- Work with project legal team to establish risk and risk allocation, providing risk and insurance drafting input which, subject to legal editing, can be incorporated into building and operating agreements and the project loan agreement.
- Utilisation of insurance surety products and premium funding to conserve project capital and cash flow.
- Provision of territory risk analysis and ability to structure/place global political risks insurance solutions.

# PROFESSIONAL SERVICE PROVIDERS

Professional services sector clients engaging to provide design, architectural and engineering consultancy, work jointly with Marsh to obtain the confidence that both they and their principals will benefit from the most thorough and individually tailored range of professional indemnity policy cover available in the global market place, coupled with superior claims advocacy and claims handling service capabilities.

## PROFESSIONAL SERVICE PROVIDERS' NEEDS

- To protect the business's revenue and reputation from the risk of professional negligence claims.
- A clear understanding of geographic risk/specific legal uncertainties enabling management of projects in any country with greater confidence.
- To have a detailed knowledge of project contractual conditions and the assumption of risk inherent within them.




## KEY RISK ISSUES

- Risk of professional negligence claims.
- Reputation of owner/client.
- Litigious nature of project counterparties.
- Subcontractors/suppliers.
- Geographic risk (legal uncertainties).
- Economic downturn.
- Acquisition: Integration and legacy issues.
- Recruitment and retention.

## PROTECTING PROFESSIONAL SERVICE PROVIDER NEEDS

- Group and project specific professional liability insurance cover to architects, engineers, project owners, contractors and manufacturers with design exposure.
- Structure and delivery of a unique range of products for professional clients including annual policies, Run-off tail policies, single project coverage including line-slip facility, owners protective professional indemnity and asset protection.
- Individually tailored manuscript policy coverage to address specific needs of each client.
- Direct access to all key global insurance markets leveraging the most competitive markets.
- Superior International claims advocacy and handling capabilities, including two of the sector's largest claim settlements in the last five years.
- Project specific placements arranged and managed in many key jurisdictions.
- Benchmarked data to assist clients in their selection of appropriate cover arrangements and ensure most competitive cost.

MARSH

For further information, please contact:

SABRINA BOSHUIZEN
Global Infrastructure Practice
+31 10 406 0407
sabrina.boshuizen@marsh.com



GRAPHICS NO. 12-0190