



Construction Risk Management Europe Report 2023



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Navigating Volatility in the Construction Landscape

The modern world demands more construction to meet the needs of growing populations, the energy transition and a changing climate.

At the same time, stakeholders face uncertainty stemming from fluctuations in the price of energy and materials, shifting geopolitical attitudes, new and untested building materials and technology, and the challenge of finding enough workers to complete projects. This environment challenges businesses to make important decisions more quickly — and more often — than ever before.

At Aon, we partner with clients to enable them to develop, design, build and operate the buildings and infrastructure demanded by modern life. Without the analytical risk management tools and risk capital prepared to absorb losses, our clients would not be able to carry out projects vital to protecting and growing their businesses.



Construction Risk Management Europe Special Report 2023



limate change, inflation, new and untested building products, geopolitics and supply chain fragilities are all contributing to ever more volatility in the world of construction. And yet, because of the very demands of climate change, energy transition and geopolitics, construction continues unabated.

We are witness to the hundreds

"As projects continue to get larger, lengthier and more complex, the challenges facing construction leaders have never been greater"

of billions of dollars flowing into US industrial and manufacturing construction because of recently enacted infrastructure, chips and climate-related legislation. Significant investments in EV battery and chip manufacturing plants are now being planned for Europe, in response to the rapid increase in investment in the US. Saudi Arabia has massive ambitions to create modern cities and a tourism hub to diversify its economy. These are but just a handful of the developments occurring right now within the global construction industry.

As projects continue to get larger, lengthier and more complex, the challenges facing construction leaders have never been greater. Today, leaders must worry about natural catastrophes that are occurring with increasing frequency and severity. They need to be protected against malicious actors hacking their project control systems and stealing their intellectual property. Leaders must find sufficient talent to help build large complex projects. Today, leaders must worry about the volatility in the lending markets, the health and resiliency of their supply chains and, crucially, whether a design error on a project will lead to a delay claim of tens of millions of dollars. The list of risks that construction leaders face continues to lengthen and the risks themselves continue to evolve at a rapid pace.

Because of all these pressures, risk management in the construction industry has a vital role to play. Risk management is the ultimate 'enabler'. We enable our clients to develop, design, build and operate the plants and infrastructure that are demanded by society. Without the analytical risk management tools and risk capital that is ready to absorb losses, our clients would not be able to pursue their ambitions.

"Risk management is the ultimate 'enabler'. We enable our clients to develop, design, build and operate the plants and infrastructure that are demanded by society"

As Aon, we're proud to have been the headline sponsor and exclusive broker partner of Commercial Risk's 2023 Construction Risk Management Europe conference. The topics covered at the conference this year squarely address the challenges faced by the European construction industry.

The conference was an excellent forum for industry practitioners to hear from the relevant experts about, and discuss in person, the various risks outlined above, and potential solutions. For those risk management practitioners that were not able to attend the conference in person, this report will prove to be an excellent summary of the current leading edge thinking of many construction risk management topics. Even for those of us who had the privilege of attending the conference, this report will be an excellent resource to refer to throughout the year.

With best wishes for your continued success in our extraordinary industry.

James MacNeal, Aon – Global Industry, Specialty Leader, Construction and Infrastructure, Commercial Risk Solutions

TEAM

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Insurance & Risk Management News



he construction industry was set to be a global engine for economic growth and recovery from Covid-19, but this expected boom is already facing challenges from inflation, higher interest rates, the threat of recessions and continued war in Ukraine.

Climate change, the race to net zero and supply chain problems are other examples of risks facing the sector. All this requires risk managers to get to grips with an array of emerging and existing threats, just as their industry goes through huge technological change. On top of these mounting problems, insurance buyers still face a difficult construction insurance market.

It is no surprise then that our recent 2023 Construction Risk Management Europe Conference attracted huge interest from risk and insurance managers, brokers, insurers and other service providers. The event in London, sponsored by Aon as the headline partner, was once again a big success and provided attendees with a lot of food for thought. This report covers the big topics tackled at the event so those unable to attend don't miss out.

Delegates were warned that mega losses are returning to the construction industry after taking a back seat during Covid-19, which could have implications for the insurance market. They were also told that the construction PI market remains difficult for buyers but there are signs of stabilisation for well-managed risks. Of course, when the insurance market is difficult, insurance managers will seek alternative risk transfer solutions. And so we cover the latest on parametric and captive options for the

construction sector, and new tech solutions emerging to help tackle what was described as 'generational' supply chain woes.

The other half of this report concentrates on the big challenges facing the construction industry as it tries to deal with climate change and the transition to net zero, with a focus on how the insurance industry is, or isn't, currently supporting this move. European Risk managers were told that a lack of data on new construction technologies to meet decarbonisation is still hindering transfer options and warned they will likely have to pay higher premium to cover some of the new materials. Meanwhile, the increasingly worrying problem of how to manage weather risk in the face of climate change was in the spotlight once more.

We would like to thank all of our commercial partners for their valuable sponsorship support this year. Thank you to Aon, Swiss Re Corporate Solutions, QBE, Zurich Insurance, Allianz, Descartes Underwriting, Sedgwick, Scor, Fenchurch Law, Inclus, Jupiter Intelligence, WINT and ThoughtRiver. Thank you also to our association partners IRMI, IRM, Airmic, LEG and IMIA.

Lastly, we are delighted to announce the date of our 2024 conference. The next Construction Risk Management Europe Conference will take place in London on 23 and 24 April. For further information about this event please contact Stewart Brown sbrown@commercialriskonline.com

Enjoy the read...

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IN THIS REPORT

Mega losses returning after Covid-19	6
Construction PI market still difficult but signs of stabilisation for well-managed risks	9
Risk managers want to see wider parametric options	10
Parametric can plug the gaps	13
Fertile captive conditions for construction firms	16
New tech solutions emerging to help tackle 'generational' supply chain risk	18
Lack of data on new construction technologies still hindering transfer options	20
Buyers will have to pay more premium for new materials	23
Insurers encouraged to get involved in approving new materials	26
Historical data no longer reliable for weather-related construction risks	28



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Mega losses returning after Covid-19

Carrier concern over modular construction

♦ CLAIMS

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fter a hiatus during Covid-19 there are signs that mega losses are returning to the construction industry, according to claims experts.

They add that there remains concern about the use of modular construction among underwriters, who believe it is often higher risk than traditional methods.

Andy Kane, head of construction and engineering at QBE Europe and part of the executive committee at the International Association of Engineering Insurers (IMIA), said data shows that were fewer mega claims from 2019 to 2022 after they had dramatically increased since 2010.

Average annual losses from mega claims over \$30m stood at

Average annual losses from mega claims over \$30m stood at \$942m for the construction market between 2010 and 2022, up from \$197m per year from 1991 to 2009

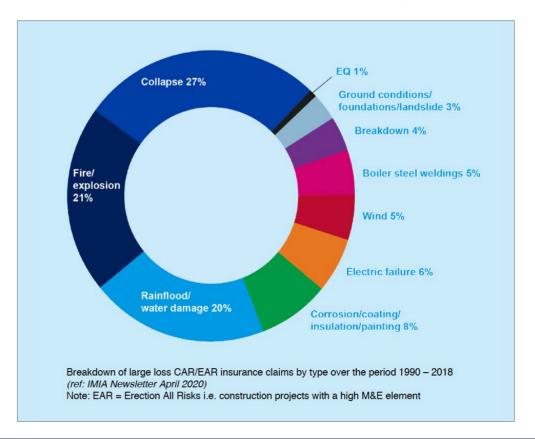
\$942m for the construction market between 2010 and 2022, up from \$197m per year from 1991 to 2009. This higher figure included the big fall in mega losses over the last three years, which experts have put down to Covid.

But Kane and other claims experts say the stats for this year look set to be very different as big losses begin to ramp up again.

"Mega losses seem to be coming back quite quickly this year," said Kane. He said this is a concern because the previous rise in mega losses caused "pretty poor" results for the engineering insurance market. Kane said recent large losses include fires at a residential timber frame building in the US, a hotel in Oman and a high-rise concrete frame residential building in Israel.

Hydro-electric projects in Nepal, Australia and Latin America have suffered collapses, while a high-speed rail project flooded in the US. In addition, there has been moisture damage and defects on several timber and modular projects, said Kane.

Martin Clark, head of claims for property – energy and engineering lines at Zurich Insurance, is also seeing a return to loss trends from before Covid-19.



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"I see 2021 and 2022 loss years as the Covid years when claims fell. So we try to look back to about 2019 to get a real comparison of what losses might look like this year because the frequency and severity from back then is comparable to the end of 2022," he said.

Modular concerns

The claims experts said there remains concern among underwriters about modular construction, which many perceive as high risk.

Kane explained that back in October 2021, a poll of 70 underwriters at the London Engineering Group (LEG) of insurers' annual conference found that most felt modular presented a higher risk to insurers than traditional building methods.

The IMIA issued a working group paper on modular construction in the same year, following large insurance losses on a number of projects using modular processes.

Peter Green, head of global construction and engineering at Sedgwick, said the same problems can be more expensive to fix in modular designs, using escaped water as an example.

"Take modular bathroom pods and imagine there is water ingress down through numerous floors.



Martin Clark, head of claims for property - energy and engineering lines at Zurich Insurance

When you have bathroom pods in position, you have to get behind that bathroom pod to try to dry it out and remove the mould growth. This isn't an easy process.

"In regular construction, you strip out the plaster board, dry it out and replace. With a bathroom pod you have to remove part of the ceiling and part of the floor. You then have to move the bathroom pod out a little bit. Then you have to get someone in behind a small gap to chop off all the service

connections, so that you can remove the bathroom pod out further.

"Once you have done that you have to then dry materials and get the treatment in place. This takes a lot longer than removing water problems in traditional builds," explained Green.

"Then you have to reverse the process and repair all the materials that weren't damaged by the original escape of water. It costs more in labour, it costs more in materials and it takes a lot more time. So the costs increase and, as an adjuster, we have to reflect that," he added.

Clark said assembling modular units can be a problem, particularly if they are being handled by inexperienced builders.

"The modular units are factory tested and probably better quality in terms of joints than traditional construction but as soon as they are fixed together or handled by site workers, problem can occur," he said.

Big risks

Kane went on to give figures on the big risks facing construction firms based on the size of insurance claims between 1990 to 2018. According to IMIA figures, collapse of permanent and temporary works was the biggest cause of loss, accounting for 27% of all successful claims. Next comes fire on 21% and flood on 20%.

Andy Kane, head of construction and engineering at QBE Europe: "Mega losses seem to be coming back quite quickly this year"



Construction PI market still difficult but signs of stabilisation for well-managed risks



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onstruction professional indemnity (PI) insurance buyers that can display good risk management are seeing some market stabilisation but others still face tough conditions, said speakers at Commercial Risk's 2023 Construction Risk Management Europe conference

They added that the construction PI market is heading "back to basics", with more stringent underwriting and insurers taking on catastrophic losses, while corporates focus on managing and mitigating smaller, everyday risks.

Construction companies have found it increasingly difficult to secure appropriate and affordable PI cover. A hard market over the last few years has seen the introduction of larger deductibles and more exclusion clauses, alongside price rises.

Expert speakers at the conference in London said things remain difficult for buyers but look slightly better for well-managed risks.

"Those firms that do the right thing and really adhere to their risk management protocols are seeing some degree of stabilisation in this market. It's not ballooning like it was two or three years ago," said Mark Peterson, senior vice president and executive director at Aon Risk Solutions.

But he added that many other construction firms continue to see those heftier price rises as well as higher retentions.

Joe Warner, EMEA manager of professional liability at Scor, said the outlook for construction PI buyers depends on risk management, location of risk and area of specialism. But in general, he said, prices continue to rise and he doesn't foresee the market easing particularly this year.

"Prices have continued to rise of late but so have the costs to deal with claims... so I don't foresee a period of rate reductions and there remains a more realistic approach from carriers," he continued.

The brokers on the panel said there is a move back to basics in the construction PI market, both in terms of underwriting and the type of risk insurers take on.

"It wasn't that long ago we could go to a carrier with half-completed application and maybe the draft project agreement and get a quote. Whereas now there is much more vigour to the underwriting process – what they need and want to see. So that is somewhat getting back to basics when it comes to underwriting and understanding the risk," said Ante Petricevic, managing director at Aon.

Peterson said that given the rise in attritional losses, the PI market probably needs to move back to where it was ten years ago by taking on catastrophic risk,

with day-to-day losses being dealt with by the various parties in the construction industry.

"Given the size of these projects, we need to rethink what is the appropriate amount that can reasonably be insured and what risk the companies should take through risk management. This makes sense in the longer term," he said.

"The owner will take more of the geotech risk because it is their land after all. The contactors and the designer can then mitigate what they can mitigate. So moving towards issues being dealt with that way rather than insurers always being involved," he added.

"Given the size of these projects, we need to rethink the appropriate amount that can reasonably be insured"

Mark Peterson, senior vice president and executive director at Aon Risk Solutions



Risk managers want to see wider parametric options

Solutions work well for construction firms but be careful on triggers

♦ PARAMETRICS

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xperts believe parametric insurance is a good fit for construction firms but stress the importance of thinking very carefully about triggers and say there is a desire among risk managers to widen covers beyond weather solutions.

Teresa Schorstein, senior structurer of parametric at Swiss Re Corporate Solutions, said parametric solutions, which pay out when an agreed trigger has been met and promise much shorter claims processes, can "keep the lights on" when quick payments are needed and offer broad coverage.

Parametrics can supply rapid

liquidity with fast payouts, agreed her colleague Hardeep Khela, senior engineering underwriter at Corporate Solutions.

He said parametric solutions are suitable for constructions firms and can fill gaps left by traditional cover, such as non-physical damage type losses.

Khela has seen parametric cover work across a range of exposures that impact construction firms, from loss of productivity because of extreme heat, to losses caused by high, prolonged windspeed.

Director of risk and management and insurance consulting firm JPIC Group Neil Timberlake said parametric solutions offer a good alternative for clients. But he added that many insurance buyers want to widen the scope of parametric solutions, and he believes this is eminently possible.

"The focus from the market has tended to be on weather events and actually what our clients are looking for is something a bit wider than that to push the boundaries of risk within projects," he said

"The parametric market should be able to seize the opportunity to look at the wider risks that its clients face. Really anything that you can associate with some form of indexation should be capable of being insured on a parametric basis. An example of that would be steel costs rising and insuring that against a steel index. So I think clients are looking for something a little bit wider potentially," he added.

Construction risk managers have suggested that parametrics could expand to cover supply chain disruption, financial loss and even some of the new building materials that the traditional market has been slow to accept.

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Neil Timberlake, director of JPIC Group





"I don't see why you couldn't do some of those things if you can make that linear connection between any index and a loss. It doesn't seem to be to be a very big jump from where we are today with weather events into something completely different to fill in the gaps," said Timberlake.

Schorstein said there is scope to widen parametric solutions. "For example, our team have looked at insuring footfall numbers among other parameters, which there is plenty of data available for. We need to think about new areas and how we would design these polices if clients come asking for new risk areas and triggers," she said.

But she stressed that risk managers need to think carefully and work with their insurers and brokers to ensure any parametric trigger is set at the correct level so payment is received if and when needed.

There are certainly concerns among some risk managers about setting the right trigger for parametrics, and many wonder if receiving payments is really as simple as things sound in theory.

"I do understand it can seem complicated. But remember, in the case of weather and nat cat, data is available to all of us. So far I cannot think of any transaction I have been involved in where there has been any dispute. Whereas in traditional insurance there is often room for differences of opinion and negotiation. In parametrics it's clear as per the data whether a payment is due or not," reassured Schorstein.

"But it is vital to be thorough about that data and triggers when structuring parametric cover as proxy for damages. Or you could end up buying protection that doesn't pay out when you need it to."

And the experts advised risk managers to use parametric solutions as part of a range of options within a risk transfer programme, combined with traditional indemnification and, ideally, a captive.

"When most people ask about parametric, they look at it through a traditional insurance lense. They ask can it replace traditional insurance? Can you build me another layer on top of my traditional programme? Or what can you do with a deductible? It isn't quite so simple. You have to remember that one pays out on actual damage and the other is determined by a trigger. So it is two different concepts," said Schorstein.

"But parametric and traditional insurance can be complimentary. Both traditional and parametric do things that the other might not so you need to think carefully about how you combine them. You can align them and make them work together. We also support our captive clients to help bring parametric risks into a captive and secure reinsurance," she added.

Timberlake was on the same page and said it is vital to set your risk tolerance and strategy before deciding on risk transfer options. "We talk to clients much more broadly about risk appetite and risk tolerance and how they want to finance their risks in general. I think if you can get to that point where you know what your tolerance and appetite for risk is, you can work out how to combine traditional insurance with a parametric programme or a captive. That can make perfect sense as long as you are doing it with your eyes open and you know how you

are trying to finance your risks in general," he said.

Aurelien Schwachtgen, director of client solutions at Aon Global Risk Consultants in EMEA, said insurance buyers need to take global view of their organisations' risks before approaching parametric solutions.

"You need to understand where you need to fill a gap or have cash payout very quickly after a loss event. It is important to use parametric to cover something very specific," he added.

"You need to understand where you need to fill a gap or have cash payout very quickly after a loss event. It is important to use parametric to cover something very specific"

Aurelien Schwachtgen, director of client solutions at Aon Global Risk Consultants in EMEA



Parametrics can plug the gaps

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arametric solutions
are increasingly being
used to help construction firms transfer risks
that the traditional market won't
support, including non-damage
business interruption (NDBI).

Experts from Descartes
Underwriting, the MGA that
specialises in weather-related
parametric solutions, said most of
its clients buy parametric solutions
because they like the benefits, such
as no loss adjusting and fast, guaranteed claims payments.

Some of its clients also buy parametric cover to fill gaps in the traditional market and when they cannot get capacity elsewhere, such as for a US cyclone, Descartes said during a session at our recent construction risk management event.

"Parametric solutions can provide additional capacity but beyond that can really expand the traditional scope of cover. They can, for instance, cover any type of non-damage loss arising from extreme weather events, a typical weakness in the traditional construction insurance market," said Louis Bollaert, chief commercial officer at Descartes.

"Parametric solutions can cover entirely non-physical damage losses and risks because they cover any financial loss and are agnostic to the type of loss. So for construction firms this could be a flood or extreme heat that interrupts work," he added.

One example is an Australian railway and port that needed protection to cover site evacuation as part of its financing deal. The traditional insurance market, which tends to work on physical loss, wouldn't cover the risk so a parametric solution was used to supplement traditional PDBI and help facilitate the project's finance.

Parametric solutions could therefore be seen as complementary to normal indemnity cover.

"There is a continuum of risk within construction projects, and traditional insurance products are good at dealing with many of these things. So we are not talking about





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www.wint.ai sales@wint.ai displacing any of those. This is a complementary process where the market is falling short or there is market failure for certain risks, and where clients can achieve the risk transfer they need or are obliged to buy," said Bollaert.

"Parametric is very flexible. It can be standalone or sit within existing towers both top and bottom. There is no fixed way of using it, so it is very responsive to risk managers' needs," he added.

Because parametric solutions are often covering tricky risks, they can seem expensive next to the more bread and butter covers. But you need to compare apples with apples, said Bollaert.

"If you consider parametric independently, it may appear expensive but it is not comparing apples with apples when comparing with your construction insurance or traditional PDBI because parametric complements those structures on a very specific peril, or weak part of your construction project. It is very bespoke and fits very well with construction projects, especially large infrastructure projects because we can do very bespoke structures," he said.

And parametric pricing is very formulaic, based entirely on the risk, data and, effectively, probability.

Louis Bollaert of Descartes: "Parametric is very flexible. It can be standalone or sit within existing towers both top and bottom. There is no fixed way of using it, so it is very responsive to risk managers' needs"

"We take peril from a pure modelling point of view so only underwrite the cost of the risk rather than market opportunity. We use stochastic modelling to look at what is likely to happen now and in the future rather than relying on past data, which is used for back testing. Because parametric is based on advanced data, some of the challenges in offering cover disappears," said Bollaert.

This means, of course, that the underlying data must be highly accurate, which requires a lot of work for weather-related risks affected by climate change.

Descartes employs around 100 data scientists to help model the risk. Bollaert believes the insurance industry as a whole needs to bring in more data scientists to help close the modelling gap on weather risks and climate change, which would then help deliver more capacity for insureds

"I think with this kind of approach, with data scientists in a room just modelling weather and climate change, we will be able to reconcile balance sheets and risk at some point. We have a global mission to reconcile capital and climate risk because we will need all the capital we can get to instil resilience and continuity, despite the next disaster," he said.

The session concluded with Descartes explaining exactly how parametric solutions work in simple terms and the benefits they offer.

"First we pre-define parameters with a pre-agreed payout based on different triggers and thresholds. Then we agree on how we will monitor that through data sources like satellites and sensors, with a backup provider for emergencies. When a policy is triggered, the insured gets money within a matter of days," said Bollaert.

"One big difference between parametric and traditional insurance is there is no loss adjusting.
Conventional insurance is conditional on claims. But parametric is based entirely on a pre-agreed index that pays if there is too much or too little rain, for example. So there is no discussion once an agreed limit is hit, there is no loss adjusting, which means payment can be swift. Risk managers receive certainty and speedy liquidity," he said.

Bollaert added that parametric solutions can also be used in captives by offering pure pricing for complex risks.







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Fertile captive conditions for construction firms

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aptives are on the march, partly because the traditional insurance market is hardening, and there is no reason why risk managers at construction firms shouldn't be utilising these vital tools.

John English, CEO of captives and insurance management at Aon, told delegates at our recent European construction conference that corporates currently face numerous risk financing challenges from the difficult commercial insurance market through to increased volatility and inflation.

These factors are increasing risk severity, increasing asset and business values and increasing the cost of risk transfer, he said.

This, in turn, is forcing organisations to turn to alternative risk financing approaches, including captives, to optimise their total cost of risk and design bespoke programmes. Captives are also helping risk managers reduce their reliance on the insurance market and build risk financing resilience, said English.

"We have seen greater use of captives. Two years ago, our clients were writing roughly \$45bn of premium globally. A year later that was \$54bn. This strongly reflects what has happened to insurance market capacity and pricing, with companies significantly returning risk to their captives' balance sheets," he said.

English explained that since 2018, when the traditional market began to harden, Aon has seen a 73% jump in retentions among captives it manages. This includes a 650% increases in cyber premiums, predominantly for risk retention, a 361% increase in property damage business interruption premium and 26% for general liability.

"General trends also include investigation into diversification of captives, including employee benefits to enhance capital utilisation and to support emerging forms of volatility such as cyber," said English. He added that captives are being used to managing the total cost of risk by filling in coverage and capacity gaps and achieving economies of scale across all operating divisions. English said they are also being utilised to provide captive bursaries for risk improvement, and help manage price and capacity volatility over time.

"People are increasingly using captive profits to promote risk management by issuing risk improvement bursaries. We have seen increased interest in putting captive profits back into the organisation in that sense. I definitely see a growth in that," he explained.

Mathieu Pasqual, deputy CEO of alternative solutions at SCOR, said captives are increasingly on the table for large European corporates that are looking to manage big retentions in property damage business interruption, general liability and cyber.

He said there is growing interest in captives to help manage important systemic risks that you can't cover with insurance, such as some elements of cyber, pandemics and climate.

"We are also seeing captives increasingly used to cover third-party risks outside the company such as top-up cargo for shipping firms," added Pasqual.

And while construction firms have

traditionally not been heavy captive users, the speakers said there is growing interest among the industry for all the same reasons as other sectors.

Blanca Berruguete, global industry solution director – construction at Allianz Commercial, said: "We see a growing demand for captives among construction clients. That's a way of participating in your own risk and getting access to the reinsurance market. A captive can become a powerful tool to help drive solutions beyond traditional insurance."

"There is no reason for construction firms not to have interest in captives. We recently saw a construction company setting up their captive with retentions in construction all risk and a number of liability lines that flow through the captive," added Pasqual.

"Construction firms can use captives for general liability definitely. Professional indemnity is another area and cyber, for sure. Captive can be as relevant for construction firms as any other sector." he said.

English agreed. "The predominant premium spend that we see from the construction industry is for property damage, for general liability and a bit of construction all risk. These are not really sector specific, they are similar trends that we see other sectors using captives for," he said.



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New tech solutions emerging to help tackle 'generational' supply chain risk

Improved data can help spur insurance options

SUPPLY CHAIN

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onstruction risk managers face probably the greatest supply chain vulnerability in a generation and must step up efforts to get to grips with this elevated risk through multi-tier supplier visibility, say experts.

With insurance struggling to provide answers to supply chain risk until better data is available, the experts said technological solutions are starting to emerge that can solve the supply chain conundrum and, in turn, help boost risk transfer options.

"Supply chain vulnerability is not just an existing ongoing concern, it is probably the greatest it has been in a generation or so. This is clearly an elevated risk that we absolutely cannot ignore. Input materials and delays in delivery and the ramifications from that are huge. Equipment and materials delay and non-delivery are now critical risks in construction," said Peter Kapler, senior vice president, national director of performance security at Aon.

Therefore multi-tier visibility is increasingly important in supply chain risk management and technology is emerging that can help, he continued.

"There are so many different counter parties that we are dealing with and so many different pieces of equipment and material all the way down the value chain that in order to monitor all this in real time we have to embrace technology. We think these solutions are staring to appear that can solve this problem," said Kapler.

Nick Wildgoose, director of Supplien Consulting, said software solutions from firms using big data and technology to map huge supply chains are coming to the fore.

This is clearly an interesting development for construction projects that need to understand multiple risks across multiple suppliers and materials.

"There is a lot of investment in technology. Some solutions are quite mature but there are more new players coming in from different directions. This is still a journey of improvement. Have we got a perfect picture supply chain picture? No. But have we got a better picture? Yes," said Wildgoose.

He explained that new software solutions use AI-powered structured and unstructured risk data to map supply chains and prioritise key suppliers. He said the solutions offer workflow support and provide ongoing monitoring, allowing risk managers to move from historical to real time and predictive supply chain information.

Wildgoose said the technology allows companies to access individual entities within their supply



chain, and discover hidden and sub-tier supplier relationships. Risk managers can also visualise and assess risk across construction programmes or products, understand priority risk areas and learn how to manage them appropriately, he added

And this can be achieved by supplying information on tier one suppliers only, said Wildgoose.

"You need to give the list of your tier one suppliers and what they are supplying and then things come from that. The vendors will start mapping your supply chain. You will then help them weight the risks you are most concerned about, but they have a huge amount of supplier data," said Wildgoose.

"And this is achieved without asking suppliers to fill in endless questions. You can send them targeted questions," he said.

Wildgoose, who was keen to stress he has no investment in any of the supply chain risk management software providers, said you can now set up a reasonable system for around \$100,000.

There is also the possibility of using the much-improved data to try and spur insurers to boost their supply chains options, which are currently thin on the ground.

Kapler believes the main reason for this shortfall is a lack of data to price the risk and give insurers the confidence to indemnify. "I think it is fundamentally a question of data. Where data goes, the insurance industry will follow," he said.

Blanca Berruguete, global industry solution director of construction at Allianz Commercial, said insurers are wary of contingent and non-damage business interruption cover, which are key supply

Nick Wildgoose,

director of

Consulting

Supplien

chain solutions, over a lack of data. This reticence has got worse since Covid-19 she said, but stressed that insurers will step up to the mark if risk managers can start supplying decent supply chain data.

"We need to know who is supplying who and if people are all using the same suppliers. It is a matter of transparency and data sharing. Covid was a real test and why we are wary of supplying capacity for this risk. If we can get

"It is fundamentally a question of data. Where data goes, the industry will follow"

Peter Kapler, senior vice president, national director of performance security at Aon more comfortable we will provide cover. If you help us, we will provide more cover," said Berruguete.

Kapler went on to explain that most experts believe the current supply chain disruption – instigated by the pandemic and then



the V-shaped recovery that has led to capacity restraints, longer lead times, delayed orders and higher costs – will settle down. But he fears it may take a while.

"Prices for many commodities are back to where they were five years ago, but supply chain problems mean there remains a 'disruption timeline' to get goods... We have seen a tremendous amount of volatility and we expect those things to settle down and lead times and costs to normalise. So yes, we do expect this to settle down but it is going to be a matter of time," he continued.

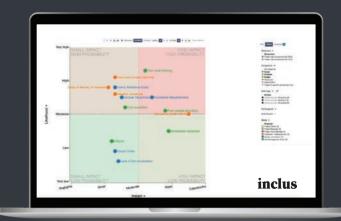
"Figures from Allianz show 25% of major manufacturers have made adjustments to their supply chain. So they have got closer to suppliers or made material adjustments. We think that 25% is transformational. So we do expect this disruption to continue for the time being, particularly as the word is deglobalising somewhat," he concluded.

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Lack of data on new construction technologies still hindering transfer options

◇ DATA

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ew technologies and methodologies in the construction sector are proving a challenge for insurers due to a lack of data, and greater collaboration between carriers, brokers and risk managers is required to help solve the issue, according to a panel at Commercial Risk's Construction Risk Management Europe conference.

The construction sector is having to deal with the transition to net zero and decarbonisation. As a result, a lot of new technologies and methodologies are being introduced. The insurance industry has been wary of some of these new

risks, leading risk managers to ask why the market is not doing more to help with the green transition.

Speaking at the construction event in London, Blanca Berruguete, global industry solutions director – construction at Allianz Commercial, noted that new construction materials and technologies have had to be introduced in a short period of time. She said technologies keep developing at a fast pace and they are unknown risks for insurers.

"New technologies involve new risks for insurers. We need to work hand in hand and get access to data, to understand the risk," she said. "We know there is a need for new solutions and innovation in products, but we need to understand the new risks because insurers really like data, and these new materials and methodologies imply no data is available."

She added: "We need more empathy with the construction industry, and they need to understand why we ask so many questions. Questions are a good sign that we are interested in your risk. We need to understand and get to know more because faulty design is one of the key causes of losses."

Berruguete said insurers, brokers and clients need to sit together to find solutions. "Our engineers need to speak to the client's engineers at a very early stage, and allow us to access the premises, to check submissions. We want to help you, but we need to get the data that we are missing. We don't have past data on these new technologies," she said.

Andy Kane, head of construction and engineering at QBE Europe, said that new technology is one of the biggest risks facing construction firms and their insurers. He pointed to hydrogen fuel as an example. "The concern for the insurance industry is that we don't repeat the same mistakes

"We need more empathy with the construction industry, and they need to understand why we ask so many questions"

Blanca Berruguete, global industry solution director of construction at Allianz Commercial





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Monday 16 October | 18:00-23:00 CET



Flanders Meeting and Convention Centre, Antwerp

We are delighted to announce that the presentations for this year's European Risk Management Awards will take place at the end of Day 1 of the FERMA Seminar in Antwerp, Belgium, on Monday 16 October. Join us at this stunning venue, where you will be able to stroll through the glasshouse, admire the architecture and network with a glass of sparkling wine, before sitting down to a three course dinner and celebrating the achievements of your colleagues.

The awards were established in 2016 to highlight the role of risk management, to showcase best practice, and to encourage innovation, creative thinking and resilience. The level of entries this year was outstanding, and truly represent the best of risk management and their supporting industries. The finalists will be announced very shortly.

In the meantime, put the date in the diary and contact us if you'd like to host a table and network with the Seminar delegates. All risk managers registering for the Ferma Seminar will automatically receive an invitation to the gala dinner – we look forward to seeing you there!

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"In order to keep some sort of control over innovations and new ideas and protect all sides, codes of practice need to be implemented"

Tom Anderson, executive director at Aon

that the power industry had with gas turbines and the losses that it produced, and similarly the mistakes in the UK around waste management and massive professional indemnity and engineering losses," he said.

Another tricky new risk is no cement concrete, for which there is simply no track record, said Kane. He said that there is also a challenge around timber-framed buildings in the UK where capacity is restricted. Kane added that UK building regulations do not require sprinklers in such buildings.

"Industry has to respond by saying we are going to manage these risks responsibly and carefully and engage with insurers at an early stage, not just construction insurers but also property insurers," said Kane.

Tom Anderson, executive director at Aon, said that the insurance market has shown previously that it can step up when faced with difficult risks. "One of the things we are thinking now is that in order to keep some sort of control over innovations and new ideas and protect all sides, codes of practice need to be implemented," he said.

Chris Dulake, global sector leader, transport at engineering consultant Mott MacDonald, highlighted the UK's new Building Safety Act, which focuses on people, processes and products. "There will be a new statutory body that



is looking at new products and compliance. Relying on those bodies that have been set up as part of the new buildings act will allow insurers to get confidence. It is important to tap into that and understand what is going on," he told the conference.

Berruguete said the hard construction insurance market over the past few years has had a big impact and insurers are feeling more comfortable with the terms and conditions that have been secured lately. "The main challenge we see now is due to climate change – high severity losses, with greater frequency. That is our main fear. Inflation is also having a big impact, as a replacement costs more and takes longer because of supply chain disruptions," she said.

The insurer said inventories need to be up to date and sums insured need to be correct to avoid underinsurance. "So that when losses hit, we can all feel comfortable about the right replacement cost," she said.

Kane agreed the insurance market is in a much more sustainable place than it was in 2019 but noted that claims inflation remains a big concern for insurers. He said reserves for professional indemnity cover continue to deteriorate.

Anderson concluded that the big risk is not learning lessons from the past. "If we look at the state of the UK market, we are still amidst the cladding crisis, born in 2006 after building regs were relaxed so that more cladding could be used to insulate homes to avoid fuel poverty taking hold," he said.

"Now, with decarbonisation, if we do not collaborate with all financial markets, investors and insurers, construction is in a very real danger of in ten years' time, at a conference like this, talking about how we failed," he said.

Buyers will have to pay more premium for new materials

But they will need to be backed on their journey to net zero

◇ NEW MATERIALS

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onstruction companies will have to pay more for insurance to cover new building materials and methods until carriers become more comfortable with the risks, and most are prepared to do so, said panellists at our recent Construction Risk Management Europe event. But the

industry needs to know that insurers are going to provide protection and follow them on their journey to net zero, they added.

Experts from both sides of the risk transfer divide stressed the importance of bringing insurers into construction projects as early as possible to ensure they will provide cover. And while buyers might accept they will have to pay more to protect projects using new materials, there is a feeling that the insurance market must move from reactive to proactive to deliver the innovation so desperately

needed. The industry was again warned that if it fails to step up, buyers will find alternative risk transfer solutions.

Robert Innes, senior risk engineer of construction at Zurich Insurance, said the lack of data on risks posed by new building materials, including those needed for the green transition such as mass timber, is a problem for the insurance industry, which will simply have to get used to the situation.

He believes the insurance market will need to find solutions without huge amounts of data, and buyers will therefore

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need to accept these covers will cost more, initially at least.

"We need to go through this in an informed way because we simply won't get the historical data. So I think everyone will have to accept there will be a price to pay for introducing new materials into the market with higher premiums and higher deductibles on certain elements. That will just have to be a given until you get the comfort," said Innes.

"Ultimately we have to cover these new materials and we can't stick with the status quo. So insurers have to get on the train but things must be commercially viable for us. So it is about finding that balance. Things will slip through the net but that is what happens with progress and change," he added.

"We have done this historically. Steel was new at one point. So insuring new materials isn't new but I think the volume of what we are seeing is greater than ever," he continued.

All about the green

Neil Timberlake, director of risk management and insurance consulting firm JPIC Group, agreed that construction firms will have to accept they will be charged more to cover new materials. He believes they understand this but must know cover will be provided and the price before builds begin.

"The point about premiums is really important. We have a number of real estate clients in our portfolio and, in our experience, where they are developing a building they have an understanding that the insurance market is trying to get its mind around new products. They do understand that they might have to pay more for cover. They are quite comfortable with that," said Timberlake.

"What they really need is that certainty at the beginning that they can insure the construction project and that when it is built they know what the cost is going to be. They are slightly less concerned about how much more that is compared with a standard build," he added.

In Timberlake's opinion, the construction insurance market is buying into new materials, such as mass timber, more than the property market. This is perhaps understandable as the latter has to cover the new risks for a much longer period post build without that long-term data.

But Timberlake said this issue is causing headaches for developers.

"I think there is a split in the way the insurance industry is looking at new materials and insuring them. If you are developing a building, the construction insurance market has tried to buy into the concept of timber, for example. There has been a lot of good collaboration between the market and developers in terms of how you manage risk onsite. This has helped with both capacity and rates," said Timberlake.

"But the construction industry has finite time covering the risk. So flip over to insuring the completed building and there is a difference. The issue for most developers and investors is if the building is going to be completed in three years' time, they don't know whether they can insure that building in the property market. This is a generalised statement and there are timber buildings across the world that are insured. So you can get insurance but the issue for investors is how much is it going cost. So the property insurance market has not fully bought into new materials. This is where collaboration is absolutely key and getting involvement from the market early and all the way along the process," he added.

"If you are designing a building you must bring the insurers along with you. I can't really stress that enough. What you

don't want to be doing is asking them if they will insure a new material after it has been used. That is too late. You must get them involved in the design process and very early on so insurers can understand how a new product is going to react and what the risks really are," continued Timberlake.

Innes and others agreed that insurers, including those from the construction market, need to work harder to get a grip on new materials and better understand

"Insurers have to get on the train but things must be commercially viable for us. So it is about finding that balance. Things will slip through the net but that is what happens with progress and change"

Robert Innes, senior risk engineer of construction at Zurich Insurance



what the long-term implications will be, particularly as they won't be able to rely on mass amounts of historical claims data.

"As the insurance industry, we are very reactive to new materials and I think we have to be a bit more proactive to try to understand what those risks are and if they are going to affect us. We have to really collaborate with the construction industry to try to understand what that risk profile looks like in the future," he said.

Innes believe the construction industry itself can help boost this collaboration.

"The insurance industry is quite good at sharing data on new materials but in my experience the construction industry is not as good because it is very siloed. We must share more because we need to get these lessons learned early. And there needs to be more education. We need to understand the products a lot better and ask the right questions. Clients need to be educating us and we need to be receptive," he said.

Hartmut Thevis, director advocacy construction at Aon, agreed that the insurance industry and all stakeholders could boost collaboration to help deliver more innovation. He said that past data is not as useful as it once was, so the market needs to move from reactive to active.

Thevis warned that if insurers don't find solutions, companies will simply look elsewhere and disrupters will no doubt find a way to meet their demands.

"If the insurance industry will not react to the demands of the construction industry

"Is the past a good indication of the future here? Perhaps it was ten years ago. Perhaps it was maybe five years ago. But things are changing"

Tim Chapman, chairman of the London Engineering Group (LEG) of insurers

it will look for other solutions. So insurers will have to work hard and maybe work on compromises between new and old fashioned products," said Thevis.

"Insurance will find a way. Like water, it will find its way through. The question is how quickly it can do this and whether disruptors pop up in the meantime," agreed

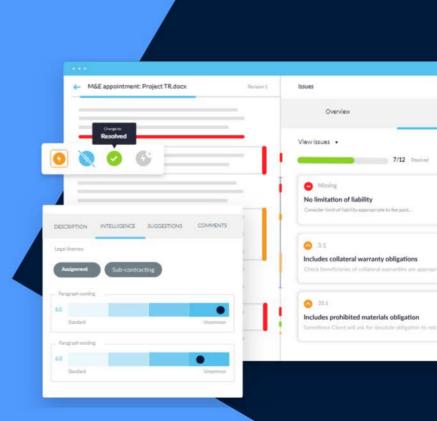
Tim Chapman, chairman of the London Engineering Group (LEG) of insurers, said we are entering another revolution with the race to net zero, energy transition, new materials and modern construction methods that demands a new approach from carriers.

"Insurers use data from the past. We have data in various forms. We use this to predict loss patterns. But is the past a good indication of the future here? Perhaps it was ten years ago. Perhaps it was maybe five years ago. But things are changing. So we need to consider carefully how we get over this, and how, if at all, we use historical data to give us that picture of future exposures," said Chapman.



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Insurers urged to get involved in approving new construction products

Testing that everyone can buy into is vital

♦ TESTING

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xperts believe insurers should get involved in testing new building materials with manufacturers, construction firms and even regulators to ensure carriers are confident in the results and can provide risk transfer.

Testing new materials is vital to understand how they will work in a range of scenarios and then, ultimately, approve their use. But most testing is carried out by manufacturers that clearly have a vested interest in getting them approved. This leaves both construction firms and, in particular, insurers slightly uneasy about the long-term risks involved.

"We are asking insurers to look into the unknown to a certain extent. We don't know how some

"There can be a reliance on manufacturers' data and as good as their tests may be, they have a vested interest in making sure we buy the product"

Chris Dulake, global senior leader of transport at Mott MacDonald

of the new materials will react in certain scenarios. There can be a reliance on manufacturers' data and as good as their tests may be, they have a vested interest in making sure we buy the product, so I don't think we can fully rely on manufacturers to do the testing for us," said Neil Timberlake, director of risk and management and insurance consulting firm JPIC Group.

"So I think there is an issue with belief. There was lots of testing done on timber, for example, but often underwriters don't believe the testing," he continued.

Timberlake said that if the insurance market doesn't believe in some of the new materials or their testing, more collaboration is needed between all parties — developers, designers and carriers — to perform tests that are supervised by qualified people who know what they are talking about.

"Everybody needs to buy into the outcome of that testing – all parties – so there aren't issues down the line of products coming to market and underwriters not giving capacity for that risk. I understand there will be risk specific to each build, and risk mitigation will be key. It may be that we start off slowly and start with hybrid products, but we will get there over time if everybody buys into the testing so we are coming from the same place. At the moment we are not doing that," he said.

Chris Dulake, global senior leader of transport at Mott MacDonald, thinks insurers could work with regulators to ensure new materials and building techniques have passed stringent tests.

He believes the new Building Safety Act in the UK provides such an opportunity and stressed that similar regimes do, or could, exist.



"It will help having a regulator confirming the validity of testing through independent sources to make sure they are approved products. I would be looking for the insurance industry to link up with the new Buildings Act, for example, to make sure the declarations you get from contractors comply with the Act. It would take a lot of work out of underwriting because you would have the evidence that the new products have been fully tested to comply with the law," said Dulake.

Robert Innes, senior risk engineer of construction at Zurich Insurance, agreed that it makes real sense for the insurance industry to work with testing and standards to ensure its requirements are being incorporated into product testing.

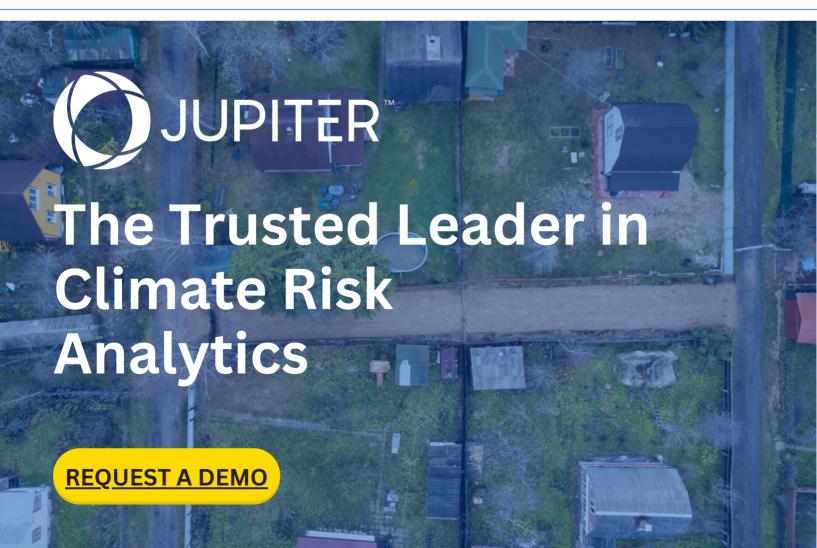
"We need to ensure that when these tests are developed our voice is heard because we have to feel comfortable that tests meet our Robert Innes, senior risk engineer of construction at Zurich Insurance standards. Often what we require is over and above what industry accepts. So it is vital for us to get involved in the conversation early. The insurance industry can't be reactive. If we want our needs to



be addressed, we have to engage early," he said.

"This issue is not going away with the 2050 net-zero target and these materials will be mandated at some point. We already see it in France, where 50% of new buildings have to use mass timber. So if we don't get on board and incorporate our voices, we are not going to be in a position to influence discussion, testing and what we need. This requires more collaboration between manufacturers, designers, contactors and insurers," added Innes.

Aon's director of advocacy construction at Aon, Hartmut Thevis, agreed. "The goals of contractors and owners are the same as insurers. They have their concern and they are the same as carriers. So we must engage with them at a much earlier stage of developing and using these new materials, in part to help develop relevant testing that everyone is happy with," he said.



Historical data no longer reliable for weather-related construction risks

♦ CLIMATE

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onstruction risk managers and their insurers can no longer rely on historical data for climate-related risk and must instead use modelling and forward-looking projections to understand the growing threat.

A panel at Commercial Risk's *Construction Risk Management Europe* conference highlighted how climate change is impacting construction risk management, noting how historical data is a poor indicator of future trends.

Stuart Large, business development director at climate risk analytics firm Jupiter Intelligence, said that historical data might show a trend for higher weather-related losses over the last 20 or 30 years. But he added that given the pace of losses from most perils is accelerating, models are a much better indicator for future trends.

For instance, return periods for severe weather events are rapidly shortening, warned Large. "We talk about one-in-500-year events, but we are finding that those assumptions are false. For example, the US Gulf of Mexico had three one-in-500-year events in five years. Return periods are much shorter than we thought," he told the risk and insurance managers gathered for the event.

Amar Rahman, global head of climate change resilience services at Zurich, said people tend to think of perils, such as wind or flood, as discrete risks. But he said there is now "more and more interaction between perils".

"Sea level rises and increasing

hurricanes and tornadoes are leading to flooding deeper inland, impacting places that historically did not have flooding," he said.

That interaction between perils is a challenge for risk managers, said Rahman.

It is vital that construction risk managers bring all this information together to build resilience, future-proof and best present their risk to the insurance market, said Tracie Thompson, global head of ESG and climate at Aon.

And she noted that that underwriting is moving from an art to a science, based on forward thinking. "It is about how we can help clients to build resilience based on the data that allows them to access risk capital. And historic data is not lending itself to underwriting models anymore," she said.

Rahman said the volume and granularity of climate data has increased, but he added that the price of data has become cheaper as computing power rises, helping firms to develop impact scenarios. "Data gives us greater confidence in developing such scenarios," he said.

The risk manager on the panel, Steven Carney from Copenhagen Infrastructure Service Company (CISC), said risk professionals are using models at a very early stage in developing projects. "We are doing early nat cat screenings, both to see the risks right now, as well as looking at the lifetime of the asset," he said. If you access the technology earlier you can avoid many issues, he added.

Later on in the discussion Rahman stressed that a sound risk management strategy doesn't only rely on insurance. "It is the last line of defence. Depending on the complexity of your project, the size, you need to think about multiple lines of defence before you transfer the risk. That is what resilience is about," he said.



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