



QUANTUM
GLOBAL
SOLUTIONS

Corporate Profile



CLARITY | FOCUS | RESOLUTION



PARTNERING EXCELLENCE

Quantum Global Solutions is an independent global construction support consultancy dedicated to supporting the construction industry to manage their projects and avoid disputes. British founded and managed, we partner with many of the leading contractors, lawyers and employers around the world.

Our experienced teams, working across Europe, the MENA Region, Africa, Asia, Australasia and the USA, provide contractual, commercial and planning support to construction teams with expertise in forensic delay, quantum analysis and the preparation of entitlement submissions for the resolution of construction claims and disputes.

As a leading industry specialist, the Quantum team comprises experts in many fields including Chartered Engineers, Chartered Surveyors, Contracts/Commercial Specialists, Quantity Surveyors, Forensic Delay Analysts and Media Specialists. Our strong reputation around the world for exceptional quality of service is at the heart of our company's customer-centric focus.

Quantum is regulated by the Royal Institution of Chartered Surveyors (RICS) and is committed to setting and upholding the highest standards of excellence.

Quantum Philosophy

At Quantum we understand that our reputation is built through how we approach and manage our portfolio of multi-dimensional projects and how conduct our business. These values can best be described in the six elements of our corporate philosophy:

- **Excellence** – not a skill but an attitude
- **Customer focus** – a commitment to exceed our clients' expectations
- **Integrity** – a mainstay of our business operations
- **Innovation** – our innovative and solutions-based approach is integral to our business philosophy
- **Solution-based creativity** – utilising creative approaches to proactively find amicable resolutions
- **Quantum Family** – a results-based team of like-minded professionals who are committed to their clients and who want to develop their careers

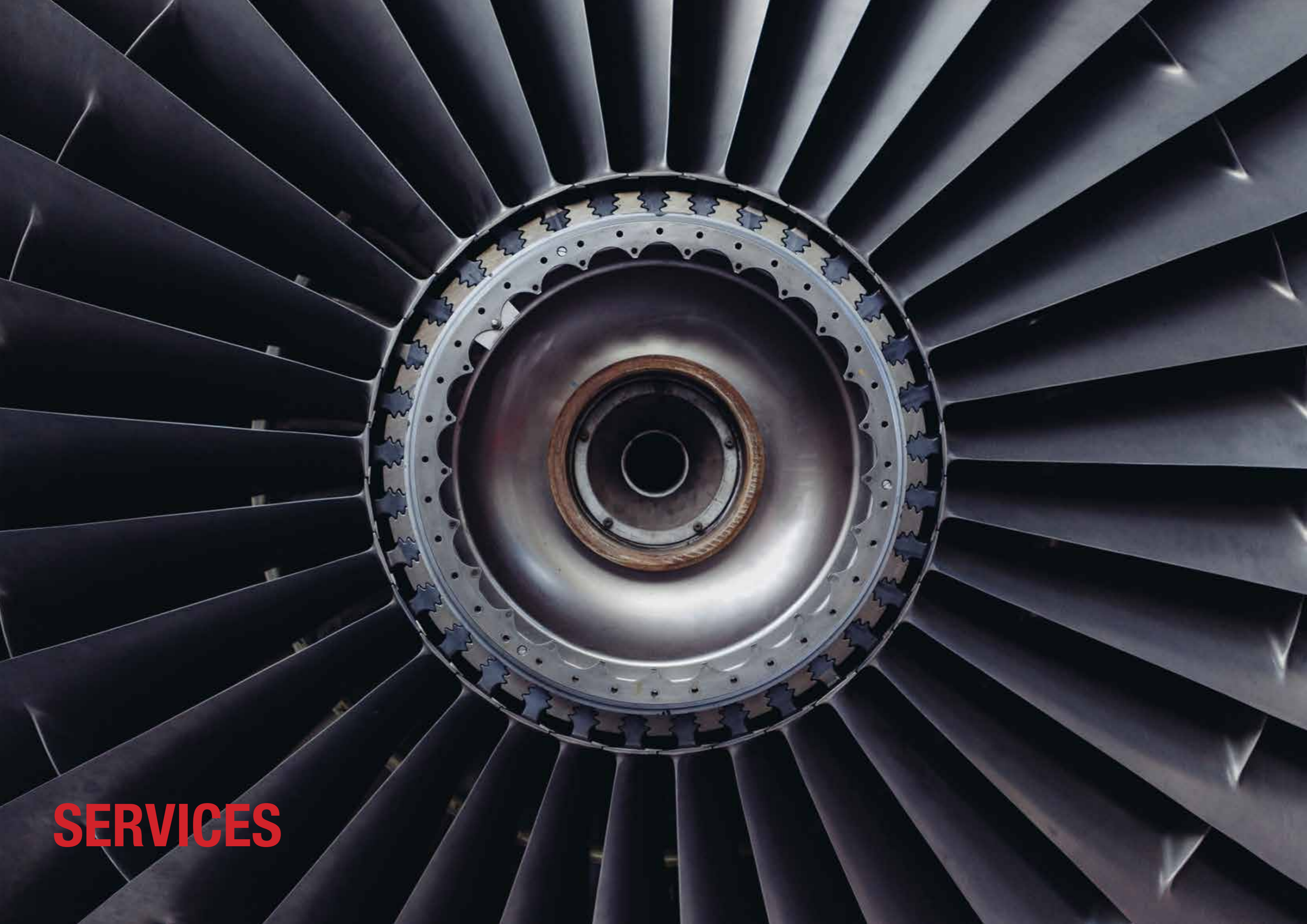
Quantum is guided by the principles and practices of leading industry associations including:

- RICS - Royal Institution of Chartered Surveyors
- CI Arb - Chartered Institute of Arbitrators
- ICE - Institution of Civil Engineers
- CIOB - Chartered Institute of Building
- SCL - Society of Construction Law
- AACE - American Association of Cost Engineers



Peter Murphy
Managing Director

“ We pride ourselves in providing our clients with the highest level of service, efficiently and effectively, and tailoring solutions to meet their individual needs



SERVICES

CONTRACTUAL COMMERCIAL SERVICES



As a provider of professional construction support consultancy services, Quantum meets the specific business objectives of each client by delivering bespoke contractual and commercial solutions for each and every challenge



At Quantum, we understand the complex nature of construction projects and the multiple issues our clients face – so we provide a wide range of bespoke services to meet our individual client needs.

Quantum recognises that complex construction projects require professional contractual and commercial services to effectively manage risks and ensure the successful completion of multi-faceted construction and engineering projects from inception to completion. Partnering with Quantum allows our clients to manage their projects whilst we look after their profits.

At Quantum we:

- Listen to our client's project team
- Work alongside and with our client's site teams
- Continually provide feedback to our clients

Our Focus

- Tender period - strategic reviews, risk analysis
- Contract award - reviews, recommendations, setting systems
- Construction period – monitoring, evaluation and submissions
- Project close out – handover, account support

Our Service

- Proactive partnerships and client support
- Third party objective reviews
- Project health checks
- Embedded contractual support



FORENSIC PLANNING

As projects continue to increase in size and complexity along with accelerated programmes for delivery, we appreciate the importance of accurate and detailed planning. It is therefore crucial to establish a workable programme from the outset that recognises contractor, client and engineer obligations which is correctly linked to react to change.

Our Forensic Planning teams:

- Understand the requirement for accurate planning
- Support our clients to plan their projects successfully
- Manage the programme incorporating change
- Use industry software to demonstrate impact of change

Our clients entrust Quantum to provide:

- Tender period – understanding scope, tender programme development
- Contract award – baseline programme development recommendations, setting systems
- Construction period – maintain progress updates
- Change management – impact of change, cost entitlements, impact analysis
- Extension of time submissions
- Disruption analysis
- Recovery/acceleration programmes
- As-built updates
- Project closeout – as-built programme





CONSTRUCTION CLAIMS

With global, multi-sectoral experience our teams acknowledge that construction projects are a dynamic process where change is inevitable. We take a proactive and hands-on approach in managing change to reach an amicable resolution without the need to resort to a formal dispute process.

Change may result in additional time and cost. Any change to the plan, must be presented in a clear and concise manner at the time rather than upon completion of the project this allows both parties to mutually agree on the quantum of time and cost.

Our teams:

- Embrace this entitlement
- Prepare clear and concise entitlement submissions
- Depict the contractual merit
- Maximise entitlement to time and cost
- Use high end multi-media presentations to demonstrate our client's position
- Maximise entitlement to time and cost

Typically our entitlement submissions include:

- Variation and change orders
- Extension of time submissions
- Delay only and prolongation costs
- Delay and disruption entitlement
- Disruption only entitlement submissions
- Acceleration submissions
- Contractual dispute and opinion
- Position and strategy documents



Quantum prefers to use the term 'entitlement' rather than claim





DISPUTE RESOLUTION

In our experience the vast majority of issues can be settled through a proactive alternative dispute resolution process. The ability to communicate complex engineering and construction issues, combined with an understanding of the market are imperative in the settlement of disputes through alternative resolution forums.

However, there are cases when parties cannot reach an amicable resolution and the formal dispute process has to be followed to secure a fair and reasonable settlement for time and cost entitlement issues.

In these cases Quantum:

- Provide compelling entitlement submissions
- Work in partnership with our client's legal team
- Prepare rebuttals for counter claims
- Utilise multi-media presentations to demonstrate client's entitlement
- Provide support to final resolution



Quantum believes in amicable resolution of issues

LITIGATION FUNDING

Over the past few years, litigation funding has developed to become an increasingly popular method for businesses to pursue claims that might otherwise have been left unrealised due to the costs of formally seeking a settlement through processes including arbitration, court or treaty case.

What is Litigation Funding?

Litigation Funding, also known as legal financing or third-party funding, is the provision of financing one party in a litigation in return for a percentage of any benefits received by the litigant. It enables a party to litigate or arbitrate without having to directly pay for it, whether because of commercial restraints or because they prefer to use their liquidity in other areas.

Litigation funding provides:

- A valuable means of access to justice for claimants who may not have funds available
- A cost-effective financing tool for claimants

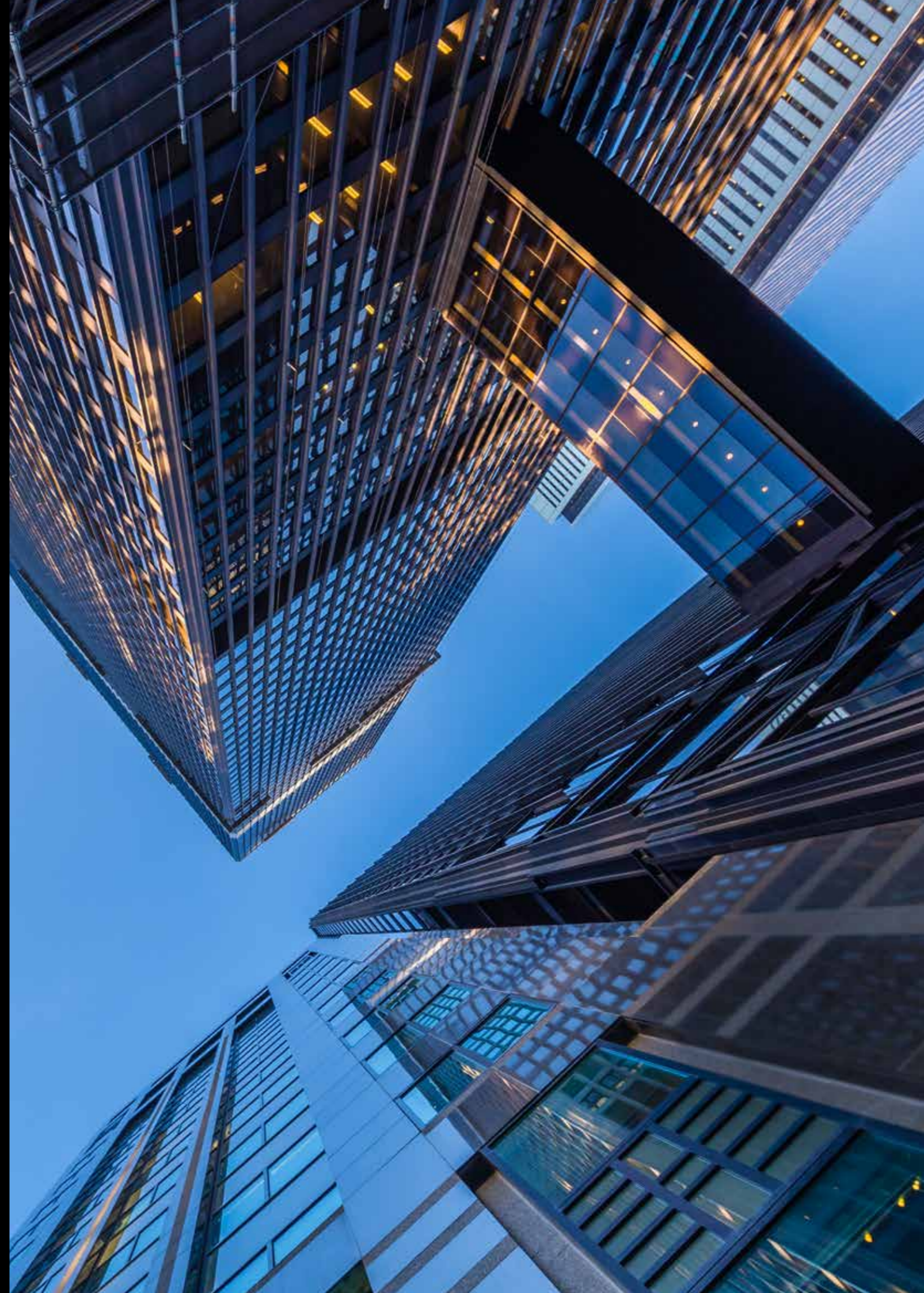
Advantages of Litigation Funding

Perhaps most importantly, it is possible for the funded party to set aside the financial risk of pursuing a claim in return for sharing the returns.

In addition, some funders, particularly those that employ experienced litigators, are able to offer a well-informed view as to the merits of the case, effectively providing guidance as to which lawyers and consultants are best suited to manage the case.



Litigation can take several years and can tie up a company's liquidity for long periods affecting cash flow





LITIGATION SUPPORT

Each construction project is unique and built by different parties working together to create something unique. Through this dynamic process, change is inevitable. Quantum recognises this and focuses on amicable resolution and dispute avoidance.

When time is critical and costs are high, disputes can arise. This can affect an entire project and not just the parties directly involved and resolution can be a time consuming and expensive process.

When an issue escalates to mediation, adjudication, arbitration or litigation, Quantum can assist in preparing a comprehensive and fully substantiated entitlement submission. This includes clearly identifying and highlighting the significant issues and separating them from the non-critical issues that surround most cases. These services support and complement the services of the legal teams.

Led by highly experienced professionals with skills in all matters of construction and dispute resolution, Quantum provides comprehensive and proactive services to assist our clients in resolving any disputes.

Quantum offers a unique approach to litigation support including:

- Specialist knowledge and experience in all disciplines
- Integrated teams allowing us to combine specialist expertise to provide a single comprehensive opinion and position
- A suite of specialist computer software able to analyse issues and project positions

Dispute Avoidance

Our teams are able to advise on contract construction and dispute avoidance techniques by drawing on the many years of global experience. This can be incorporated into contractual agreements during the initial procurement phase of a project.



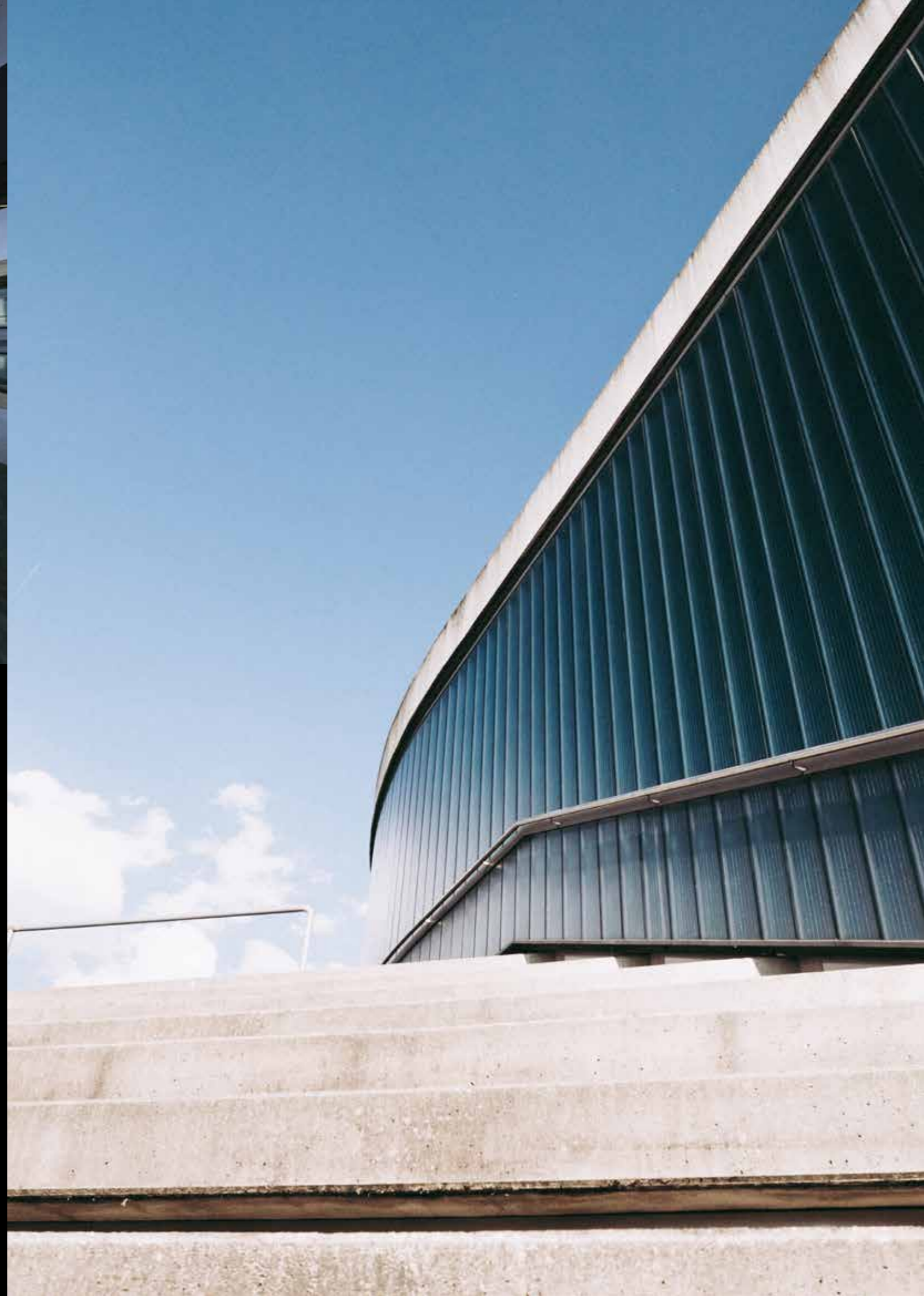
The adoption of appropriate strategies can reduce the instances of dispute and allow a project to proceed efficiently and economically



EXPERT SERVICES

Construction disputes are normally extremely complex and specialised. Quantum's experts can assist a client's legal team in framing claim and defence cases and documentation. Our team are able to quickly and efficiently draw upon their experience to identify the real issues in dispute allowing for a more focused submission.

A proactive and understanding approach permits Quantum to integrate its services seamlessly into the preparation of the various stages of a case allowing the client's legal team to focus on the legal issues whilst providing them with a technical understanding of the issues.



EXPERT WITNESS

Quantum is able to provide a team of skilled experts who are able to review evidence and prepare clear and concise reports. Our expert's disciplines include forensic planning, construction cost control, technical and engineering, delay and disruption quantum for numerous jurisdictions and tribunals.

Our services comprise:

- Initial and preliminary advice – review of available documentation, statements of claim, defence and providing an initial opinion
- Strengths and weaknesses review – detailed review of the evidence and position of the parties including best and worst-case scenarios and outlining the parties' technical strengths and weaknesses
- Expert reports – analysis of the evidence and provision of expert witness statements and reports based on testimony
- Expert witnesses to provide detailed testimony at the hearing

Our expert witnesses have experience in:

- Various codes of conduct for both claimant and defendant
- Understanding of construction complexities
- Formulation and case preparation
- Framing claims and defences
- Presentation of case



In our experience for a successful outcome it is essential for an expert witness to be clear, concise, convincing and credible

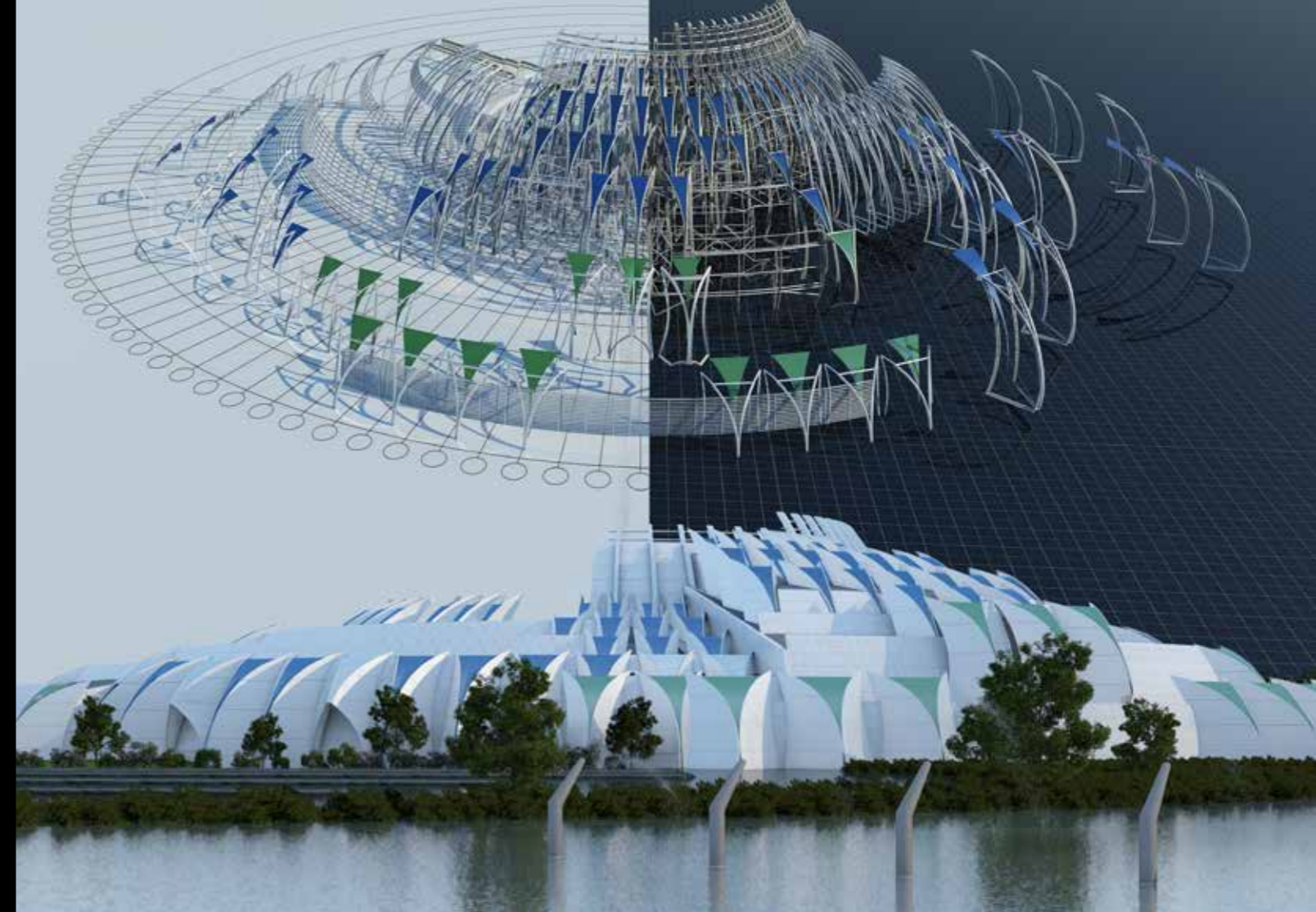


QUANTUM DIGITAL

With contractual entitlement issues being commonplace in the construction industry and regularly leading to disputes, Quantum has earned a strong reputation for successfully delivering early settlement of claims and disputes clearly and concisely through their highly-skilled digital team.

At Quantum Digital, our team appreciates that 90% of the information transmitted to the brain is visual, and our brain processes visual images 60,000 times faster than text. We apply this understanding during the development of all our projects. One unique method Quantum uses to trigger negotiations and avoid protracted dispute is through the use of fully animated movie presentations using creative and dynamic multimedia techniques. To leverage this fact, Quantum has developed an in-house media team specifically dedicated to the preparation of movies and interactive presentations used to demonstrate construction claim entitlements. When utilised in this way, media is particularly useful for making presentations to key decision makers who do not necessarily have the time to read large volumes of narrative accompanying many claim submissions.

“ We believe in graphical representation, clarity of message and understanding through visualisation





TRAINING

Quantum is strongly committed to sharing its knowledge and experience with our clients to promote a non-adversarial approach to construction projects.

The Quantum team have extensive experience in the construction industry on a wide range of projects with the key focus on managing contractual, commercial and planning issues and ensuring our clients not only complete their projects safely and on time but also securing their profits.

Quantum training seminar topics include:

- Commercial management
- Contracts management
- Planning training
- Share knowledge and experience
- Encourage collaboration
- Discuss lessons learned

Quantum partners with our clients to:

- Provide on-the-job training
- Undertake training workshops
- Make industry specific presentations
- Share knowledge and experience
- Encourage collaboration
- Discuss lessons learned



Quantum regularly contributes to industry conferences and gatherings





SECTORS

WHAT IS CONSTRUCTION?

Construction is defined as the art and science to form material or immaterial objects, system or organisations.

Our clients are experts in their field managing the construction of prestigious projects throughout the world. Their focus is on quality and safe delivery of projects on time and within budget.

Quantum provides specialist contractual, commercial and forensic planning services across the full spectrum of the civil engineering, construction and building industry to protect our clients' interests with particular focus on time and cost entitlement.

“ The construction industry contributes greatly to the economic growth of nations helping to develop infrastructure, industry and housing





INFRASTRUCTURE

Infrastructure is a strategic asset for future growth and economic development. As the global population continues to increase, a continued period of expansion and significant investment in all areas of civil engineering, building and construction is anticipated.

Quantum understands that our lives depend on safe and reliable infrastructure including access to energy, water, communication and transportation. Our teams have extensive experience of infrastructure projects partnering with our clients to provide invaluable expert knowledge and understanding of the issues that will be faced.

“ Building is defined as the process or business of constructing something ”



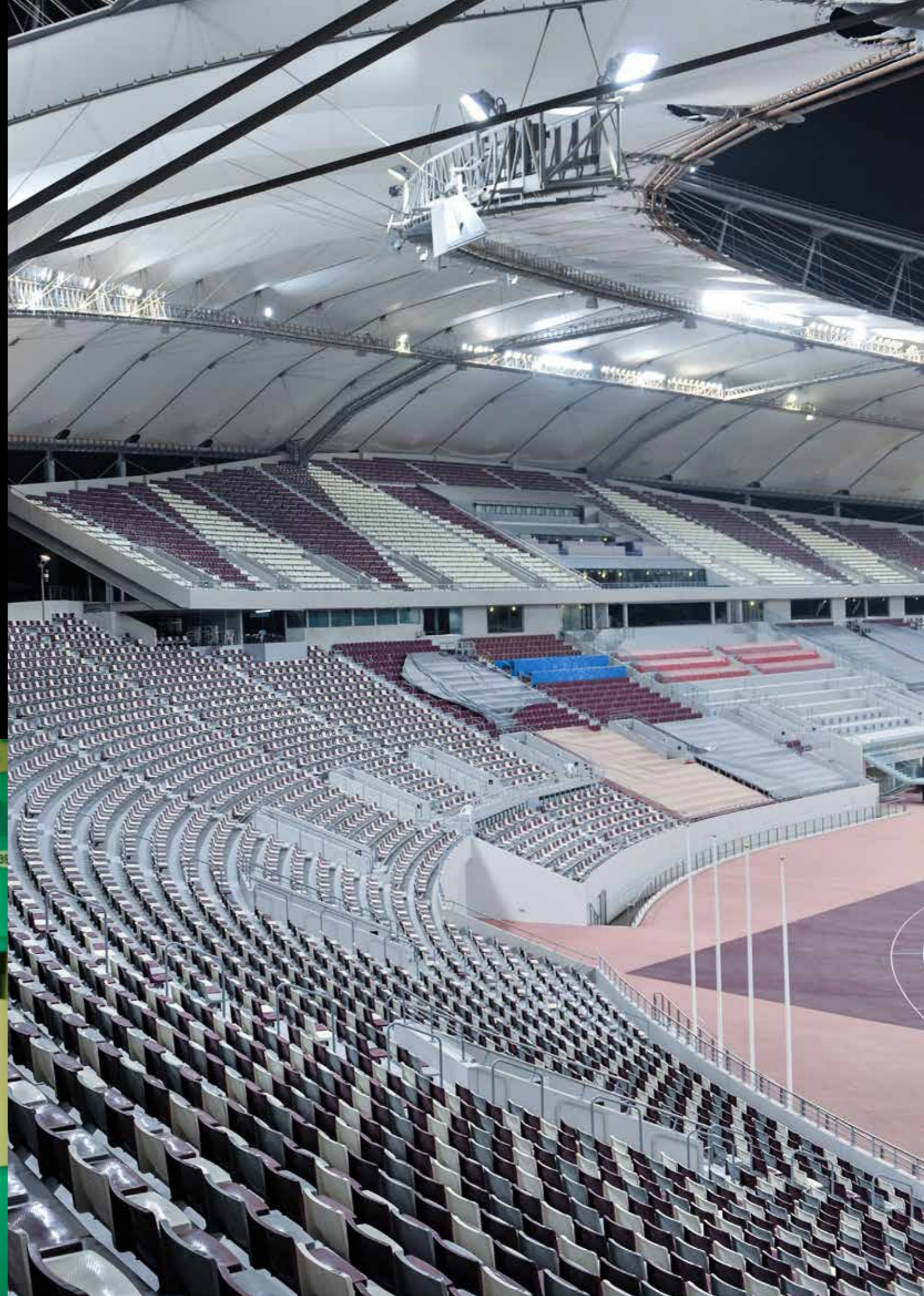
SPORTS and LEISURE

Accounting for approximately 1 per cent of global GDP, the annual global sports market including infrastructure development is estimated at US\$ 600-700 billion.

Quantum recognises that in the latter part of the 20th century, sport and leisure transitioned from a largely amateur pastime to a global business. Many facilities are constructed in a state of uncertainty and change reflecting the rapid evolution of technology and sport specific demands. Quantum's teams of construction industry professionals not only have expertise in the construction of world class sports facilities but also participatory knowledge of a broad range of sports.



Safe and reliable infrastructure provides solid foundations for communities and enables commerce





COMMERCIAL DEVELOPMENTS

Commerce is the whole system of an economy that constitutes an environment.

Continued growth and development throughout the world requires a significant focus on commercial development projects. The Quantum team has extensive experience and provides invaluable expert knowledge and understanding of the issues that are faced by both client and contractor.



OIL and GAS

Throughout the world the success and continued growth of many countries is supported by the revenue generated through the production and sales of energy reserves particularly oil and gas.

Our team of experts have extensive oil and gas project experience and will share the lessons learned to ensure successful implementation of oil and gas development projects.



Complex and challenging industrial facilities and infrastructure projects require specialist knowledge and understanding to ensure safe and reliable production and delivery



RAIL

Reports highlight that with continued global growth, the world rail market volume is predicted to grow by 2.6 per cent per year worldwide over the next years reaching approximately US\$ 220 billion in 2021.

Quantum understands that our lives depend on safe and reliable infrastructure including access to energy, water, communication and transportation. Safe and reliable infrastructure provides solid foundations for communities and enables commerce.

“ The Quantum team has extensive experience of rail projects



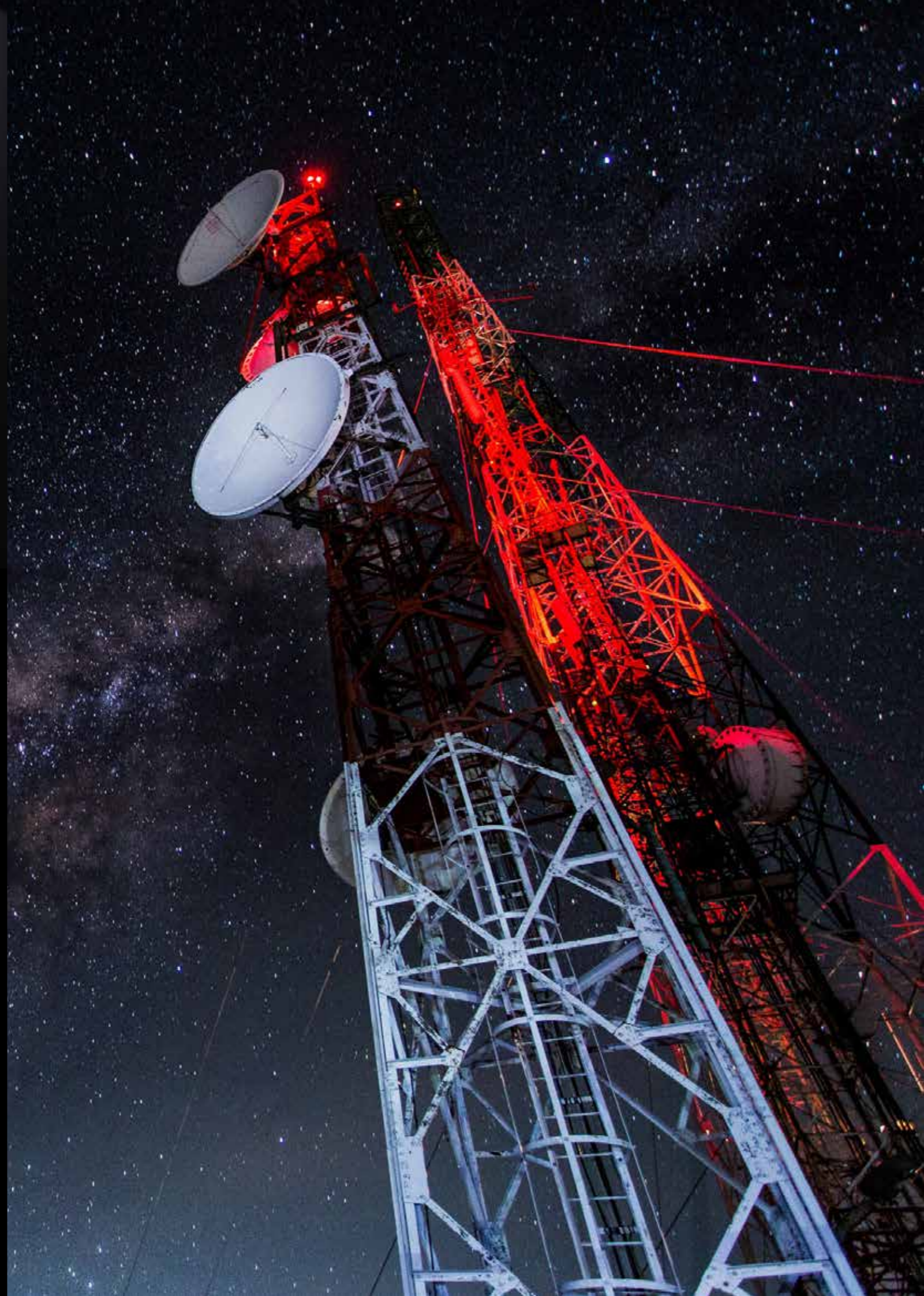


IT and TELECOMMUNICATIONS

Communication is now immediate and all-encompassing. We understand that this is critical to business, our way of life today and for the future.

Quantum has extensive experience and remains up to date with the latest IT and telecommunication developments and technology and partner with our clients to provide invaluable expert knowledge and understanding of the issues that will be faced in this constantly evolving field.

“ IT and telecoms is the most rapidly developing and dynamic area of construction projects with the continued desire for faster, reliable and more efficient communication



LIFE SAFETY and SECURITY SYSTEMS

With increasingly dense urban populations and more technological smart buildings the demands on life safety and security systems become more complex and critical. Governments throughout the world continue to focus this as a priority to ensure the safety and wellbeing of their people.

Quantum has extensive experience of this rapidly changing technology and impact on projects and is able to bring this knowledge to assist with evaluation of the change ensuring amicable resolution between the parties and minimise delay to the project.





AIRPORTS

The world is getting smaller and travel between continents is part of our daily lives. On a global level there continues to be rapid growth in the aviation industry and associated infrastructure while the Middle East's recent expansion activities have seen the region become the leading world hub for all international travel and freight.

With extensive collective experience of airport projects Quantum ensures the successful implementation of these development projects which play an important role in the global economy.



Globally the aviation industry contributes almost 1 per cent of annual global GDP estimated at US\$ 769 billion



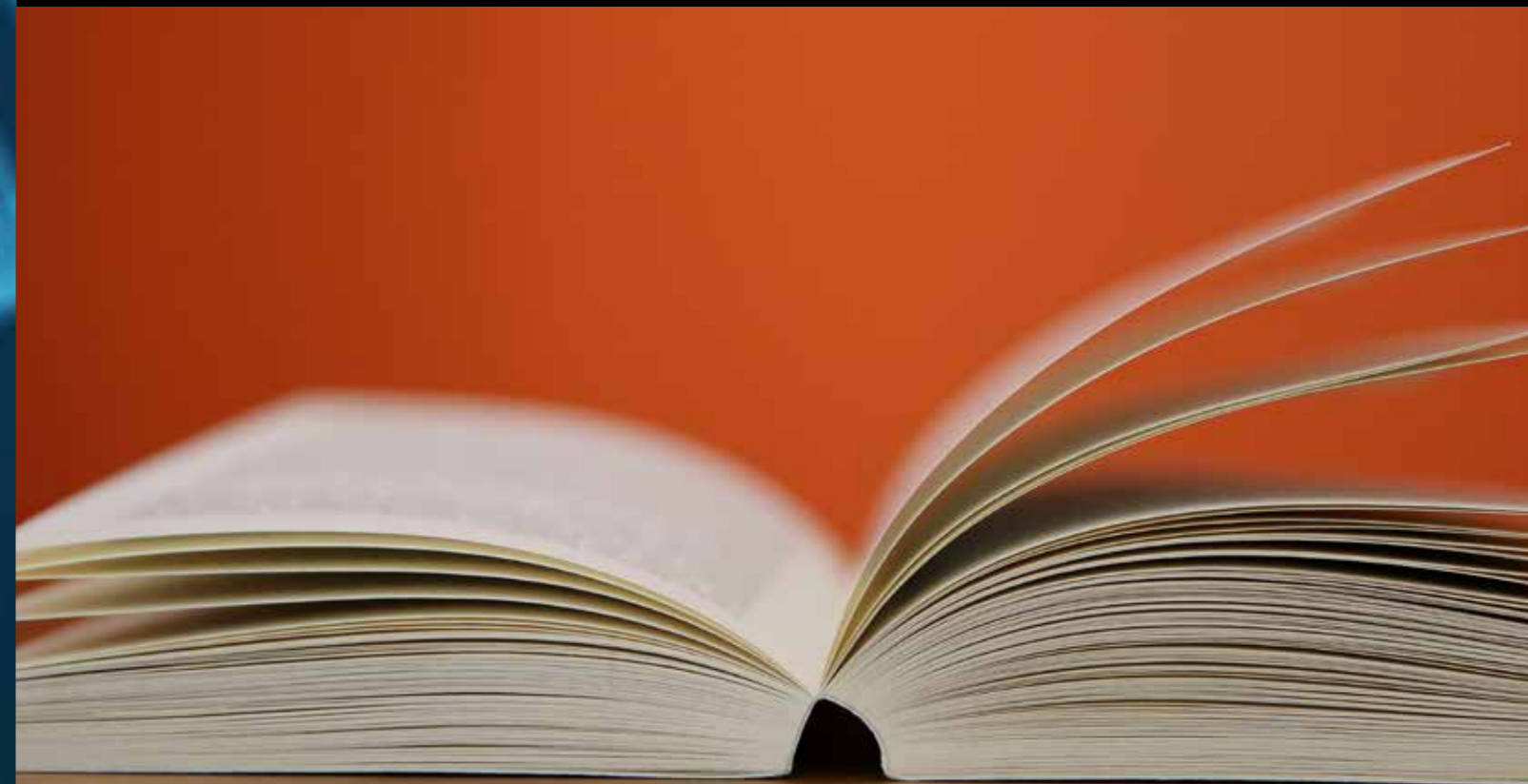
HEALTH and EDUCATION

Strong educational foundations are fundamental to the continued growth and development of modern knowledge-based economies enabling people of all ages to effectively contribute to their future.

In addition, the development of new world-class healthcare facilities also provides patients with a ground-breaking level of service in innovative and ultra-modern facilities designed to promote healing. Utilising their experience of education and healthcare projects the Quantum team understand of the issues that will be faced during these complex major projects.



World class education and healthcare are the primary building blocks of life





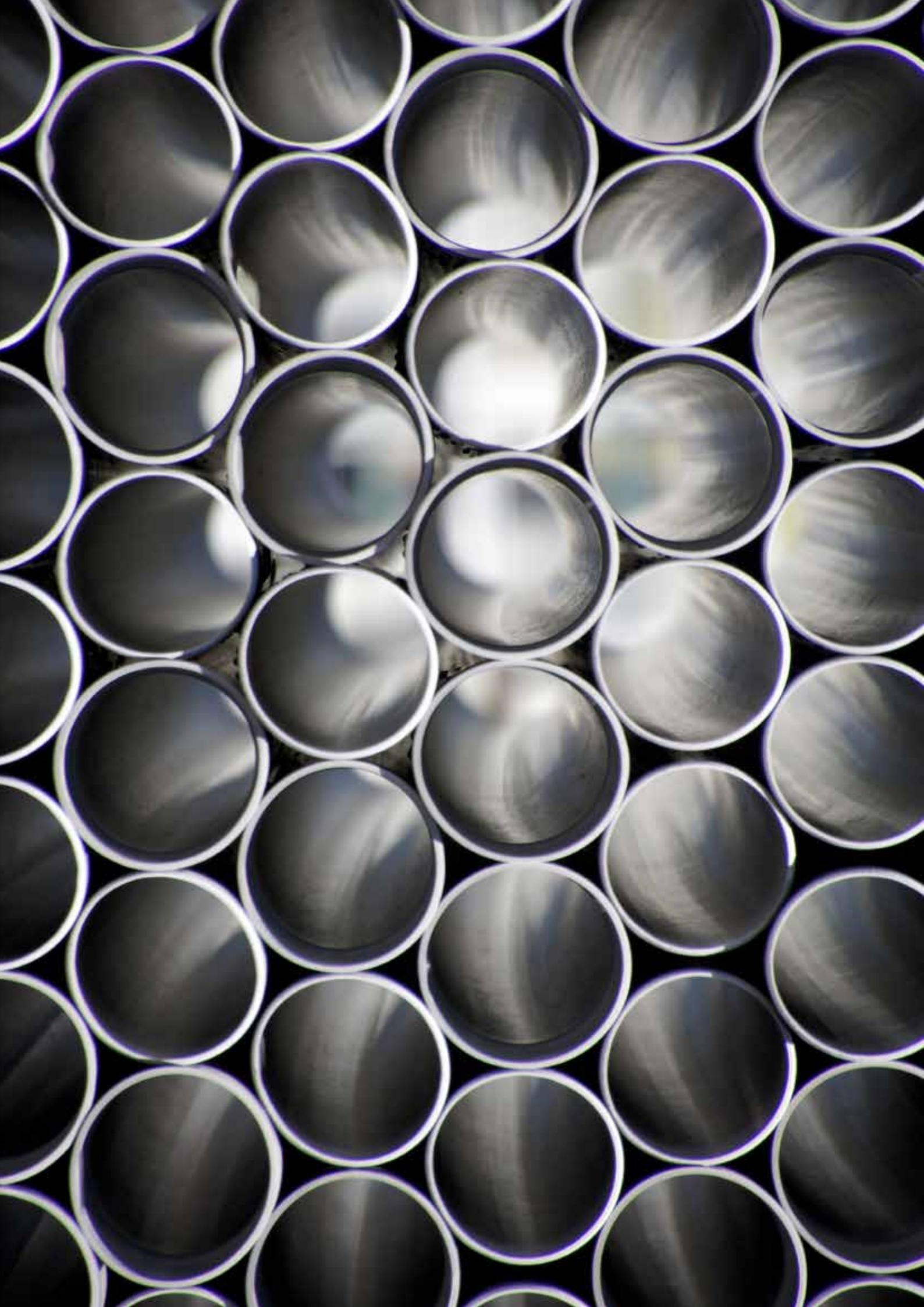
MARINE

The sea remains the primary gateway for international transfer of materials between nations and continents and modern marine facilities are the key to successful development and growth.

Our teams of world-class construction professionals are well-respected in the industry for their in-depth knowledge and experience in preparing comprehensive, multi-million dollar marine infrastructure claims.



Marine projects by their nature are uniquely complex and challenging and require specialist knowledge and understanding to ensure safe and reliable construction and maintenance



MECHANICAL ELECTRICAL and PLUMBING

Quantum understands that our lives depend on safe reliable infrastructure including access to energy and water. They have a direct impact on the success of any project and continued facility operation. However, these services are understood by very few.

Mechanical, electrical and plumbing, or MEP services, are the technical services in buildings in order to ensure their safe and comfortable operation and optimising the building's efficiency through its entire service life. With a wide range of experience across a myriad of MEP projects, the Quantum team have partnered with our clients to prepare numerous successful large scale, investigative claims for both the prime contractor and client.



Mechanical, electrical and plumbing (MEP) are the three fundamental, and essential, requirements integral to the success of every modern construction project



QUANTUM FAMILY



QUANTUM FAMILY

The Quantum family is a fundamental cornerstone in how we operate. Our employees, currently working in over a dozen locations around the world, are the key to both our success and the high level of professional service we deliver to our clients.

We recognise the wider Quantum family including spouses and children and make every effort to get together and celebrate the success of our company in supporting the ongoing development and growth throughout the world.



“ At Quantum we employ individuals who are committed to excellence ”



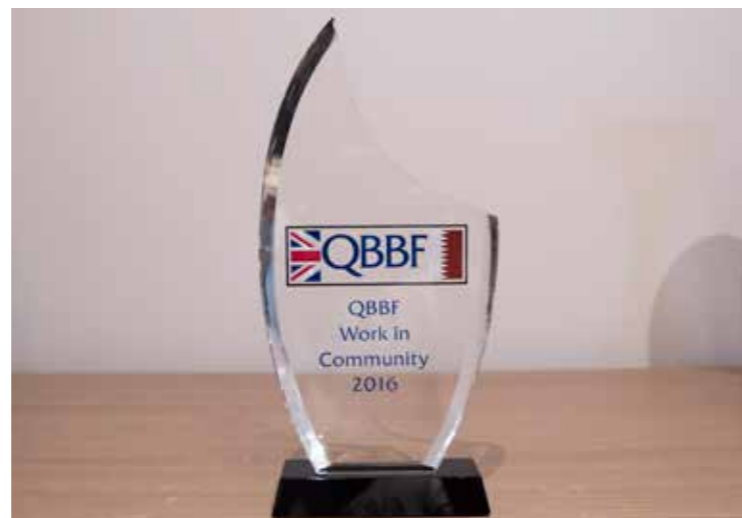
**CORPORATE SOCIAL
RESPONSIBILITY**



Q-munity

At Quantum being a responsible corporate citizen is something we take very seriously and we are fully committed to making a positive contribution within the communities in which we live and work.

We strongly believe in the value of family including our employees, their families and the wider community. Our Q-munity Corporate Social Responsibility (Q-CSR) programme actively aims to add long-term value by supporting our interaction with community groups and our support of health, sporting and educational initiatives.



“ The Quantum ‘Donate a day’ initiative was established in 2015 to allow employees to ‘Donate a day’ of their time to a worthy charitable organisation



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