

Directors, Boards and Existential Threats



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In addition to the business and context related risks that many companies monitor and seek to mitigate, there are also background global risks and existential threats that could have catastrophic consequences for societies and social and economic systems. While directors may be aware of them and personally concerned about them, they do not always feature on board agendas or as priorities for innovation to the extent that perhaps they should. With risks and threats come opportunities for those who are agile, flexible, and entrepreneurial.

Public bodies are often constituted to respond to the symptoms of crystallised risks and existential threats and/or deal with emergencies rather than address their root causes, which may require public-private collaboration and collective responses. Boards should be open to possibilities for mutually beneficial cooperation to prepare for challenges, cope with them, and be ready to grasp the business opportunities that may accompany them. Innovation and doing things differently to enable our collective survival are now pressing imperatives.

Threats and their consequences

Whether or not a threat is considered existential and by whom depends upon attitudes and perceptions. Who or what might be impacted, where, when, for how long, and/or to what extent? A threat that may prove terminal for the viability and continuation of certain groups, species, or activities in some situations, circumstances, contexts, and

locations could initially be viewed as a minor inconvenience by others. A stoppage described as an emergency or crisis by one board might be considered a temporary interruption elsewhere.

This article primarily concerns risks and threats that pose a significant danger to human life with the potential for large numbers of casualties and that might significantly affect the livelihoods, lifestyles, contexts, and prospects of those who survive their first or early impacts. Words such as disaster and catastrophe might be applied to describe their actual, likely, potential, or later outcomes. Certain risks and threats that may not yet be regarded as existential for humans are already proving terminal for many other species.

While the chances of disasters happening can vary depending upon the threat and, in some cases, may seem remote, the probability of one or more such events of some form occurring in the lifetime of many of those living today is uncomfortably high. Many companies are at risk of being severely impacted, while there are others that could possibly have a key role to play in preparing for worst-case outcomes and activities to increase community, societal, and collective resilience. There are many existential threats and possible antidotes to consider.

Nuclear weapons and threats

The nuclear threat may always be with us. It is not clear how nuclear weapons could be uninvented for good. Early fission weapons, or atomic bombs, have long been superseded by massively more destructive fusion weapons, or hydrogen bombs. The risk of mass destruction and death is ever present, whether initiated by accident, nuclear terrorism, or system failure, or by a deranged, impulsive, or suicidal action, an AGI application, or a failure of deterrence or controls to prevent an initial catalytic attack and retaliatory responses and further escalation.

There are thousands of nuclear weapons. Once launched, their delivery vehicles can be difficult or impossible to stop. Arsenalns are designed to be resilient, resistant to interference, and to deter. Multiple emergencies and 'near misses' have occurred. More attention seems to be devoted to modernising and testing weapons than mitigating the risks of their existence and possible misuse. At times, such as the Cuban missile crisis, there

has been a heightened risk of nuclear conflict. The possible use of nuclear weapons has been suggested by President Putin during certain stages of Russia's invasion of Ukraine. His country retains tactical nuclear weapons, and Russian doctrine allows for their use in certain circumstances.

Arms control agreements have frayed, and the modernisation of nuclear arsenals is underway. Underground bunkers and plans to delegate responsibilities to networks of alternative public governance arrangements have been abandoned in certain countries but retained in varying states of readiness elsewhere. It had been hoped that preparations would enable some people to survive, at least for a period of time. Information leaflets were distributed to make them aware of the consequences of nuclear war and the subsequent risks to life and health. Recreating forms of protection today could be controversial, costly, and alarming for some people.



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Biosecurity threats

Biological and chemical weapons, as well as nuclear ones, could be used by state actors or terrorists, including for blackmail. Certain options might be affordable to non-state actors, malevolent individuals, and gangs. Human societies have been under the threat of pandemics for millennia. They can arise from natural events, human

interaction with other species, genetic research, development, and bioengineering. The risks of laboratory misuse, accidents, inadequate safety measures, and defective protective arrangements are ever-present.

Greater mobility, interconnectedness, and travel can speed up the transmission of pathogens and computer viruses. The recent COVID-19 pandemic revealed how unprepared most countries were, the inadequacy of much decision-making, and how undervalued and underfunded some processes and systems for dealing with it were. Future viruses might be more transmissible and virulent. Panic, fear, failure to take precautions, inadequate control measures, or a breakdown of law and order resulting from one existential threat and the activities of those who seek retribution, revenge, or to take advantage, could also unleash others.

Biological risks and threats have long been recognised and experienced in localised and global pandemic forms. Both biological and chemical weapons have been researched and used, and steps have been taken internationally to limit and control them. Personal protective equipment (PPE) is available for operating in many contaminated environments, including areas of heightened radioactivity. Their cost and inconvenience can be significant but bearable for organisations and societies in certain contexts and for some occupational groups in comparison with the consequences of losing those they protect. They have a shelf life, so companies should be ready to quickly ramp up their availability as and when required.

Global warming and climate change

Global warming and climate change are existential threats that people are becoming more aware of because of visible impacts such as melting ice sheets and glaciers, rising sea levels, and the greater frequency of extreme weather events such as floods and wildfires. The WMO has recently reported a year and a decade of record-high average global temperatures. Scientific monitoring and assessments predict further increases, and their impacts are likely to get worse before they improve. Our collective responses to date suggest we will not move quickly enough to avert multiple crises and disasters, including famines, mass migrations and/or relocations as areas are abandoned or inundated, and infrastructure failures. Widespread disorder and conflict could result.

Climate change can give rise to both new and aggravated risks and short and long-term existential threats, for which individual, organisational, community, societal, and international responses might be possible, desirable, and justifiable. The risks and threats create myriad opportunities. Action is underway, but more needs to be done collaboratively and quickly. Many scientists already fear that, in our fracturing world, current efforts will not prevent the triggering of remaining tipping points and negative feedback loops, such as methane released from melting tundra, that accelerate further global warming until it becomes uncontrollable.

While climate change may not result in a biological or radioactive substance that could be transported, it might also create new targets for a malevolent actor, such as sea or flood defences already under pressure from higher water levels. Existing practices such as burning crops and their impacts in cities are already causing premature deaths and exacerbating global warming and climate change. There may be steps that could be taken to improve indoor air quality and further collective action that could reduce external pollution. Climate adaptation and mitigation create opportunities for increasing resilience, alternatives, and reinvention.

Artificial intelligence and its regulation

Some threats may benefit certain activities and interests but prove disastrous for others. AI capabilities are developing faster than our ability to monitor, control, and regulate them. Those who worry about being left behind are rushing to adopt affordable applications. While some activities can be transformed by AI to advantage certain people and interests, the consequences of the use of both generative AI and artificial general intelligence, or AGI, by naïve and 'bad actors' could be catastrophic. For many adopters, the prospects of benefits override their concerns about misinformation, the undermining of elections and democracy by deepfakes, the threat to life of bioterrorism, or risks such as that of autonomous and uncontrolled actions.

Companies operating within the European Union (EU) are already subject to requirements that, over time, will or may influence customer expectations. Given the rapid spread of AI and generative AI adoption, application, and experience, similar provisions may soon be introduced in other jurisdictions. At minimum, a responsible company might wish to ensure that outputs from its applications of

AI are identified as having been AI generated. It would be prudent to avoid putting AI offerings into the marketplace that could expose others to unacceptable or unreasonable levels of risk. Appropriate warnings could be provided.

Technological and software developments are likely to continue to occur more rapidly than new monitoring, control, or regulatory measures can be introduced by governments and regulatory authorities. Just as concerned governments face difficult choices about legislative, regulatory, and financial priorities, corporate boards have capacity and capability constraints. Given that human inventiveness and activity is the common cause of multiple existential risks, in time, an autonomous AGI application might act against us. Corporate AI/AGI policies and guidelines should responsibly address the challenge of preventing disaster and misuse by others without becoming an unreasonable constraint on progress.

Boards, governance and existential threats

Threat levels are increasing. Trends such as global warming and geopolitical regrouping continue. A common feature of existential threats is the opportunities



they create for 'bad actors' with malevolent intentions, such as terrorists or criminals, either for destructive purposes or for blackmail. The polarisation that is occurring in many societies, exacerbated by targeting and the use of some AI applications, is increasing their potential misuse. Various delivery mechanisms, such as the availability of affordable load-carrying drones, are

democratising their possible applications and misuse. As global temperatures rise and people lose hope, some of the disadvantaged may revolt, conflicts might occur, and public order could break down.

Boards may find that with staff turnover and retirements, system updates, corporate retention, and disposal of document policies, little remains of understanding and details of past arrangements to deal with high-impact events. With many other claims upon their time and pressures on available resources, corporate and government decision-makers in some democracies might be reluctant to invest in precautions that could possibly save some lives in scenarios such as a nuclear accident or terrorist attack. Such measures may be easier to introduce in an autocracy where a longer-term view is taken and some form of eventual conflict is regarded as inevitable.

Interest in certain existential threats has waxed and waned over the years. They can be quickly forgotten as events and people move on and new issues and preoccupations emerge. Memories are sometimes short, especially in many democracies, while boardroom discussions often concern more immediate issues. Available time may be devoted to matters on which urgent decisions are required. When under pressure, perspectives may narrow, and longer-term risks, trends, and existential threats may be put on the back burner. Many boards find it difficult to prepare for events and eventualities whose timing is difficult to predict.

They may also be reluctant to raise them with investors and other stakeholders.

Handling diverse existential threats

The varied range of contemporary existential threats requires access to differing disciplines and sources of scientific research. This reduces or may avoid the challenge of calling upon certain experts and scientists to simultaneously consider and address multiple threats. It does, however, increase the number of relationships a company or group of collaborating entities may need to manage and the number of threat-specific teams or task forces that might be required if action is taken to better understand and prepare for selected scenarios.

Although some directors may wish to avoid thinking about the unthinkable, existential risks come in various forms and may initially be experienced in less than a total

or worst-case manifestation. There may be preparations that could be undertaken and corporate and collective responses that would reduce their adverse impact. Bulk buying through collective purchasing and shared storage and/or maintenance arrangements might reduce some unit costs. These could be affordable in comparison to certain existing per-head and total expenditures by health systems, or the per-life saved cost of ejector seats for use by pilots in an emergency, when the number of people who might benefit is considered.

Even if they might be possible, some directors may worry about the implications of the cost of precautions and preparations for the pricing of a company's offerings in competitive markets. Would potential customers be prepared to pay a premium for the possibility of extra safety? Could additional protection, greater resilience, and less risk of harm become a differentiator? The answer may be yes in the case of a premium on an already relatively expensive and regularly used car. It might be problematic in the case of a hardened or biologically more resistant house or flat that could be unoccupied when disaster strikes.

Possible corporate responses

There are protective measures that could be considered against destructive attacks, and their costs could be compared with those of recovery, replacement, or inconvenience while a resource, facility, or infrastructure



is unavailable. Some risks may be insurable, but as their frequency increases, others may become unaffordable and/or insurance unavailable. When reviewing responses to existential threats, boards should look beyond physical safety and the vulnerability of processes and systems. Where mental health issues are increasing, how much might people be prepared to pay for greater peace of mind and psychological safety?

Boards can ensure that companies have policies and arrangements in place to deal with existential menace-related and other blackmail threats. Discussion of certain existential challenges may make some directors more aware of the impacts of existing contextual factors such as environmental pollution and the importance of air quality for human health and well-being. Crop burning may be a convenient option for rural farmers, but could the circular economy use of waste, including for power generation, represent a business as well as an environmental opportunity?

There are many issues and questions that directors and boards might wish to address. Have they and an executive team thought through a company's vulnerability to global risks and existential threats? While some of these may impact most entities, are some companies more likely to be impacted or sued? What activities and operations might be most likely to be adversely affected, and where and when? A matrix could present an overview of the potential impacts of threats for a company and its stakeholders, their duration, what steps are underway or could be taken to mitigate them, cope, or recover, and compare their costs with estimates of possible harm.

Understanding challenges and vulnerabilities

It helps if a board, executive team, key suppliers, and customers have a common and consistent understanding of the risks and possible impacts of existential threats, areas of vulnerability, and preferred responses to possible scenarios. A shared understanding of roles and responsibilities and to

whom corporate, community, and government responsibilities and authority might be delegated in crisis and emergency situations is also advisable. Executive and leadership development programmes might benefit from a module on existential threats, with exercises involving the identification and ranking of an organisation's exposure and suggestions about steps that could be taken to increase resilience.

Some boards may wish to periodically test director, board, and senior executive responses to certain existential threat scenarios. When they occur, there may be malevolent actors seeking to take advantage, as well as those needing help and support. Choices may have to be made between protecting assets and/or lives and corporate and/or community resources and infrastructure. Seeing how individuals and groups respond and interact in such circumstances can be very revealing. Outcomes can sometimes be unsettling. For some companies, the greatest risk may be how their leadership teams react to adversity.

Strategies to increase resilience are likely to be incomplete if the consequences of certain risks and existential threats are not considered. Similarly, as risks and threats can drive innovation, overlooking them can result in missed opportunities. Slow-burn risks, emerging crises, and existential threats can also prolong the imperative for innovation. When people finally realise that continuing as before is neither desirable nor possible, they may be more open to ideas and possibilities. COVID-19 led to a speeding up of vaccine development and approval processes as activities previously undertaken sequentially overlapped and/or were undertaken in parallel. A diversity of perspectives can be helpful when exploring possible responses.

Differing perspectives on human ingenuity and inventiveness

The time that may be available to prepare for and respond to existential threats can vary. Concern about one or more threats could lead to reviews of a company's purpose, mission, and priorities for the period of any available window for reaction before it is too late. These could take account of capabilities, connections, accessible resources, and potential collaborations.

Responsible and caring boards might also prepare for differing possible emotional and behavioural responses to threats and think about their own roles and the help and support that key executives and others might require in crisis situations.

Multiple current challenges, risks, and existential threats result from human ingenuity and inventiveness. After the detonation of the first atomic bomb, Robert Oppenheimer quoting from the Bhagavad Gita, uttered the memorable words, 'Now I am death, the destroyer of worlds!'. Our collective human activity is resulting in the death of an increasing number of life forms and degrading the earth's ability to support its growing population of people and their expectations. The widespread yearning for more is threatening our own prospects. Human ingenuity and innovation should now be focused on less resource intensive and more responsible alternatives, ensuring our survival. ■

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