



Built to last  
Construction



# Built to last

**The engineering and construction industry is one of the largest sectors in the world, accounting for approximately 6%-7% of global GDP, and an even larger percentage in emerging markets such as India and China.**

And the construction boom of the last ten years continues. A recent study by consultancy firm Turner and Townsend showed that of 46 construction markets surveyed across 33 countries, over half of the outlooks were categorized as 'warm', 'hot' or 'overheating'. Long-term projections also show significant upward momentum, with the industry expected to grow to \$15.5 trillion, an increase of 85%, by 2030, according to a report by Global Construction Perspectives and Oxford Economics.

There are, however, some suggestions that the sector's upward trajectory is slowing. A report by Allianz and Euler Hermes at the end of 2018, for example, stated that: "After ten years of growth (2008-2018), we have reached the peak in the

global construction cycle," predicting a marginal decline in year-on-year growth from 3.5% in 2018 to 3% in 2019. The contributory factors, the report stated, included "slowing GDP growth and tighter financial and monetary conditions."

By its very scale and nature, the construction sector is exposed to fluctuations in global economic growth. According to the International Monetary Fund, global growth for 2019 is forecast at 3%, the lowest level since 2008–09. However, a pick-up to 3.4% is forecast for 2020, reflecting "a projected improvement in economic performance in a number of emerging markets in Latin America, the Middle East, and emerging and developing Europe that are under macroeconomic strain."

While projected growth rates vary, the upward trajectory of the construction sector will continue, as a range of growing pressures drive the need for large-scale building and infrastructure projects.

**"After ten years of growth (2008-2018), we have reached the peak in the global construction cycle"**

# Taking the strain

**“There are multiple macro and micro developments currently creating increased demand for the global construction industry,” explains Alex Radcliffe, technical head, Power, Energy and Construction, Australia. “These range from the implementation of government policies driven by population growth and the massive infrastructure investment required to support that growth, through to advances in urban planning, technology influences, and an increasing focus on environmental issues and sustainability; as well as factors such as evolving supply-chain dynamics and globally low interest rates.”**

As demand for construction continues, so the scale and complexity of many of the projects that are being undertaken is increasing. Multiple mega construction projects are currently underway around the world. These multi-billion-dollar undertakings include the Al Maktoum International Airport in Dubai, which is also hosting the colossal Expo 2020 event, the South-North Water Transfer Project in China, the Linear Chuo Shinkansen high-speed rail project in Japan and the Crossrail project in the UK.

Add to this the constant need for new housing, the demand for enhanced transport and utility infrastructure in emerging territories, and the immense pressure to reduce the “infrastructure gap” in developed nations, and it is clear the construction industry is having to take the strain.

Changes in demographics are also an influencing factor in the Middle East, according to Derek Patterson, operations manager, UAE, Crawford Global Technical Services (GTS). “A number of countries in the region have seen a significant increase in the number of under 25s.” he says.

“This highly educated segment is keen to play a more prominent role in a more diverse economic environment. As a result, in addition to ongoing investment in oil and gas-related infrastructure, we are also seeing a greater focus on large-scale projects in the industrial, commercial and tourism arenas.”

Another force impacting sector demand is the push to integrate new processes, technologies and materials into an industry starting to show its age. A 2016 report by the World Economic Forum in conjunction with the Boston Consulting Group<sup>1</sup> went so far as to state that the engineering and construction industry had “a moral obligation to transform” given its central role in addressing megatrends such as increasing urban populations and the need to reduce the environmental impact of buildings.

Suggesting that the sector had been hesitant in its willingness to advance, the report highlighted the huge potential afforded by new capabilities and technologies such as augmented reality, 3D printing, Building Information Modelling and advanced building materials to move the industry forward. By adopting these technologies, it stated: “companies will boost productivity, streamline their project management and procedures, and enhance quality and safety.”

Add such factors to the standard pressures faced by the industry, including multiple project stakeholders, highly complex supplier networks, regulatory developments, operating in new territories, demands to reduce costs and improve performance, and the sector burden is incredible.

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<sup>1</sup> Shaping the Future of Construction - A Breakthrough in Mindset and Technology



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# A complex blueprint

**“There are numerous factors pushing the boundaries of what is reasonably achievable in the construction sector,” believes Radcliffe. “These include the feasibility of the projects themselves; prototype construction methodologies; time and cost deliverables; increasing regulatory and environmental considerations; multiple interdependencies – with complex and strongly interrelated supply chains; complex financial funding; modeling; and project stakeholder relationships.”**

For many large-scale projects, particularly some of the multi-billion-dollar infrastructure builds highlighted earlier, the contractual framework which underpins them is as complex and detailed as the project blueprints themselves.

“These mega construction projects, such as mass transit systems, skyscrapers and stadiums, bring together numerous different parties,” explains Reubin Iqbal, Head of Construction London Market International Construction & Engineering, Crawford GTS, “each with specific roles, responsibilities and demands. These can extend from the ultimate project owner or owners and their financiers, to the principal contractors, trade contractors and suppliers, as well as the landowners, architects and engineers. Ensuring that all of these stakeholders interact effectively is critical to the success of any major build.”

Such a complex multi-stakeholder environment requires a clearly structured and agreed engagement plan that connects the various parties and defines how this ecosystem will function. Central to this is the engagement plan which identifies each participant and establishes

their roles and responsibilities, provides detailed objectives, defined strategies, and predicted outcomes for the full lifecycle of the project development.

According to the World Economic Forum report, the complexity of the construction contract has increased massively over the last few decades. The report states that: “Complexity of contracts and 25 years ago, a typical contract consisted of about 50 pages; today it can easily exceed 1,000 pages and is packed with legal complexities,” creating the potential for huge dispute resolution challenges.

Spanning investors, landowners, developers, architects, construction managers, contractors etc., these contracts not only map the complexity of the build environment and how all the parties interact, and ultimately how the project will be delivered, but also should address the exposure potential that this multi-stakeholder ecosystem creates and perhaps more importantly where accountability sits.

“There is certainly an increasing need to properly identify and understand the risk elements of any project – whether that is financial, physical or environmental,” explains Radcliffe. “This is key to ensuring a fair allocation of the risks to balance the interests of all parties and ensure successful project delivery. We are seeing a much greater focus on risk assessment and allocation through the key stages of tendering, construction planning, resource allocation and delivery strategies.”

His comments are echoed by the recommendations of the WEF report, which proposes that the industry adopt, “Innovative contracting models with balanced risk-sharing.”



## Complexity in action

As Dubai prepares to host the Expo 2020, the largest event ever staged in the Arab world and encompassing businesses from 190 different countries, the region is a hive of construction activity.

As a nominated loss adjuster on the project, Crawford has worked closely with many of the key stakeholders involved and understands just how challenging and complex the project plans underpinning such a colossal construction effort can be.

“This is very much a government-driven project and to manage it effectively, it has set up a separate legal entity to provide a central management function for the construction activities,” Patterson explains. “This acts as the interface between all of the multiple government stakeholders involved, which range from the land department and the tourist board, through to the financial division and the department responsible for the development of smart cities.”

At the next level, the project plan is divided into a series of packages, with each package specific to a particular group of contractors, spanning areas such as utilities, buildings and infrastructure. From an insurance perspective, there exists an overarching insurance program as part of the principle control package for the whole of the Expo project, coupled with insurance programs at the individual package level which link into that.

“So, you get a real sense of the intricacies of the contractual and insurance framework that is required to support a project of this scale,” Patterson continues. “This requires a very high level of precision to ensure for example that the contract terms and conditions are aligned with the wordings of the overarching policy plus the policies in place at the package level. From an insurance perspective, managing claims relating to losses that span two different packages requires incredibly careful handling and a very good understanding of the contractual relationships that are in place.”

# Building the insurance program

It is not surprising that given the number of different moving parts within any large construction project, the vast spectrum of risks that exist, extending from on-site health and safety risks, to project management and organizational risks, through to environmental factors and the threat of force majeure events, and the multitude of relationships it encompasses, that the precise construction of multiple inter-related insurance programs is a prime foundation to ensure speedy resolution and lower the potential for disputes.

“If I consider some of the loss events that Crawford is involved in on the construction front,” says Andrew Bart, global president, Global Technical

Services (GTS), “the protection of the policies in place span a broad range of stakeholders. So, it’s not just the complexity of the structures themselves that requires careful underwriting, but also the stakeholder relationships. Insurers and brokers are having to engage with that full spectrum of parties to ensure the coverage is fit for purpose.”

According to Iqbal, this means that the construction industry the contract is king. “Construction programs are different from other insurance policies in that access to the policy is determined by contractual entitlement. The multinational and industry-specific layers that need to come together when managing complex construction projects and insurance claims are vast.”

## Extra cover

As extensions become a more prominent component of construction-related insurance policies, the claims implications can be significant and far-reaching. Issues that Crawford need to consider in the case of the contractors’ liquidated damage (LD) insurance included:

- The interplay with the project contract works policy; potential areas of overlap between ACOW, expediting and extra expenses on the Construction/Works policy and the cover provided for offset costs on the liquidated damages policy;
- Difficulties in measuring ‘Qualifying Period’ as defined;
- Deductible application (based on an increasing scale relevant to % of total LDs applying to the admissible ‘Delay’);
- Contractual interplays from main contractor down the line;
- Understanding the scope of coverage extensions (prevention of access, interruption by civil authority, other property damage, utilities, damage at suppliers’ premises);
- Recognizing and application of exclusion of other contractual reliefs, extensions of time, other ‘deals’ agreed to without consent of Insurers, other con losses, fines / penalties, other non-indemnifiable LDs; and
- Correct interpretation of conditions relevant to set-off arrangements and project monitoring.

“It is vital to understand that contractual matrix to ensure all parties understand their entitlement to any policy in force, which in turn will also manage expectations and ensure a swift claims resolution. The insurance contracts must be water-tight and crystal clear – any ambiguity in the wordings or within that contractual matrix can have significant and far-reaching repercussions in the event of a loss.”

It is therefore not surprising that the construction sector and the insurance market have always been very closely aligned. Increasingly demanding construction projects requires comprehensive programs that mirror the complexity and function as effectively as every single component of the onsite build.

“The expectation on the insurance sector is that they will bring to market those solutions required to assist in guaranteeing delivery of the project jigsaw from the perspective of the multitude of interested parties involved,” says Alex Radcliffe. “Project-specific policies, whether owner-controlled or contractor-arranged, are being tailored such that they now offer far more than a traditional material damage reinstatement promise, and now incorporate an extensive array of covers associated with consequential, contractual and financial losses.”

The potential scope of the project policy is vast. Covers will extend from Contractors All Risks (CAR), delayed start-up (DSU), general liability and employer’s liability, through to environmental liability, public liability, non-negligent cover and professional indemnity for defective design issues. And that scope is expanding almost at the same rate as the scale of the projects themselves.

“On the larger-scale projects, the depth of coverage is much greater than ever before,” Derek Patterson explains. “We are seeing a number of extensions being introduced for exposures that would not have

been available previously. These include extensions for mock-ups and sample buildings, as well as for defective plans, specification, workmanship and materials. All of this of course has a knock-on effect on the claims environment.”

According to Reubin Iqbal, the increasing complexity and size of construction projects has also led to an increased take-up of DSU cover. “With the revenue streams that are covered by this ever-increasing risk, certain insurers have introduced DSU monitoring for larger projects,” he adds. “This requires the employer to regularly submit up-to-date construction programs so that insurers can both monitor the risk and ensure that in the event a claim is made, requests for information are completed in a more efficient manner.”

He also highlights how regulatory development are affecting construction-related policies. “We are seeing instances of brokers inserting clauses in their Owner Controlled Policies in response to legal decisions. One instance in the UK was the case of *Haberdashers’ Aske’s Federation Trust Ltd and others v Lakehouse Contracts and others*, which turned the spotlight on sub-contractor’s rights under a project policy. The case highlighted how even if the intention was for a policy to cover a sub-contractor, if there was any ambiguity in the contract wording, that contract wording would take precedent, negating the intention of the policy – the implication being that the sub-contractor would have to claim on their own policy.”

Other new extensions that Crawford has witnessed include: project-specific contractors’ liquidated damages insurance, as well as covers relating to loss prevention, extra expenses (including cover for stand-down), additional cost of working (ACOW) and removal of debris (restoring access to the property insured and/or the working conditions existing immediately prior to the damage).

# The claims impact

**As the construction industry continues to expand globally, and in turn construction risk and the complexity of the insurance policies required – in many cases numerous policies per project – it is inevitable that this will impact the claims environment.**

This is evident in the claims data that Crawford has generated over the last decade. For example, from 2013 to 2017, the global building and construction industry topped the list of the number of large and complex claims assignments managed by Crawford GTS. Further analysis of its claims data showed a rapid growth of 43 percent over a two-year period for global large loss building and construction claims managed by Crawford.

Addressing the changing dynamics of the claims environment, Radcliffe believes that there are numerous factors influencing loss activity in the Australian market at present.

“There is a wide range of developments at the site level, the market level, the regional level and the global level that are heightening the complexity of the claims arena in the Australian construction sector,” he believes. “These include the increased presence of multi-national and multi-jurisdictional contractors working on major projects in Australia often in joint venture design and construction relationships; the rise in the number of extreme weather-related events across the country; increasing use of more cost-effective developmental solutions

such as imported pre-fabricated building and infrastructure components.

“We’re seeing an increasing prevalence of construction-related defects – both in terms of design and construction – which are impacting the professional indemnity market,” he continues. “Add to this increased claims in the renewable energy sector as the country transitions from a reliance on coal to new renewable technologies; as well as changes in the local regulatory landscape stemming from developments such as the Hayne Royal Commission. And, of course, we have witnessed the multitude of fires related to combustible cladding.”

The devastating fires resulting from flammable cladding materials has had a major impact on building codes around the world, with increased restrictions on materials used and changes to the requirements on the distance between the cladding and the wall of the structure, and rules prohibiting the use of cladding on above a certain number of stories.

Another risk rapidly gaining momentum in the sector is cyber attack. The global construction industry has become one of the most exposed areas on the cyber front in recent years. With so many different parties involved in large-scale projects, expansive supply chain networks and constant flows of capital across the network of companies involved, the sector has become a primary target for cyber-related incidents.

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# Aligning the process

**As new processes are introduced to enhance on-site efficiency, reduce environmental impact, lower costs and advance speed of delivery, the claims potential of the evolving build environment will undoubtedly increase. And with increasing pressure to complete on time, to stringent quality levels, within strict regulatory parameters and without exceeding ever-tightening budgets, any unanticipated halt in production can cost millions. So, when a claim arises, a swift and speedy response is critical.**

These demands are increasing the expectation levels on loss adjusters. “We’re seeing greater pressures on multiple fronts,” Radcliffe says, “including time and cost delivery; our ability to provide global support; the depth and breadth of expertise that we offer; the quality of regulatory governance and compliance that we maintain; and also the scope of the technology offerings that we are able to introduce.”

Pre-loss nomination on large-scale construction projects can play a significant part in the ability of loss adjusters to respond quickly and efficiently in the event of a claim. Given the multiple participants to the project, and the heightened possibility that the adjuster will be managing more than one insurance policy in a loss situation, having sight of the program in advance can ensure adjuster are better able to hit the ground running.

“Pre-loss nomination allows all stakeholders to develop a deeper relationship,” states Andrew

Bart, “which ultimately ensures we can deliver a better service to the claimant and all of the parties involved. Depth of understanding of the client and the project is critical because it is something which evolves, and we get a better understanding of their processes and how programs are structured, which means your ability to expedite any claim is greatly enhanced.”

That familiarity with the multiple contracts and programs can also expose inconsistencies within different policies, highlight terms and conditions that may conflict in the event of a claim, or reveal areas in which insurance cover may be inadequate.

For Derek Patterson, another key benefit is the trust that it establishes between Crawford and the other parties. “It’s very important to establish that level of trust between the various parties and this comes from being able to demonstrate an understanding of the programs and contractual relationships in place. In the event of a claim that close connection can be central to your ability to access information and to facilitate the interaction between the parties to the claim.”

Building that trust level, he continues, is also enhanced by the ability to demonstrate a working knowledge of the construction environment. “When we’re working with people on-site its essential that we can show from the off that we have a working knowledge of the activities on the site. That’s why the majority of the people in our team are dual-qualified.

# Taking construction to the next level

**With growing demand from an increasingly pressurized construction sector, how is the loss adjusting sector responding?**

“What this changing industry dynamic means for Crawford,” says Bart, “is that we must ensure we continue to provide a multi-disciplinary capacity on a global basis which represents genuine subject-matter experts. We also have to be making continuous investment across all areas of our business to be able to support the construction industry not just in the short term, but for the longer term as the sector evolves and expands. That’s why we are focusing on developing a dedicated global construction offering that unites our expertise in this sector. It’s about providing that consistency of service coupled with that depth of capabilities.”

That aligned capability covers a suite of services that include loss adjusting, third-party administration, managed repair, dispute and litigation services and catastrophe response. And further investment is being made on multiple different fronts.

In terms of expertise, the company is focusing on bolstering its in-house specialist staff to ensure that it has dual-qualified practitioners across every skillset within the construction environment.

“The breadth and depth of expertise that we need to service the construction sector is constantly expanding,” says Bart. “Having those specialist capabilities and a genuine market understanding within our team is vital. That is why we aim to



bring onboard people with particular professional expertise and then progressively develop their insurance capabilities via our training and development programs.”

An expert adjuster is essential to manage the overall claim accurately and efficiently. Region-specific specialists familiar not only with the unique circumstances of the program, the specifics of the build environment and the requirements of local regulations surrounding a construction claim can help eliminate delays and provide policyholders with dedicated support throughout the process to translate the nuances of the claims process anywhere in the world.

Crawford is also introducing a range of innovative capabilities across its construction services as part of its commitment to a new era of technology.

“We’re using a range of technologies to augment multiple aspects of our claims response,” Tim Jarman, president of Crawford Australia, explains. “For example, we’re introducing robotic process automation (RPA) to speed up the claims process, reducing the administrative burden while increasing data accuracy for more standard claims, and freeing up our adjusters to devote more attention to larger, more complex claims.”

At the building level, electronic site and scoping tools, virtual reality, 3D imaging cameras and livestreaming capabilities are creating a much more interactive experience that can greatly reduce the time to resolution and restoration if required.

“Our teams across Australia are using these tools,” he says, “to give our insurers a 360-degree interactive view of the loss site. That means that they can remotely walk through the scene, zoom in on specific aspects of the damage, and make judgements based on what they are seeing on how to respond.”

“And with the scoping and pricing tools, by working with our building and restoration colleagues at Crawford Contractor Connection, we are able to establish the scope and price of any restoration work whilst the contractor or builder is on site. That’s a real game-changer.”

Another core component of Crawford’s ongoing investment in innovation is its Claims Fabric program, which is designed to create an infrastructure across the organization which enables us to respond more effectively to the ever-changing and rapidly expanding needs of its clients.

“Claims Fabric is about creating a tech environment that allows us to easily introduce new technologies and partners into our claims management ecosystem,” Jarman explains. “It is also delivering a much more integrated data framework that enables us to connect seamlessly and securely with our clients’ systems.”

“By harnessing data effectively, analyzing it quickly and delivering that insight direct to our clients, we’re establishing a much more strategic relationship where we can use loss data and wider market trend information to support broader risk appetite decisions.”

**“The breadth and depth of expertise that we need to service the construction sector is constantly expanding”**



## Building higher

**Looking ahead, the pace of change that is evident across the construction sector in response to growing build demands, new technologies and processes, and revisions to regulation will undoubtedly increase.**

Greater usage of modular housing techniques, the introduction of new materials and printed materials, the demands of creating carbon neutral structures, the implementation of new technologies and heightened automation capabilities both on and off-site, the rising impact of cyber related issues and many other advances and developments will significantly alter the construction environment.

In such a world, building projects will increase in complexity, the breadth of specialist expertise on

and off-site will expand, radically different contract forms will be required, supplier networks will become more convoluted and logistical challenges will grow.

All of which will impact the exposure potential which in turn will affect the scope of the insurance programs required. And that is exactly how it should be.

In turn, Crawford will continue to extend its capabilities further while working ever closer with our clients. By combining industry best practice, proven claims handling techniques, global reach, and construction-specific experiential know-how, we will play our part in helping the construction industry to build ever higher.

# For more information

For further information, please contact your local Crawford office or one of our regional experts below.

## Andrew Bart

Global President, Global Technical Services  
T: +44 207 265 4096  
M: +44 780 259 1040  
E: andrew.bart@crawco.co.uk

## Tim Jarman

President, Australia  
T: +61 8202 7401  
M: +61 429 138 857  
E: tim.jarman@crawco.com.au

## Rob Blunden

National Construction, Power, Energy and Engineering Manager  
M: +61 478 305 971  
E: rob.blunden@crawco.com.au

## Derek Patterson

Regional Director, Middle East  
T: +971 4 223 6370  
M: +971 50 455 0870  
E: derek.patterson@crawco.me

## Mark Hale

Construction Practice Leader  
T: +1 519 580 7184  
E: mark.hale@crawco.ca

## Alex Radcliffe, ACII, ACILA

Technical Head, Power, Energy & Construction  
T: +61 7 5501 7123  
M: +61 477 723 439  
E: alex.radcliffe@crawco.com.au

## Reubin Iqbal

Head of Construction, UK & Ireland  
M: +44 774 097 7398  
E: reubin.iqbal@crawco.co.uk

## About Crawford & Company®

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**9,000** employees | **50,000** field resources | **70** countries | **\$14B** annual claims payments

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