



Emerging and interconnected risks

Given the amount of disruption and change over the last few years, energy leaders are paying renewed attention to how they can identify emerging risks and explore how these not only impact on their risk framework, but also how they are related to expected growth and greater strategic focus over longer time horizons.

\$110 trillion in capital investment will be required to achieve net-zero by 2050. This global goal is a shifting sea of change that covers macro risks as well as operational issues (Figure 1). With heightening geopolitical risk, and climate change amplifying diverse risk exposures, identifying, quantifying and mitigating emerging and interconnected risks is essential, yet challenging.

It is imperative that risk leaders need to look beyond the short term, day-to-day risk exposures and examine this changing environment with a broader lens. Whilst many of the emerging risks we are facing, are not new, the landscape is rapidly evolving, and the biggest risk may be inaction.

Research suggests that future-prepared firms — who have invested in building corporate foresight units — outperform the average by a 33% higher profitability and by a 200% higher growth¹. Organisations of all sizes can learn from the approaches taken to improve their organisational agility and resilience through appropriately scaled management of emerging risks.

That starts with risk identification and accessing views that will challenge your thinking. We asked our WTW Research Network to give us their thoughts on key emerging trends they feel the energy industry should be considering.

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¹ <https://www.sciencedirect.com/science/article/pii/S0040162517302287>

Figure 1:

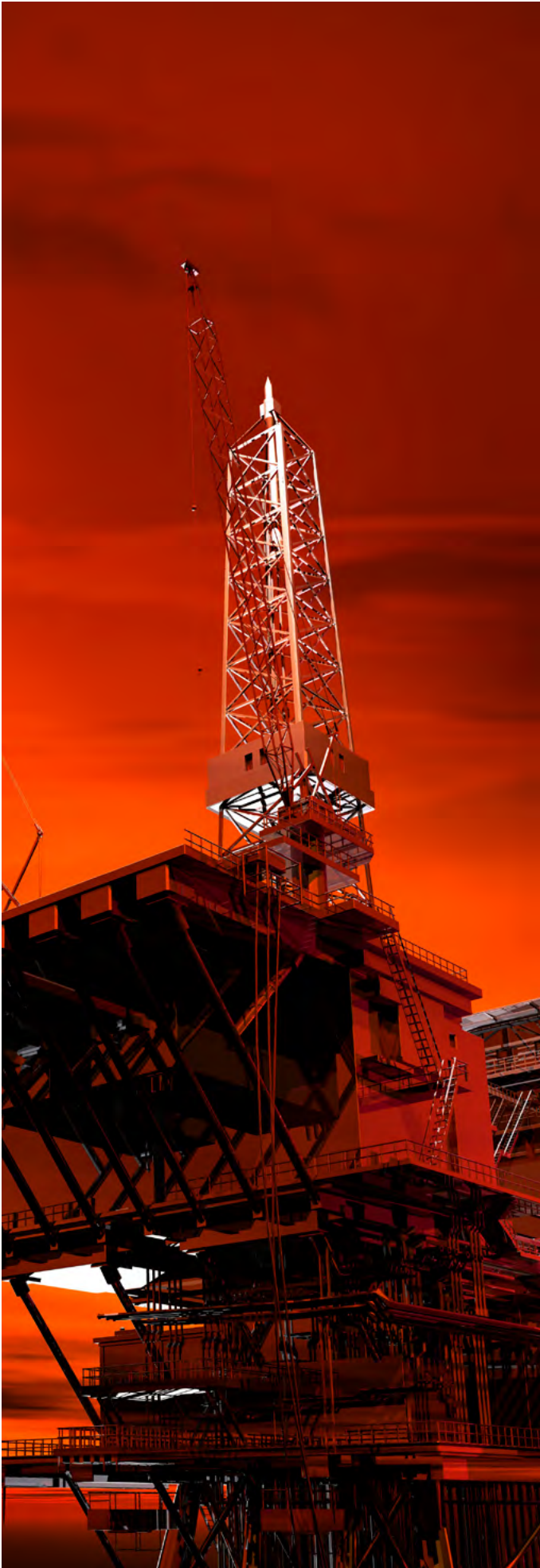
Emerging trends and risks, and how you can respond

<p>49% / 64+1: geopolitical shifts</p>	<p>2024 is set to be what the Economist has called “the biggest election year in history,” with national elections scheduled in at least 64 countries plus the EU, representing close to half the global population (49%)². Many will prove consequential for years to come with potential impacts ranging from social stability to reshoring/offshoring, regulatory change to international investment shifts.</p>	<p>Key lesson: Effective leaders are factoring geopolitical trends into their intelligence monitoring to identify opportunities for growth, while preparing to act quickly and decisively when events occur. WTW’s Geopolcast provides a thought-provoking discussion of the world’s most pressing geopolitical issues through expert interviews.</p>
<p>50 million gallons of water: supply chain risks</p>	<p>Every time a ship crosses the Panama Canal more than 50 million gallons of water are diverted from surrounding lakes into the locks and then, after the vessel has been lifted, flushed into the ocean. The region has just experienced its worst drought since it opened in 1914, leading to disruption as fewer ships are able to traverse the canal. This disruption of a key Asia-U.S. route happened at the same time as conflict in the Red Sea also resulted in the need for further diversions.</p>	<p>Key lesson: Given the flexibility of global transportation, there is a reliance on always being able to take another transportation route. That may involve record high costs with very real financial impacts³. Taking a global view and bringing stakeholders together from across regions can allow companies to stress test possible futures and uncover hidden vulnerabilities.</p>
<p>17.94 million hectares: wildfire risks</p>	<p>2023 saw Canada experience its most extensive wildfire season on record, with 17.94 million hectares burned — a new high for North America. The scale of fires saw the Canadian government close several roads across Quebec, with many energy and mining companies having to curtail their operations. As wildfire risk increases, a multifaceted approach will be needed that combines early forecasting and anticipation of wildfires with robust infrastructure, effective communication, adaptable policies, and consideration of nature-based solutions.</p>	<p>Key lesson: Events once thought rare are becoming more likely or occurring at scales previously not seen. The historical record alone does not capture the full range of potential risks. By examining what-if scenarios, organizations and governments can gain insights into potential vulnerabilities and develop strategies for a more resilient future.</p>
<p>38 billion by 2030: IoT connections</p>	<p>Emerging technologies and connected devices will continue to change the cyber risk landscape. They will also allow organisations to build out digital twins, gain greater visibility of their supply chain, and deploy resources more effectively. Currently the majority of the world’s mines — essential for transition technologies — are open-pit. However, connected devices could allow for smaller, modular mines facilitated by semi or fully autonomous fleets, reducing the requirements for ventilation volumes and fans, consequently both reducing the energy demand, and reliance on flying in workers and the number of specialists on-site.</p>	<p>Key lesson: risk frameworks can also be used to explore opportunities, shift business models, and allow organisations to embrace new futures. A forward-looking view of positive and negative futures can provide a structured framework for discussion, whether through a short workshop or full day of wargaming.</p>
<p>30 / 13: future of work</p>	<p>The IEA forecast that 30 million new clean energy jobs will be created by 2030, while close to 13 million jobs in fossil fuel-related industries are at risk⁴. Multiple generations in the workforce are pushing leaders to be more creative in how they manage different sets of needs. Permanent demographic shifts have created long-term shortages for certain jobs and skills that could persist for years, and companies are still catching up to find the workers they need.</p>	<p>Key lesson: When discussing risk and strategy, there is a strong role for workforce perspectives, whether that’s considering the workforce of the future or how your staff today influence/manage/and react to risk. Your people are an untapped view of risk — often dealing with the operational realities of strategic decisions, and can very quickly point at risks and opportunities.</p>

² <https://time.com/6550920/world-elections-2024/>

³ https://www.eia.gov/petroleum/weekly/archive/2023/230927/includes/analysis_print.php

⁴ <https://www.iea.org/reports/world-energy-employment-2023>



It all starts with understanding what we mean by emerging risks

Organisations use a range of different definitions for emerging risks, refined based on time horizons, risk tolerance thresholds, and strategy deliverables. The recent release of the *ISO 31050 — guidance for managing emerging risks to enhance resilience* — marks a pivotal moment in the management of these risks at a time when new regulatory standards and requirements are being implemented or considered.

If definitions can vary, what are emerging risks?

To quote directly from ISO 31050, they can cover a series of characteristics:

Emerging risks can include, for example:

- Risks arising from unrecognized changes in organizational contexts.
- Risks created by innovation or social and technological development.
- Risks related to new sources or previously unrecognized sources of risk.
- Risks from new or modified processes, products or services.

Source: ISO 31050

To make the language clearer and more accessible an organisation could choose to view emerging risks as:

1. Circumstances that materially change the profile of risks we have already spotted.
2. Circumstances that lead to new risks we had not previously spotted.
3. Circumstances that cause two or more risks to combine, happen simultaneously or create a domino effect.

There is no one-size-fits-all approach to identifying, analysing, monitoring and responding to emerging risks. Organisations should remain aware of this and ensure they take account of their culture, experience, technological capability and colleague attitudes when designing or refining their approach. Reviewing emerging risks and being future ready is about more than maintaining a risk register, or scoring acceleration, impact and severity.

In asking whether your existing approach deals with these risks and opportunities appropriately, an organisation may wish to consider three challenge questions:

1. How do you identify and manage emerging risks?

The importance of building an emerging risk process and linking it to the business model cannot be emphasized enough. That includes the lens of opportunity. Reviewing emerging risks is also about considering your competitive advantage, gathering insights into new market opportunities, customer needs, and technological advancements, as well as staying ahead of regulatory developments, compliance requirements, and industry standards that could impact your operations and reputation.

Action: Instigating a horizon scanning regime that extends beyond traditional boundaries, such as a focus on new legislation or financial reporting standards. By asking the question “what’s new and what does it mean for us?” regularly, new risks and opportunities may become apparent far earlier. By examining what-if scenarios through techniques like wargaming that immerses attendees in roles, organizations can stretch their imaginations to gain insights into potential vulnerabilities, competitive advantages, and develop strategies for a more resilient future.

2. What is your biggest concern in the current environment?

Given the pace of change in our internal and external contexts, truly “new” risks are increasingly likely. An important element of an effective emerging risk process is the ability to spot these risks in good time, and to plan and prioritise a response appropriately given the varied risk profile the organisation is likely to have.

Action: That might mean taking a fresh look at existing data sources such as taking a specific emerging risks view when reviewing your claims data alongside WTW’s Renewable Energy Loss Database (RELD), or keeping pace with the latest thinking across science, academia, think tanks and the private sector. This is the approach our WTW Research Network uses to identify risks, improve their understanding and quantification for the benefit of our clients and society.

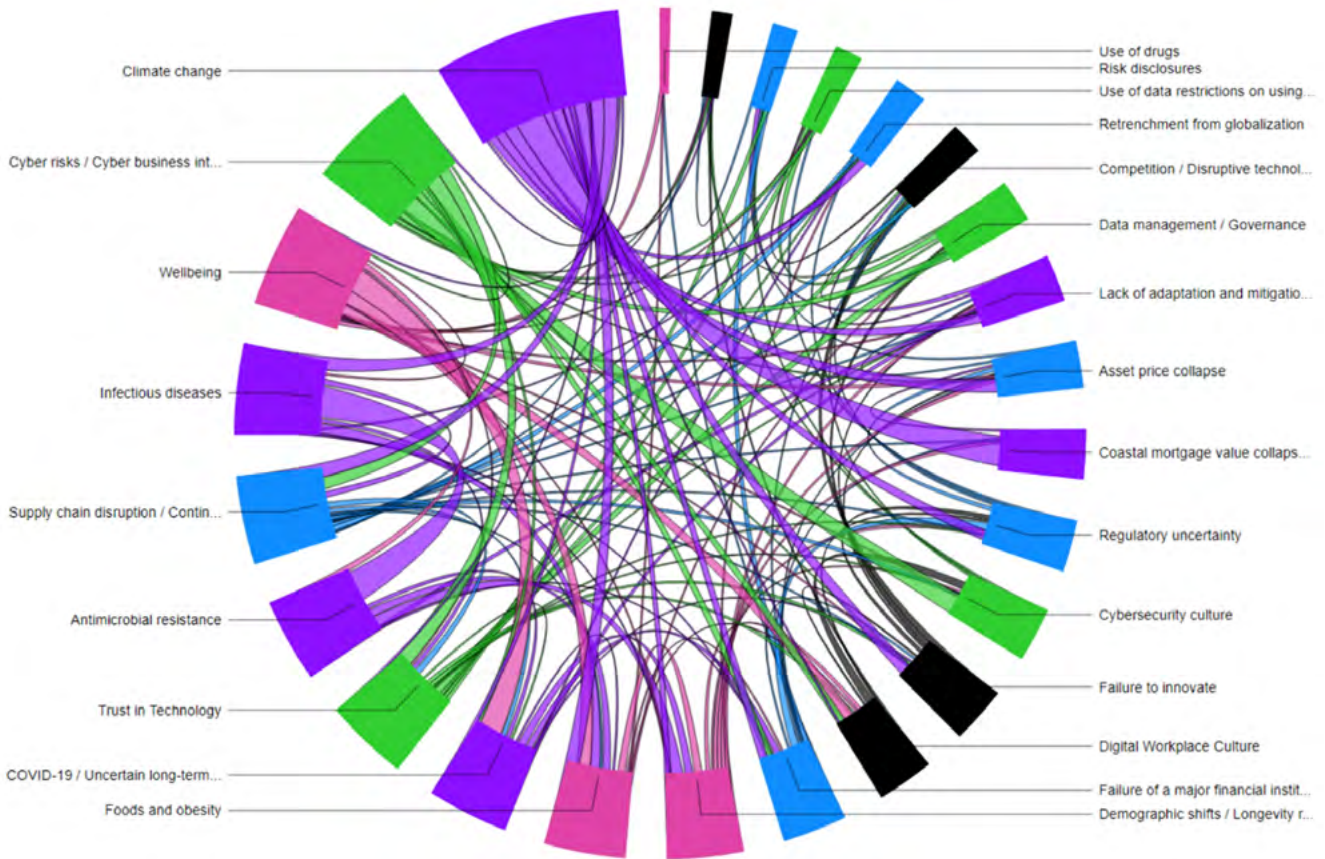
3. To what extent do you consider the interconnected nature of emerging risk when formulating plans to respond to your top concerns?

Traditional risk assessment frameworks frequently use statistical methods and techniques to identify and isolate historical trends in the trigger, magnitude, or the frequency of an individual hazard. While this captures the risk one hazard at a time, it does not adequately capture the risk associated with connectivity, whether that’s co-occurring, compound or cascading hazards. If something goes wrong and exceeds organisational resilience, it is rarely the tried and tested area of individual risk with numerous tightly defined controls and scenarios. Instead it is usually either about interconnected risks or scenarios just beyond the imagination.

Action: A structured approach to consider interconnectivity between risks can provide a foundation for shared understanding between stakeholders. Registers have their place but additional value can be added through challenge perspectives, such as the below view of a list of top 25 risks, where respondents were asked for their top three combinations of risks of concern. This approach can be used to bring unseen/unappreciated risk dependencies to the surface, encouraging collaboration across business functions, and enable an elevated risk governance regime that offers the business a repeatable, but necessarily flexible, means of outsmarting complex risk connections. You will have your own opportunity to respond to our 2024 survey and benchmark your views against your industry peers, and see what other industries are thinking about.

Figure 2:

Challenging interconnectivity



Source: WTW Emerging risks survey 2021

Consideration of emerging risks is essential for a truly effective enterprise risk management approach, which provides long-term value and accordingly, organisations should seek to ensure they give emerging risks, in all their guises, sufficient consideration and attention when building, enhancing and implementing strategic frameworks and processes. It is also not just a defensive technique — understanding emerging risks should also consider how that lens may uncover competitive advantages from new markets to collaboration between functions.

In the face of global change, there has never been a better time to reconsider your emerging risk approach to ensure you find a smarter way to risk.



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