

CBRNe

‘CBRNe’ is the abbreviation commonly used to describe Chemical, Biological, Radiological, Nuclear and Explosive materials or weapons. The term is also used to describe the tools, capabilities, and markets that counter CBRNe risks and threats. This Primer complements Heligan Strategic Insights’ previously published CBRNe Spotlight - a deep dive into this growing area of importance - with a succinct overview of CBRNe and its associated markets.



Case study 1

In March 2018, Russia carried out a Novichok chemical attack on UK soil against former Russian GRU (Russian Military Intelligence) officer Sergei Skripal, and his daughter Yuliya. That attempted assassination resulted in the murder of an innocent British civilian, Dawn Sturgess, who died after finding a perfume bottle with the Novichok used for the attack weeks after it had been discarded in a public park.



Case study 2

Whilst transiting Kuala Lumpur International Airport in 1988, two ladies approached Kim Jong Nam (the exiled half-brother of North Korean Supreme Leader Kim Jong Un), spraying him with the VX nerve agent. Kim Jong Nam died 20 minutes after exposure, in an attack that is believed to have been orchestrated by North Korean intelligence agents.

In the UK Government's 2021 Integrated Review, it publicly stated that 'It is likely that a terrorist group will launch a successful CBRN attack by 2030,' with the government shortly thereafter setting up the Counter Terrorism Operations Centre (CTOC), led by UK Policing and the UK Intelligence Community to counter such threats.

There is now, more than ever, a strong, compelling reason for governments and the private sector to be investing in research, products, and capabilities that directly help to mitigate and protect against CBRNe risks.

Terrorism and despotic leaders aside, CBRNe poses yet more threats to the UK and Europe right now. In 2025 the world's attention is focused on Russia and Ukraine.

The threat of accidental, negligent, or actual deliberate use of CBRNe material in the war has brought the prospect of a CBRNe catastrophe to the doorstep of Europe. And let's not forget Fukushima and the dangers of CBRNe release from natural disasters. All in all, CBRNe isn't a theoretical threat, it's real, and this has therefore given rise to an industry focused on protecting and mitigating such a threat.



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HELIGAN INTELLIGENCE

Heligan assesses a strong growth for the European CBRNe market

In our CBRNe Spotlight and associated market analysis, Heligan assesses strong growth for the European CBRNe market based on a 2021 market estimate of \$4.56 bn. In 2022 we saw this market grow to \$5.89 bn and estimate it to be \$21.08 bn by 2027, representing total growth of 362% between 2021 and 2027 within the European region.

There are plenty of reasons for this, and as this is a primer, we'll keep them brief:

1. The destabilising effect on confidence and an **increase in real terms threat**, due to the ongoing conflict in Ukraine and Russian aggression.
2. The **threat to civil nuclear in Ukraine** due to the ongoing conflict and the increased awareness of civil nuclear vulnerabilities will drive a growth in defensive CBRNe spend.
3. The 'Russian Playbook' or **Russian doctrine** and conflict modus operandi that has the use of chemical or biological tactical (small scale) nuclear weapons inscribed as an escalatory course of action.
4. **Defence budgets** in NATO aligned states increasing with all countries committing to spending 5% of GDP on defence and security by 2035.
5. **Finland and Sweden both joining NATO**, with both having strong internal CBRNe industries.
6. **Increased public awareness** of public safety matters – particularly in the aftermath of the Covid pandemic – is pushing private companies to adopt advanced security systems to mitigate against CBRN threats in sectors outside of the military, such as law enforcement, healthcare, critical national infrastructure (CNI), transportation, and manufacturing.
7. A **strong innovation and technology ecosystem** within the UK and Europe that will drive new growth and respond to new threats.
8. **Nuclear Safety** – global civil and military nuclear programmes are some of the most stringent in terms of safety and failover. There have only been three major accidents to have occurred in over 18,500 cumulative reactor-years of commercial nuclear power operation in thirty-six countries (Three Mile Island, Chernobyl, Fukushima). Investment in nuclear power remains strong, particularly in innovations for safety and protection from human error and natural disaster.

Case study 3

In 2017, Russian opposition figure and anti-corruption activist Alexei Navalny was sprayed in the face with a 'brilliant green' chemical, causing eye injuries that resulted in him losing 80% of his sight in his right eye. Navalny, at the time, accused the Russian state of directing the attack. He was again hospitalised in 2019 with damage to his eyes and skin in another suspected chemical poisoning attack, and then in August 2020 Navalny was poisoned with the Novichok nerve agent where he was hospitalised in Berlin in serious condition. Navalny died in a Russian prison in 2024.



Case study 4

Ghouta, on the outskirts of Damascus in Syria, was the scene of a deadly chemical attack in 2013, perpetrated by the armed forces of now-deposed President Bashar al-Assad during the Syrian Civil War. Up to 1,729 people are thought to have died when rockets containing the chemical nerve agent Sarin struck opposition-controlled areas in Ghouta.

Why should Heligan care?

Well, there are numerous reasons we should care, but the primary one is that Heligan now sees growing volumes of CBRNe VC and PE investment opportunities pass through the assessment phase. Having a rounded view of the market that those opportunities fit into is critical for Heligan, as a specialist investor and provider of advisory services to the National Security, Crime Prevention, and Public Safety sectors. It is our expertise in the aforementioned sectors that sets us apart from others in the financial services industry.