IF'S RISK MANAGEMENT MAGAZINE 01/2022

Risk Consulting

Insights into risk management and loss prevention

4 Risk preparedness and global supply chains

8 Avoiding underinsurance

16 Energy outlook 2022

18 Liability in the Digital Age

Contents

4 Risk preparedness and global supply chains

8 Avoiding underinsurance: The key to accurate values

10 How does Risk Management link to sustainable business practice?

12 Loss prevention work with our clients

16 Energy outlook 2022

18 Liability in the Digital Age

22 Managing refrigerated transport

26 A lithium-ion battery on fire

If Sustainability Report 2021

Publisher If, Keilasatama 2, 02150 ESPOO, Finland, +358 10 19 15 15, www.if-insurance.com
Editor-in-Chief Kristian Orispää
Project Editor Carita Hämäläinen-Tallgren
Communications Specialist Caroline Bødkerholm
Art Director Ero Tsirika

Production If Creative Agency
Printing Newprint
Change of address industrial.client-service@if.fi
ISSN 1459-3920
Cover Photo Unsplash

Editorial

Difficult decisions in a turbulent market

Few could have predicted the events that would unfold over the first quarter of 2022. With the Russian attack on Ukraine, the European Union and its allies came together to take action and condemn this act of aggression. Foreign companies left Russia, with many Nordic companies impacted in the aftermath that unfolded.

For many companies and insurers alike, it has been quite a turbulent month. Various actions were required with regards to our portfolio, as well as internally, in our efforts to respond to the sudden changes in our market. There have been many challenging discussions and we have had to make difficult decisions. Working together with our clients, we continue to monitor the situation in Ukraine.

TRANSPARENT RISK MANAGEMENT

The past years have been truly challenging, businesses have been struggling through the pandemic, natural hazards and extreme weather events are on the rise, and a shortage of raw materials and critical components continues to hinder recovery. Now, companies are once again challenged, this time by war and the consequences of war. Today, preventing losses and managing risks are critical to getting back on track from these difficulties.

At If, we have 45 risk management specialists. Our Risk Engineers have broad technical expertise and extensive experience related to the risks our clients face. Located in eight countries, alongside our offices in the Nordics and Baltics, we also have experts in our branch offices in Germany, France, Netherlands and the United Kingdom.

We are here to support our clients with our risk management experts, who will work by your side as an additional pair of eyes and ears. Risk management has many purposes, from protecting your business operations, securing safe practices to prevent losses, but also serve a very real environmental purpose. After all, a loss that does not happen is probably the ultimate sustainability measure a company can take.

SUSTAINABILITY REPORT IS OUT!

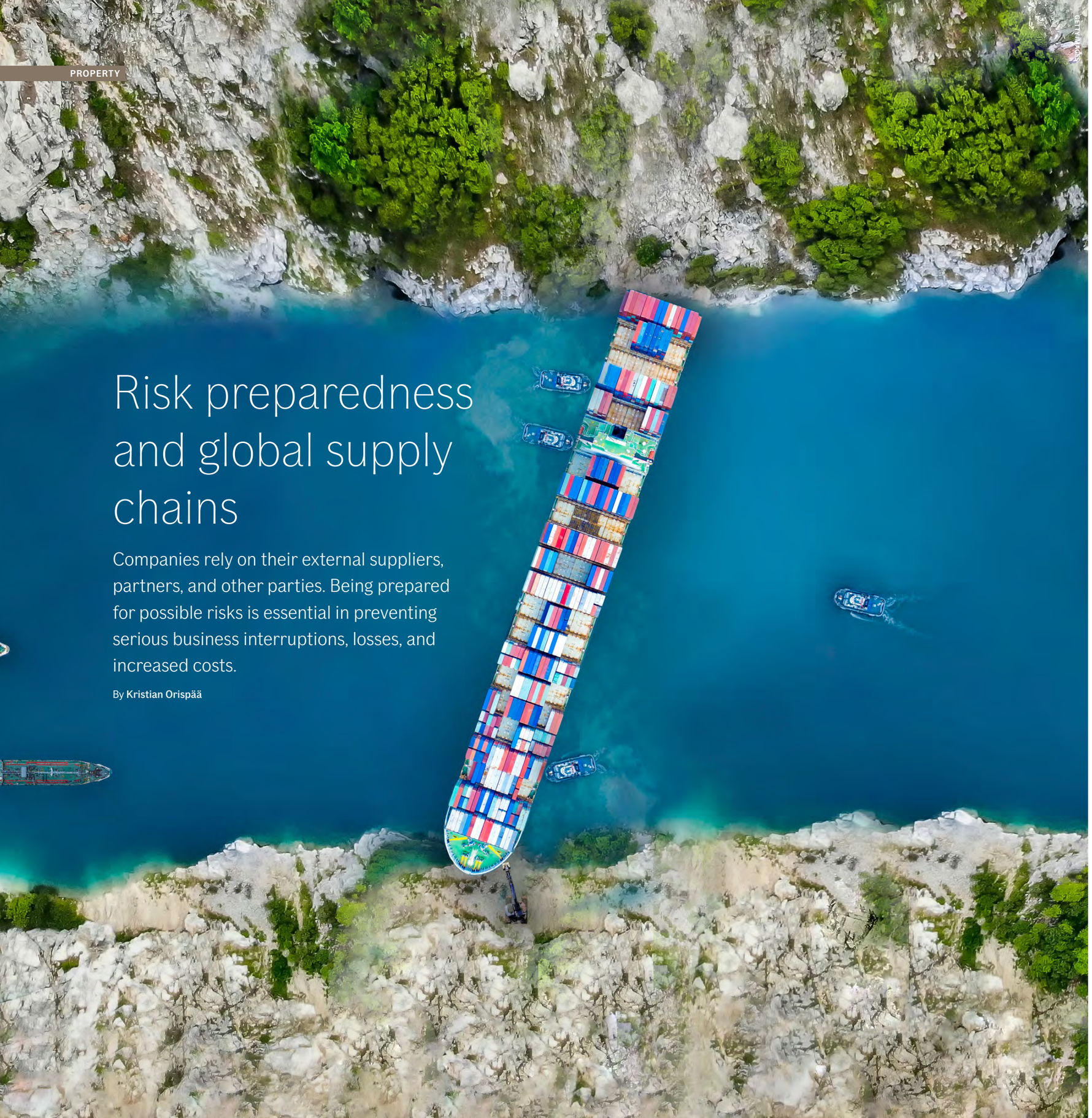
As many of you know, last year we took several concrete steps forward with regards to sustainability. For example, environmental and human rights factors were added directly into our underwriting standards. We now expect our clients to comply with the UN Global Compact's principles, even if they are not corporate members of the initiative themselves.

Last year, we also made our commitment to the Science Based Targets initiative (SBTi). This means we have set science-based climate targets not only for our own operations, but also for our claims handling and investment operations. This is an ambitious commitment and shows that we are ready to do our part for the climate.

Please, use the QR code on page 2 under the Table of contents to visit the If Sustainability Report 2021.

Poul Steffensen
Head of BA Industrial, If

If P&C Insurance, contact information
Finland: +358 1019 15 15 **Sweden:** +46 771 43 00 00 **Norway:** +47 98 00 24 00 **Denmark:** +45 7012 24 24 **France and Luxembourg:** +33 142 86 00 64
Germany: +49 6102 710 70 **The Netherlands and Belgium:** +31 10 201 00 50 **Great Britain:** +44 20 7984 7600 **Estonia:** +372 6 671 100
Latvia: +371 7 094 777 **Lithuania:** +370 5 210 89 25



Risk preparedness and global supply chains

Companies rely on their external suppliers, partners, and other parties. Being prepared for possible risks is essential in preventing serious business interruptions, losses, and increased costs.

By **Kristian Orispää**

Modern products are increasingly complex, and their production process often involves utilising multiple suppliers across different geographical locations. Over the past decades, the focus has been on lean production methods, by which companies have managed to take advantage of cost savings benefitting from on-demand production, by reducing the need for warehousing and large inventories.

As witnessed during the pandemic, the downside to operating in this manner carries the risk of serious business interruptions occurring. Volatility and fluctuations can have dire consequences, and external dependencies can also ignite a chain reaction. Delays and issues with just one supplier, for example, can have a ripple effect across the entire market.

UNPREPARED FOR A PANDEMIC

Due to the impact of the coronavirus pandemic since early 2020, significant disruptions to global supply chains have been largely responsible for the near crippling of global commerce and international trade. As a result, the securing of raw materials and the production of everything from toys to heavy machinery has faltered, and in some cases, stopped. Consequently, many businesses have had to shut down operations, cancel orders as demand plummeted, or otherwise hit the brakes on their operations.

With many countries around the world now slowly beginning to recover and with some governments claiming that the end of the pandemic is finally within sight, companies have been trying to keep up with renewed demand for their products. However, that demand is being met by delays that can range from six months to a year, or more. From a business inter-


GETTY IMAGES

ruption perspective, lead times of this magnitude can have serious consequences.

Raw material shortages represent just the tip of the iceberg. In the last two years, the price of wood and other natural resources has risen on a global scale. In addition, the surging demand for consumer products that contain microchips, coupled with the pandemic-related disruptions in production, have led to significant shortages and large price increases for semiconductors, further compounding the challenges.

MULTIPLE CHALLENGES ACROSS MANY INDUSTRIES

According to Andreas Kräling, Head of Risk Management Services, If Sweden, "There were signs in the market that after such a swift slowdown in 2020, companies were beginning to find that they were not able to secure supplies and materials to ramp up their operations to the levels they were used to. Perhaps more immediate were the issues that arose from delays in obtaining components, spare parts and building materials. Following an accident or event, businesses were finding it difficult to rebuild. Early on, for example, we saw that the lead-time on forestry equipment started to increase dramatically, increasing our exposure and complicating recovery."

Semiconductors have been a significant challenge and there have been several notable examples reported in the media of companies facing issues due to semiconductor shortages. "In fact," adds Kräling, "we need to understand how it is not only the supply chain and a loss in global production ability that is a problem, but also a production bottleneck of a few manufacturers going back in time leading to a very competitive procurement in a crisis, where smaller businesses were struggling to secure a supply."

In addition, the cost of transporting goods in shipping containers has skyrocketed since 2020 and the bulk of them have continued to be in the "wrong" places due to the pandemic. Thus, even if the product is available, an added challenge exists in delivering the product further along the supply chain.

MANAGING BUSINESS CONTINUITY

Whether it is a flood, fire, or a pandemic, being prepared for an unexpected event is vital. Business Continuity Management (BCM) tackles these challenges. To support operations, secure raw materials and fulfill customer commitments, companies need to have a plan for their Emergency Response, Crisis Management and Business Recovery, but most importantly, there needs to be a clear understanding of their exposure to risks. Conducting a business impact analysis regularly helps keep you aware of your vulnerabilities, for example by understanding who your critical suppliers are, and where any potential alternative suppliers are located. You need to really get down into the details, e.g., how important are you to your suppliers? What about this potential alternative supplier, will they be able to support you in the face of a crisis?

Working by your side, If Risk Engineers support Business Continuity Management around the world to help prevent losses and manage risks.

"Preparedness and well-trained organisations are the foundation that help companies quickly mitigate losses and disruptions and return to fully recovered business operations as soon as possible.

NOT ALL BAD NEWS

For some companies, the pandemic did not force them to cancel orders and shutdown operations. Several small appliance manufacturers, for example, have been able to meet demand despite the market surge and are producing and delivering appliances at an all-time high rate.

"Most likely, looking ahead, the future will probably not shift towards huge warehousing, as this binds capital, but we will see more distribution centres in other regions than Asia. Reshoring is a fact and is ongoing, and this will continue for many reasons."

Kräling notes, "Though there are many challenges, I don't see the final farewell to the "just in time" supply chain on the horizon, but rather a more redundant sourcing with vetted alternative suppliers and increased reshoring. Most of the companies have handled supply chain disruptions quite well and will adapt to the new reality, but not by stocking up in huge warehouses. They will still have short turnarounds, as warehousing is costly and binds capital. The solution lies in strong Business Continuity Management that can effectively handle the sudden disruptions in the supply chain, and possibly the loss of production capacity."

"There are companies that were able to adapt their supply chain by finding alternative components and other suppliers. These companies have benefitted from being flexible and setting up good Business Continuity Management as well as supply chain control. Some of these companies immediately found alternatives to their existing suppliers for components that could also meet their specifications."


UNSPLASH

WAR IN UKRAINE

As Russia continues its attack on Ukraine, supply chains in the area have been severely impacted. With various measures imposed on Russia and Belarus, including war sanctions, the departure of international companies from the market and the economic aftermath dragging down the rouble, we can see the movement of goods has halted and access to raw materials has abruptly ceased. As Ukraine is a major supplier of wheat, for example, it is expected that the longer the war continues, the greater the impact will be on food prices across the European Union (and the wider world) over the coming months. At the time of press, the situation is ongoing and being monitored closely.

Avoiding underinsurance: The key to accurate values

Being underinsured is a larger issue than most people realise, and the consequences in a worst-case scenario is that the insurance policy held by a company can be insufficient to cover the damages incurred. This means that rebuilding or purchasing equipment, while maintaining operations after a loss, might no longer be possible. In this article, you can read about the parameters that impact values the most and receive expert advice from Daniel Martin-Vivaldi, Senior Property Underwriter at If.

By **Caroline A. Bødkerholm**

According to Daniel Martin-Vivaldi, companies benefit from using an external appraisal company to achieve the most accurate valuation of their assets. However, this has not been common practice in the Nordic market in recent years, probably because industrial companies have not been obliged to conduct regular reviews of their property and assets, unlike countries like Holland, for example.

Says Martin-Vivaldi, "Although it is not a requirement, we advise our clients to make use of external appraisal assistance for their different sites with 4-6-year intervals between appraisals. We also advise proper indexation to make sure that the values are as accurate as possible at all times. Our experience shows that the most accurate values are often calculated after a full site visit, with the valuation conducted by an external appraisal company. Having people visit the site and walk around checking everything is the optimal solution and will increase the likelihood of identifying and ensuring accurate values."

THERE IS NO ONE-SIZE-FITS-ALL SOLUTION

"We know very well," continues Martin-Vivaldi, "that companies have limited budgets, and we recommend starting with a more basic desktop analysis. The appraisal company will use all available information including site drawings, risk survey reports, satellite pictures, production flow diagrams and fixed asset ledgers, for example.

Depending on the quality of the material they receive, the appraisal company should be able to provide a good indication of the property values at the specific site. Upon reviewing the shared material, any discrepancies between the insured values and desktop research results are easier to locate.

That said, at If, we highly recommend on-site visits, though we acknowledge the value of desktop analysis to be a valuable starting point. If the desktop appraisal indicates that the values are accurate, then further analysis might not be considered necessary. However, if the desktop appraisal shows that there is a significant gap between the estimated and the actual values, then we strongly recommend conducting a full on-site appraisal."


UNSPLASH

A COMMON MISCONCEPTION IS...

"Something we see quite often is that values are registered with the purchase price, which can sometimes be 10-15 years old. The actual value should always be calculated as the replacement value as of today. The biggest challenge relates to companies with large, heavy and often old machinery. Such machinery would probably, following a loss, be replaced with a very different piece of equipment performing similar operations and therefore it is difficult to estimate the replacement value in advance.

Replacement values for buildings are in general much more straightforward as this is more standardised, but there can be a variation between countries due to labour costs and the costs of building materials, amongst other things," Martin-Vivaldi adds.

UNDERINSURING BUSINESS INTERRUPTION

"Looking beyond property and assets, we also see a significant number of companies and organisations that have insufficient Business Interruption (BI) cover. Calculating BI values is an area where we can support our clients based on our extensive data and existing expertise in this field."

"At If, we have a very experienced Business Interruption Competence Centre which has developed the tools required to support BI assessment. The knowledge and research that comes from the BI Competence Centre is of high value to us but is also an excellent resource for our clients. Having this expertise in-house makes it possible for us to secure our clients' business, by ensuring full compensation during the time it takes to rebuild and get back into business following a business interruption loss," states Martin-Vivaldi.

"Looking beyond property and assets, we also see a significant number of companies and organisations that have insufficient Business Interruption (BI) cover.

FOLLOWING A FIRE YOU FIND OUT THAT YOU ARE UNDERINSURED – THEN WHAT?

"For many years, as an insurance company we have been rather generous when issuing leeway clauses. This refers to incidents where even though there is a case of underinsurance, the clause protects the client with an additional 20%, or another maximum, to match the actual values. Looking ahead, however, I am sure that the focus will be on getting the values accurately insured first and foremost, as such allowances will be much more restrictive going forward.

"I envisage that there will be fewer leeway clauses issued due to an increasingly number of underinsurance cases year on year. Ultimately, we are looking to have accurate values that will bring security to a company and minimise the risk of business interruption. So, understanding the correct values of raw materials, replacing business critical equipment and rebuilding damaged electrical installations or systems is going to be increasingly important," concludes Martin-Vivaldi.

How does Risk Management link to sustainable business practice?

The best way to be sustainable is to prevent a fire from happening in the first place. This article explores the environmental impact of fires, how fire safety improves business resilience and the current issues surrounding sustainability and risk engineering.

By **Caroline A. Bødkerholm**

Fires remain the leading cause of commercial property loss and consequently are the primary focus of Risk Engineers worldwide. All fires create immense environmental impacts that include the releasing of needless carbon emissions into the atmosphere. For example, wildfires, which are becoming both more frequent and more devastating each year, emit 1.76 billion tonnes of carbon globally: a total equivalent to Germany's annual carbon emissions.

Another key environmental impact comes from unnecessary waste and the use of resources required when many buildings must be demolished and rebuilt from scratch. Furthermore, fires in businesses and company buildings emit more than 350,000 tonnes of CO2 each year, the equivalent of around 140,000 cars with an internal combustion engine (ICE). Other than harming our environment, these varying environmental impacts can create serious consequences for the business' productivity, their supply chain as well as the local community.

HOW DOES A RISK ENGINEER MITIGATE THIS?

The single biggest attributing factor for preventing commercial and industrial property fires relates to the installation of a compliant sprinkler system. This sprinkler system should be operationally active day and night, 365 days per year, and ready to control a fire before it consumes a building. Also, counter to what the Hollywood movies would have you believe, sprinklers only activate above the source of the heat rather than the entire building, and so limit the water damage to a property.

GETTY IMAGES

With sprinklers installed, and by using non-combustible construction materials, companies are able to reduce the impact of a fire and further prevent losses

> *Fires in businesses and company buildings emit more than 350,000 tons of CO_2 each year.*

In addition, sprinklers protect the environment by avoiding wasted materials, pollution (CO2) emissions, excess Fire Rescue and Safety service (FRS) water use and water contamination. The use of FRS requires a vast amount of water (totalling more than 9 billion litres used by FRS in the UK annually, and in itself a scarce resource), and this can often result in water runoff, which can kill aquatic life across areas covering several kilometres. With companies using sprinklers, the amount of water required by the FRS is hugely reduced.

CURRENT ISSUES SURROUNDING SUSTAINABILITY AND RISK ENGINEERING

Sustainability and loss prevention work should be initiated when a site is being built. Here the lifespan of the materials and the entire process of recycling should be taken into consideration. It is important to analyse whether the leftover material can be used as an energy source and burned, for example, or used in connection with another process or utilised by other companies. This will increase the life cycle of the materials and thereby have a more positive impact on the environment.

Currently, there are some conflicts between risk engineering and sustainability in commercial or industrial property. A sustainable building is recognised in the industry as one which is constructed from sustainably derived materials, and not for how it implements fire resilience or active fire protection.

Sustainable construction is in itself typically combustible. There is also a drive to counter the current energy price surge with the installation of alternative sources of energy such as photovoltaic (solar) panels on the roofs of buildings. However, what we have seen with roof fires is that sustainable materials may not be that sustainable in the event of a fire, resulting in high levels of toxic emissions. At If, we always recommend that companies follow best practises for the installation and maintenance of solar panels. Contact If's Risk Engineers for more information.

After all, it is important to conduct risk management planning and implement loss prevention measures even when utilising sustainable construction materials.

GETTY IMAGES

Loss prevention work with our clients

In this article, we highlight the responsibilities of a Risk Engineer when it comes to loss prevention work and the environment. The article explores the lifespan of buildings and challenges in selecting construction materials.

By **Caroline A. Bødkerholm**

“At If, we manage risks together with our clients and support them in loss prevention work, both when the claim occurs as well as in the rebuilding phase.

Working closely together with our clients to prevent losses has always been an important part of If’s strategy. First and foremost, it should be noted that physical losses are not only costly for the insurance company. Large losses can cause long disruptions to a company’s operations, as the attention shifts from fulfilling the business strategy to cleaning up and resurrecting the site and restoring operations. This process can often take months or sometimes even years. In addition, the company’s market share and their employees’ jobs are also at risk, which is why it is important that we work closely together with our clients to secure the best process for loss prevention.

Another important part of this equation concerns the environmental impact. This environmental impact has always been present, but it is only in more recent years that it has received the attention it deserves. Large losses will always have a significant impact on the local environment as well as contribute to increased carbon emissions. We often see the poisonous smoke and soot from a fire spreading with the wind and polluting the local environment. We also see the chemical reactions in a fire will convert environmentally friendly building materials into hazardous waste, and the extinguishing water then collects these poisonous residues from the fire and creates local and regional pollution transported with the wastewater. Furthermore, carbon emissions are released into the atmosphere and contribute to global warming.


GETTY IMAGES

Any physical loss will have an impact on the environment, and as the largest insurer in the Nordics, we perceive it as a win-win mission to succeed with loss prevention procedures: our clients benefit from preventing losses and the environmental impact is reduced.

THE LIFESPAN OF A BUILDING

When talking about sustainability, we often hear that we should reduce the number of materials, focus on recycling, and consider the lifespan of a product. How do we consider this in our work?

Anders Rørvik Ellingbø, Head of Property Risk Management Services in Norway explains; "Well, each building, machine, the goods and raw material has its own environmental life cycle. The equation begins already when extracting raw materials from nature such as the mining of metals, felling trees, excavating soil, and using fresh water. Raw materials are transported, which also has an impact. Raw materials are transformed into semi-finished products which again is transported and refined into finished goods for sale on the international markets."

All buildings and machines insured by If have a predicted lifespan. As an example, the lifespan of a building can be anything from 20 years for the foil of the roofing, to decades or even hundreds of years for well-maintained heavy building constructions. In our work with our clients, we also focus on maintenance, which both reduces the risk of a claim from happening as well as reduces the risk of a negative impact on the environment. Well maintained buildings and equipment typically also impact the general status of a factory and it will appear more orderly and cleaner as a result. Then again, the requirements and usability for buildings might change over time and require more frequent development.

UNPREDICTABLE RISK SCENARIOS

At If, we have seen many different risk scenarios which our clients can't predict. A large fire, flood or even storms and hurricanes can disrupt the planned lifespan of buildings, machinery, and inventory. A total fire loss of a large production site will require most building materials and the interior to be demolished and replaced with new material, once again collected from our vulnerable natural resources, and transported, refined, and reconstructed to make new buildings. It will all have a carbon emission impact, as well as both a local and global environmental impact.

USING SUSTAINABLE MATERIALS

One factor that is important to consider relates to the challenges of using different kinds of materials, for example materials with high and low CO2 emissions.

The whole life cycle of the materials must be taken into account. It starts from the collection of the raw material, and moves through the production process, the transportation of the material and the energy consumption when being erected.

The equation of the environmental impact is extremely complicated, and we also must consider the lifespan of the finished product, whether it is a machine or a building. If you can build a robust building lasting for 90 years, compared to materials with an expected lifespan of 30 years, you will "save" two demolitions and reconstructions, and that equals a significant CO2 emission saving. We can also see that huge efforts are now being put into creating more environmentally friendly production methods when producing construction materials. This includes the increased recycling of steel, aluminium, and concrete, as well as an increase in the utilisation of green energy in both production processes and transportation.

DILEMMAS WHEN CHOOSING MATERIALS

In terms of the challenges involved in choosing materials, one example is the renewable and so-called environmentally friendly material wood, used in construction. Trees are, of course, a renewable source of building material. However, cutting down a younger pine tree or spruce tree, for example at 50 or 60 years, will have a CO2 impact. This tree could be collecting CO2 for many more years if left undisturbed. Furthermore, if a wood constructed building burns to the ground, we increase the consumption of trees as well as the amount of CO2 emissions, while the natural CO2 store is reduced.

Wooden material that has been affected by moisture over longer periods might also be exposed to rot and fungus, which means it must be replaced. During a large fire, the materials are extinguished by huge amounts of water, which becomes highly polluted by the waste material from the fire, and must also, due to this fact, be replaced. So called 'dead materials', such as steel or concrete, can more easily be restored after a large fire or flood.

Another example relates to plastic insulation, which by its nature, will contribute to an existing large fire with both energy and emissions, and not only CO2 emissions but also highly toxic materials. The insulation itself might reduce the thickness of the walls when erecting a building but will conversely create a larger environmental impact both locally and ultimately globally, when burning.

Most varieties of plastic insulation will start decomposing already at 50-130 degrees Celsius. Unprotected steel structures can lose half of their load bearing capacity at 500 degrees, while concrete and fire protected steel can often withstand the impact of a large fire. We consider many different aspects when having a dialogue with our clients about loss prevention work and the impact on the environment. There can also be legislation to consider for different branches. When we look at the food and beverage industry, for example, there can be a request in some parts of the building for plastic insulation that fulfils hygiene standards. There is no easy answer when choosing materials and we must support and reflect on the subject together with our clients to find the best possible solution. Therefore, we are very careful when recommending materials when clients are planning and constructing buildings.

"Our success stories are often those where a large loss is either prevented from happening through adequate and sufficient barriers. Or where the extent of the loss is drastically reduced due to good loss reduction barriers.

THE WORK OF A RISK ENGINEER

Preventing losses through close cooperation with our clients has always been a part of our key strategy at If. For that reason, the work of the Risk Engineer has always been to prevent environmental impact by losses.

The most important task of the Risk Engineer is to work closely together with the client and through site visits map the risks of losses. Through our long and broad experience, the Risk Engineer will then suggest how to best prevent losses from occurring or if a loss should happen, how to minimise the consequences.

Secondly, we also provide guidance to our clients when requested in new projects, extensions or changes in their portfolio of buildings and facilities. This can be everything from where to locate the site with a focus on flooding, forest fire risk or other external exposures, to what kind of building materials are used, the fire separation walls or the inclusion of sprinkler systems.

Measuring the losses that do not happen is nearly impossible, but there are plenty of examples of the effect of a solid fire wall or a sprinkler system that controls the fire until the fire brigade can put it out or can even extinguish the fire itself.

We all gain from loss prevention. Our clients can continue their production within a short time without severe disruption to their market share or financial results, and their employees and management can concentrate on what they know best: creating value for their company and clients. To that end, the environment is saved from being unnecessarily exploited. At If, we can then focus on creating value for our clients by doing even more loss prevention work. And in the best of worlds if we succeed in reducing losses across the whole portfolio, claims costs and premiums will be reduced.

Energy outlook 2022

With the loosening of COVID-19 restrictions in recent months, the world was thought to be arriving in a position where it could further accelerate away from its reliance on fossil fuels. Then, in late February 2022, the war in Ukraine began and this will also impact the transition from carbon-derived fuels to more sustainable and renewable energy sources.

By **Fredrik Aronsson** and **Caroline A. Bødkerholm**

The supply of oil and gas has always been a geopolitical issue stretching back a century and to the period that saw the onset of the First World War. Now people across Europe have suddenly found themselves more involved than ever in the complex world of energy supply and demand. And while previous wars in the Middle East have impacted Europe and created higher prices at the fuel pumps, nothing is comparable with the current situation.

To that end, the renewable energy policy directed from Brussels will now likely be both significantly stronger and more frequently articulated.

It is thought that onshore and offshore wind power will receive a greater boost than seen before. Likewise, solar energy both for heat and electricity (PV) will also be more strongly supported, although this development in southern Europe, in particular, has been active since the beginning of the millennium.

It is increasingly clear that sourcing natural gas from Russia is no longer considered to be a viable geopolitical option for Europe, and that this gas may ultimately be substituted by hydrogen throughout the European pipe network. Furthermore, it is thought that the new European collaboration against President Putin will likely both speed up the technological shift towards renewables as well as the amount of euros invested, in terms of enhancing the European security of energy supply.

European countries who have been particularly reliant on natural gas from Russia are expected to begin a rapid technological transition towards new energy sources.

Norway is key to this transition in many ways, since it is the third largest exporter of natural gas in the world, after Russia and Qatar. It is therefore likely that the demand for Norwegian gas will now be significantly higher and in the short run new investments to help secure this gas supply are to be expected.

But Norway also possesses the engineering know-how to help further expand the offshore wind market, based on their long experience of the offshore exploration of oil and gas.

In addition, it is now possible that there will be a transition in the North Sea from oil rigs to offshore wind farms, with many new engineering companies becoming involved in the shift to the new business.

Furthermore, new know-how will be needed for offshore wind farms potentially being installed at sea depths never attempted before. General offshore safety knowledge and the practices long utilised in the oil industry will likely therefore be transferred to offshore wind. The expectation is that the Norwegian cities of Oslo and Bergen are likely to become hot spots for politicians and venture capitalists who wish to become part of this energy transition. ▭

GETTY IMAGES

Liability in the Digital Age

The digitalisation of factories, surgical procedures and even toasters, is raising questions relating to liability. Who is liable if your e-toaster burns down your home? What happens when the artificial intelligence operating on a patient makes an erroneous decision?

By **Matti Sjögren**

There are many definitions of artificial intelligence (AI). Generally, most of these definitions highlight the ability of a program, system, device or a robot to 'mimic' human behaviour. AI does this through the utilisation of diverse technologies and is also capable of learning and developing its skills independently, while performing tasks that are traditionally done by human beings.

As explained above, artificial intelligence can execute tasks that demand independent decision-making as effectively as any human would perform the given task. An accident involving artificial intelligence is an incident where the AI has played a role in the chain of events that led to the accident. But while the use of AI is slowly entering physical products as well as administrative decision-making processes, concerns about AI's uncontrolled actions involving risks have emerged.

NEW EU REGULATIONS AND LIABILITY REGIME FOR AI AND EMERGING TECH

During 2022, the European Commission will seek to establish regulations around artificial intelligence and emerging technologies to help further clarify liability. This will happen on two tracks. Within the Coordinated Plan on AI, the Commission will propose measures adapting the liability framework to the challenges of new technologies, including AI. In addition, prepared by the European Commission's Directorate-General for the Internal Market, Industry, Entrepreneurship & SMEs (DG GROW), it will also propose revisions of the General Product Liability Directive which concerns the liability for injuries and property owned by consumers caused by any kind of physical products. Of course, liability leads to compensation only after something has occurred. From the Risk Management perspective, the Commission is proposing to also revise product safety legislation like the Machinery Directive and the General Product Safety Directive to take new technologies into account.

What kind of reforms can we expect for liability rules? The Expert Group on Liabilities and New Technologies established by the Commission released a report, Liability for artificial intelligence and other emerging digital technologies[1)] in 2019, highlighting possible considerations to allocate the liability. Currently, the producer or importer (to ETA) of the product is liable for injuries and physical damage caused due to safety defects. But with new technologies, the blame could be put also on the providers of software, network or IoT based connected systems, users of the new technologies or, indeed, producers of AI technology used in the systems. The expert group suggested the following solutions:

- *A person operating a permissible technology that nevertheless carries an increased risk of harm to others, for example AI-driven robots in public spaces, should be subject to strict liability for damage resulting from its operation.*
- *In situations where a service provider ensuring the necessary technical framework has a higher degree of control than the owner or user of an actual product or service equipped with AI, this should be considered in determining who primarily operates the technology.*
- *A person using a technology which has a certain degree of autonomy should not be less accountable for ensuing harm than if said harm had been caused by a human auxiliary.*
- *Manufacturers of products or digital content incorporating emerging digital technology should be liable for damage caused by defects in their products, even if the defect was caused by changes made to the product under the producer's control after it had been placed on the market.*
- *For situations exposing third parties to an increased risk of harm, compulsory liability insurance could give victims better access to compensation and protect potential tortfeasors against the risk of liability.*
- *Where a particular technology increases the difficulties of proving the existence of an element of liability beyond what can be reasonably expected, victims should be entitled to facilitation of proof.*
- *Emerging digital technologies should come with logging features, where appropriate in the circumstances, and failure to log, or to provide reasonable access to logged data, should result in a reversal of the burden of proof in order to not be to the detriment of the victim.*
- *The destruction of the victim's data should be regarded as damage, compensable under specific conditions.*
- *It is not necessary to give devices or autonomous systems a legal personality, as the harm these may cause can and should be attributable to existing persons or bodies.*

> *"Establishing a foundation for how liability will work with autonomous technologies is a challenge."*
> *Matti Sjögren*

AN INSURER'S PERSPECTIVE

Artificial intelligence risks are present in many different insurance lines and there are several risks involved with AI and digitalised products and services. These are compounded by the fact that these are new risks with insufficient statistical data available to fully meet the requirements for insurable risk. If new allocation rules of liability between producers, digital service providers and owners and users of the equipment are implemented, it may turn out to be both complicated and expensive for the liability insurer of one alternative liable party to adjust the claim. So far, plain data has usually not been considered physical property. If any forms of financial loss or immaterial loss are to be included, it will be a tough challenge for the insurance industry to incorporate it into insurance products.

If an AI program or device causes an accident today, what is the common practice when establishing liability?

Currently, the producer of the product is liable for bodily injury or property damage to a consumer's property. In business-to-business relations, the product liability is based on contracts and sale-of-goods legislation and is as such not dependent on the EU product liability legislation. However, in case of bodily injuries, the product liability legislation applies no matter if the product is in industry use or at home.

Establishing a foundation for how liability will work with autonomous technologies is a challenge. If a technology has been accepted for implementation into vehicles and in addition approved to be applied in a city centre, for example, then who is ultimately liable when an accident happens.

WHY DO WE NEED LIABILITY GUIDELINES FOR AI AND EMERGING TECHNOLOGIES?

In preparatory work by the Commission, it has been stressed that new technologies do not fit into the framework of the now 35-year-old Product Liability Directive (85/374/EEC), because the accidents may not be caused by individual products but rather by systems of interconnected products, software, or even independently operating AI. Artificial intelligence is also seen as technology having a strong influence in societies through systems of controlling and following citizens, analysis of big data and in automatic decision-making processes, thus needing specific regulation to protect civil liberties.

However, in the comments from industries like European Technology Industries, Orgalim and Federation of European Risk Management Associations (FERMA), as well as from Insurance Europe, the needs of stricter liability rules have been opposed. These industries and associations have highlighted the fact that there are already other liability regimes that apply to any kind of injury or property damage cases and new rules would only have negative impacts on product development because the new rules would not be clear. In addition, any kind of compulsory liability insurance requirements sometimes suggested for AI have been firmly rejected by the industries.

Of course, the consumers representatives like The European Consumer Organisation (BEUC), have seen a need to update EU product liability law so that it extends to digital contents products and services.


GETTY IMAGES

1) European Commission, Directorate-General for Justice and Consumers, Liability for artificial intelligence and other emerging digital technologies, Publications Office, 2019, https://data.europa.eu/doi/10.2838/25362

GETTY IMAGES

Managing refrigerated transport

In the food and beverage industry securing transportation and ensuring the continuity of production can help to reduce the environmental impact of your operations.

By **Anne Nyman** and **Kristian Orispää**

Food production is expensive and reducing waste is important. Few people stop to consider the amount of valuable raw materials that can be ruined by errors made during transportation. For example, incorrect storage temperatures during raw material transportation can ruin the entire cargo. Similarly, an accident during transport can have a serious impact on the supply chain. In this article, If's risk management specialists Jaana Salo and Markus Hytönen provide insights into how clients can work to reduce risks through good risk management.

TEMPERATURE-CRITICAL TRANSPORT DEMANDS ATTENTIVENESS

The food industry transports significant volumes of raw material that always require the right storage temperature. If the temperature is even a few degrees off, this can be disastrous for the cargo, and often the only option is that the batch has to be destroyed.


GETTY IMAGES

"The more expensive the raw materials, the more significant the financial loss will be, which often ultimately impacts the purchaser of the materials," explains Hytönen. "Transport companies are often quite well protected in these types of cases," he notes.

In addition, it can be often difficult to find out who is liable and whose insurance will cover the damages. This is especially the case if sub-chartering is involved. This means that the consignment has been transported by several different carriers during its journey.

HOW TO REDUCE TRANSPORTATION RISKS?

Markus Hytönen states that there are several different ways to reduce transport risks.

"The most important thing is to have proper control measures in place with raw material sources and providers, as well as to utilise only the most reliable partners whenever possible. This is especially important if you do not have your own transport vehicles or equipment. Contracts with transportation partners can also stipulate that sub-chartering is prohibited."

Selecting the quickest and most reliable route, without intermediate storage and with minimal transfers from one vehicle to another, will help lower the risk of a rise in temperature," says Hytönen. "It is therefore worth planning transport routes carefully. This can also help reduce the emissions of the overall journey, as industry players work to put efficiency of operations and sustainable solutions as priorities for transportation."

It is essential to monitor the temperature during transport and to set limits with alarms for refrigeration equipment in accordance with the temperature restrictions for the products being transported.

"The seller and the customer can also agree on the use of data loggers placed in the load to ensure continuous monitoring along the way. This also helps to track any temperature variations during transport. If something seems to have gone wrong during transportation, data loggers will reveal the true conditions in which the goods were delivered. Data loggers should be placed in different locations in the container to verify the steady temperature of the transport from the front of the car to the rear, for example," explains Hytönen.

Buyers of raw material should keep in mind that reliable control measures also protect the operator from, among other things, reputational damage when spoiled products are intercepted before they reach consumers.

VEHICLE CONDITION AND HUMAN ERROR

Clients with their own refrigerated transport equipment need to regularly inspect their equipment as well as train their staff, including holiday successors, to be able to respond correctly and effectively in the event of an accident or an unexpected interruption.

"It is important for drivers to know how they should act if a vehicle breaks down during transport, and this includes how to locate and secure alternative or replacement transport as soon as possible.

Similarly, being able to secure servicing and repairs for the vehicle at various locations along the journey is also essential. These things should also be considered in advance, as having clear guidelines in place can save the whole load," emphasises Hytönen.

Human error is another factor which must be considered. Errors, for example, can be made when the goods are packaged for transport. The packaging materials used should be as ecological as possible but still appropriate for the protection of the materials, in order to avoid contamination or fluctuations in temperature.

CONTINUITY PLANNING BRINGS SECURITY TO PRODUCTION FACILITIES

In addition to the challenges during transportation, another significant risk of large losses includes an accident at a production plant.

"The most devastating event is a fire, and it is important to do everything possible to prevent a fire from happening in the first place," says Jaana Salo, Risk Engineer at If.

Fire prevention is vital to safe operations. Alongside the installation of active fire protection systems, such as sprinklers, it is recommended that facilities are also secured with rated fire doors. Similarly, the use of PIR/PUR sandwich panels is not recommended, as the use of non-combustible materials will provide better protection.

According to If Risk Engineer Phil Preston, "For existing facilities where these sandwich panels may already exist, potential ignition sources such as electrical switchboards and battery chargers should be removed from the panels. Planned renovation projects should include removal of PIR/PUR sandwich panels and replacement with non-combustible alternatives."

Raw materials that are perishable need to be quickly diverted from primary production in case of an accident. This is an important part of continuity planning, helping to reduce the impact of the failure in production to lead to environmental issues.

"In addition to the loss of raw materials, a fire can cause significant short and long-term damage to the environment. In the event of a fire, various environmentally hazardous compounds are released into the air. Water used to extinguish the fire must also be prevented from entering the environment," Salo notes.

Common causes of fires in the food industry include careless hot work tasks, electrical faults and dust explosions. The replacing of lamps from halogen to LED is a simple way to reduce the risk of fire, as well as save energy in the long run.

In the food industry, continuity planning can significantly reduce the risks of disruption through preparing for scenarios that can occur and being ready to make swift changes in operations in the event of an accident. Risks can also be reduced by having back-up systems to secure various functions in the production line. This means that operationally critical equipment, such as the power supply, are secured from two different sources, reducing the risk of disruption.

"You could say that good risk management and preparedness is always an environmental act for a company, although it may not seem that way at first," Hytönen and Salo conclude.

OVERNIGHT PARKING

Clients are recommended to monitor the parking of refrigerated trucks overnight at a site. Typically, when the site is unmanned or only a small number of staff is present, e.g., for cleaning, it is important to pay attention to risks relating to refrigeration equipment in parked trucks. Specifically, when a fault occurs in refrigerated equipment the combustible insulation can ignite. Trailers used for transporting frozen goods are typically built with materials that are combustible. If the trailer is parked at the loading bay overnight, the fire can quickly spread into nearby buildings or structures. It is therefore recommended that all overnight parking of trailers should be at a distance of at least 10 metres from buildings. Furthermore, it is good practice to supply the trailers with electricity to power the refrigeration, rather than running on diesel, which is not only an environmentally unfriendly practice, but can also disturb neighbours.

A lithium-ion battery on fire - at If's Safety Centre

A video has been created to serve large enterprises for demonstration purposes only, specifically companies and organisations with professional personnel that have the required skills to handle (Li-ion) battery fires.

Please note that the information provided in the video is NOT applicable to private people facing an electrical fire on their personal electric car, e-bike, electric scooter, or any other electrical device that has a lithium-ion battery. This video only demonstrates how explosions from the battery behave in a fire event. Performing any actions presented in this video is NOT recommended at the risk of severe injury.

POWDER VERSUS FOAM EXTINGUISHERS
In the video we demonstrate how ineffective powder extinguishers are when fighting a lithium-ion battery fire, therefore this type of extinguisher is not recommended to be used to put out the fire.

IMPORTANT INFORMATION
Some people would naturally react by trying to put out a small fire, however when it comes to lithium-ion battery fires it is recommended that (if possible) you allow a battery pack to burn itself out until the device has been fully consumed, to be sure that there is no risk of re-ignition. Please note that this should only be done in a safe environment, as the smoke from a burning lithium-ion battery is often corrosive and dangerous to your health.

If it is not possible to let the battery pack burn until fully consumed, the current recommended action from fire brigades is to extinguish the fire (removal of flames) as shown at the end of the video. This means moving the battery outside as soon as possible. If you do not have a shovel at hand, you could use a fire blanket, fit for this purpose.

SUBMERGE THE BURNING BATTERY IN WATER
The successful method of extinguishing a lithium-ion battery fire, is to drop the entire battery into water. However, it is important to note that this could also result in toxic consequences. The water in which the battery is placed will become severely polluted, which makes it vital to carefully select where you will place the burning device. If possible, place the battery in a container with water, rather than a river, pond, or nearby anybody to avoid a threat to people and the environment.

We strongly recommend that readers do not try to attempt similar fire tests of lithium-ion batteries, due to the extremely unpredictable nature of such fires and high hazard for personnel and environment.

NOTIFICATION!
Scan the QR code below to watch the video where we demonstrate common mistakes made when attempting to extinguish a lithium-ion battery fire. Before watching the video, please note that lithium-ion battery fires are very different from a traditional fire as they pose complex and serious hazards.

Persons without the required skills and personal protective equipment should not attempt to extinguish a lithium-ion battery fire. It is important to always contact the local fire brigade when a battery is on fire and prioritise your personal safety first and foremost.

Short news

External dependencies, preparation is key

Read the full article at:

Dependencies on suppliers and partners, or any other parties outside the company can be impacted by perils such as fire, machinery breakdown or natural hazards, which can lead to serious business interruption, losses and increased costs.

When you understand the risks, know their potential financial implications, and have plans in place to mitigate these, a clear and transparent starting point will support discussions on selecting the right insurance solutions for your business.

With If, external dependency effects can be included in a business interruption solution for your company. When both parties understand the types of risks we mutually face, we will be able to serve you better, offering the solutions that best meet your specific business needs. We seek to understand the risks and we write the risks we understand.

Appointments

Petri Karkinen
Risk Engineer, FI

Carl-Henrik Holmgren
Risk Engineer, SE

Christian Helwigh
Risk Engineer, DK

Tom Guttormsen
Risk Engineer, NO