Perspective
Economics

Department for
Digital, Culture,
Media & Sport

# The UK Safety Tech Sector:
## 2022 Analysis

DEPARTMENT FOR DIGITAL, CULTURE, MEDIA & SPORT
UK ONLINE SAFETY TECHNOLOGY SECTORAL ANALYSIS

# Ministerial Foreword

This government is committed to ensuring that the UK is the safest place in the world to go online. The UK Digital Strategy, published in June 2022, recognises the potential for the UK's safety tech sector to help deliver on this commitment, by providing innovative and cutting edge online safety technology to protect users online.

The potential of the safety tech sector was first highlighted in 2020, when the first UK Safety Tech Sector Analysis report set out the UK's leading role in developing innovative solutions that are being used worldwide to safeguard and protect online users from harm, and to detect and remove illegal content.

This year we are publishing our third safety tech sectoral analysis, showing how this sector is going from strength to strength. There are now over 115 safety tech businesses based in the UK. They continue to make world-leading advances in areas such as content moderation, age verification, digital forensics, content filtering, and in detecting and countering fraud. These are essential technologies in the fight against online harms, and they ensure that a wide range of digital platforms have the tools they need to keep their users safe online.

The safety tech sector is a catalyst for UK digital growth. The sector is one of the fastest growing in the UK, with revenues increasing 21% in the last year alone to £381m. Safety tech employs more than 2,850 staff across the UK, with hotspots identified in areas such as Leeds, Edinburgh and Manchester.

The sector is well-placed to grow further, with a record-breaking year for external equity investment in 2021, raising over £63m.

We have continued to commit funding to initiatives to support the safety tech sector to develop innovative new solutions to protect users. For example, the 'Safety Tech Challenge Fund' supported the development of innovative technologies to help keep children safe in end-to-end encrypted environments, whilst upholding user privacy.

This report demonstrates how improving online experiences will create dividends for business and the whole of society.

**DAMIAN COLLINS MP**
MINISTER FOR TECH AND THE DIGITAL ECONOMY

## KEY FINDINGS

This research update highlights that the UK safety tech sector continued to grow at pace through 2021. The key metrics are covered below.

### Companies:

– The number of UK companies providing safety tech products and services has now reached 117 firms, an increase of 17% since last year.

– There are encouraging signs of newly registered start-ups, particularly in the domains of tackling disinformation and developing new approaches to content moderation and video and image analysis at scale. Existing firms specialising in communication and semantics are also moving into the safety tech domain.

### Revenues and Employment Growth:

– We estimate that total safety tech sector revenues have reached £381m in the most recent financial year.

– This reflects an increase of 21% (£65m) since last year's analysis.

– We estimate the safety tech sector remains on track to hit £1bn in annual revenues by the mid-2020s, based upon its compound annual growth rate (CAGR) since the inaugural study.

– Within the safety tech sector, there are currently an estimated 2,850 Full-Time Equivalent (FTE) employees. This is an increase of 30% (650 people) since last year's report.

### Investment Performance:

– There has been strong increased interest in safety tech by the investment community, with a record £63m raised in 2021 across 16 deals.

– The sector continues to mature, as reflected by the increasing scale of Series A and venture stage investments in safety tech scale-ups. For example, in 2021, SafeToNet raised £15m, Vault Platform raised £6m, and Cyacomb raised £5m. Additionally, in early 2022, Logically raised £18m, Pimloc raised £5.5m and CheckStep raised £3.6m.

### Support for the Safety Tech Sector:

– Membership of the Online Safety Tech Industry Association (OSTIA) saw a 45% increase, to 44 organisations from across the globe. Support from the UK government included the £555,000 Safety Tech Challenge Fund, and further funding came through the US government-backed US-Paris Tech Challenge. In March 2021, DCMS hosted the world's first safety tech conference and in November, the UK and other G7 countries participated in the inaugural G7 Safety Tech Summit.

# Introduction

In May 2020, the Department for Digital, Culture, Media and Sport (DCMS) published 'Safer Technology, Safer Users: The UK as a World-Leader'in Safety Tech'.

This was followed by a 2021 update, published in May 2021.

This research provided an overview of the UK's online safety technology sector, identified considerable growth in recent years, and highlighted a range of innovative companies focused on tackling online harms through a range of technical solutions.

In April 2022, DCMS commissioned Perspective Economics to update the sectoral analysis figures, to identify how the safety tech sector has grown in the 2021/22 financial year.

This includes exploring the number of businesses now offering safety tech solutions, or engaging with new initiatives such as the Safety Tech Innovation Network.

It also includes an updated estimate of the size of the safety tech sector in the UK, measured through revenue and employment, and a review of the investment landscape.

### METHODOLOGY:

The research team developed a definition for safety tech, including a taxonomy for products and services considered in scope.

The team identified company trading data for the 117 safety tech providers using Bureau van Dijk FAME (for financial metrics), Beauhurst (a research platform that identifies high-growth and high potential firms in the UK, including investment data), and through direct consultation and an online survey of industry members.

The full methodology used for this research is consistent with that set out within Appendix B of the 'Safer Technology, Safer Users' report.

## Definition Recap:

Safety Tech providers develop technologies or solutions to facilitate safer online experiences, and protect users from harmful content, contact or conduct.

### THIS FOCUSES ON FIRMS THAT:

- Often work closely with law enforcement, to help **trace, locate and facilitate the removal of illegal content** online

- Work with social media, gaming, and content providers to **identify harmful behaviour** within their platforms

- Monitor, detect and share online **harm threats** with industry and law enforcement in real-time

- Develop **trusted online platforms that are age-appropriate and provide parental reassurance** for when children are online

- Verify and assure the age of users

- Actively identify and respond to **instances of online harm**, bullying, harassment and abuse

- **Filter, block and flag harmful content** at a network or device level

- **Detect and disrupt false, misleading or harmful narratives**

- Advise and support a community of **moderators** to identify and remove harmful content

## NUMBER OF SAFETY TECH FIRMS ACTIVE IN THE UK

As of April 2021, we have identified 117 registered businesses active in the UK providing safety tech products and services, an increase of 17% in the past year.

This reflects 17 newly identified providers, and includes newly registered safety tech start-ups, as well as existing technology firms that have been identified as now providing safety tech solutions.

The table below sets out the number of safety tech firms by taxonomy area (and includes a definition of each). Please note this reflects the perceived 'best-fit' for each company. However, many companies do offer multiple products and services.

## NUMBER OF SAFETY TECH FIRMS BY TAXONOMY AREA

| TAXONOMY CLASSIFICATION | SHORT DEFINITION | NUMBER OF FIRMS |
|---|---|---|
| System-Wide Governance | Automated identification and removal of illegal content: use of technology to identify and enable the removal of illegal child sexual exploitation and abuse (CSEA) material, and terrorist content including imagery and video. | 14 |
| Platform Level | This includes organisations that support content moderation through identifying and flagging to human moderators for action:<br>• Potentially illegal content or conduct, such as grooming, hate crime, harassment or suicide ideation<br>• Harmful content or conduct which breaches site T&Cs, such as cyberbullying, extremism or advocacy of self-harm | 29 |
| Age Orientated Online Safety | Enabling age-appropriate online experiences through use of age assurance and age verification services to limit childrens' exposure to harmful content, or development of child-safe content. | 15 |
| User Protection | User, parental or device-based products that can be installed on devices to help protect the user from harm. | 15 |
| Network Filtering | Products or services that actively filter content, through black-listing or blocking content perceived to be harmful. This can include solutions provided to schools, businesses or homes to filter content for users. | 15 |
| Information Environment | Flagging of content with false, misleading and/or harmful narratives, through the provision of fact-checking and disruption of disinformation (e.g. flagging trusted sources). | 14 |
| Online Safety Professional Services | Advisory support and implementing technical solutions. Enabling the development of safer online communities and embedding safety-by-design. | 15 |
| TOTAL | | 117 |

Within the last year, there has been growth across all categories (with respect to the number of companies), with firms added including:

- **Pattr** which aims to safeguard users and brands from toxicity and spam in social conversations through the use of AI-driven tools and insights. Founded in Australia in 2014, Pattr has a London office working with UK sports teams, gaming, media, retail and agencies.

- **Nisos** which works with security, intelligence and trust & safety teams to help platforms defend against and respond to advanced cyber attacks, disinformation, and abuse. In 2021, Nisos established a base in Northern Ireland to create a new software development and technical centre.

- **Block Party** which provides tools that are designed to help citizens take greater control of their online experience, and to combat harassment on social media platforms. Block Party established a UK office during 2021.

- **conteX.ai,** a spin-out from London Imperial College, which has developed AI-based content moderation solutions that aim to emulate human understanding in detecting toxicity across text, speech and images.

- **Rewire,** a start-up whose customisable AI solutions seek to keep online communities safe by finding and stopping toxic content.

## LOCATION

The map below sets out the registered locations of the 117 providers identified. We note that there is **continued growth of safety tech across the regions,** as more than half (57%) of firms are based outside of London and the South East. Hotspots continue to include areas such as Edinburgh, Leeds and London. There is also emerging activity in areas such as Greater Manchester, Oxford, Bristol, and Belfast.



## ESTIMATED REVENUE AND EMPLOYMENT

**Revenue:**

**We estimate that total UK safety tech sector revenues for the last financial year have reached £381m.**
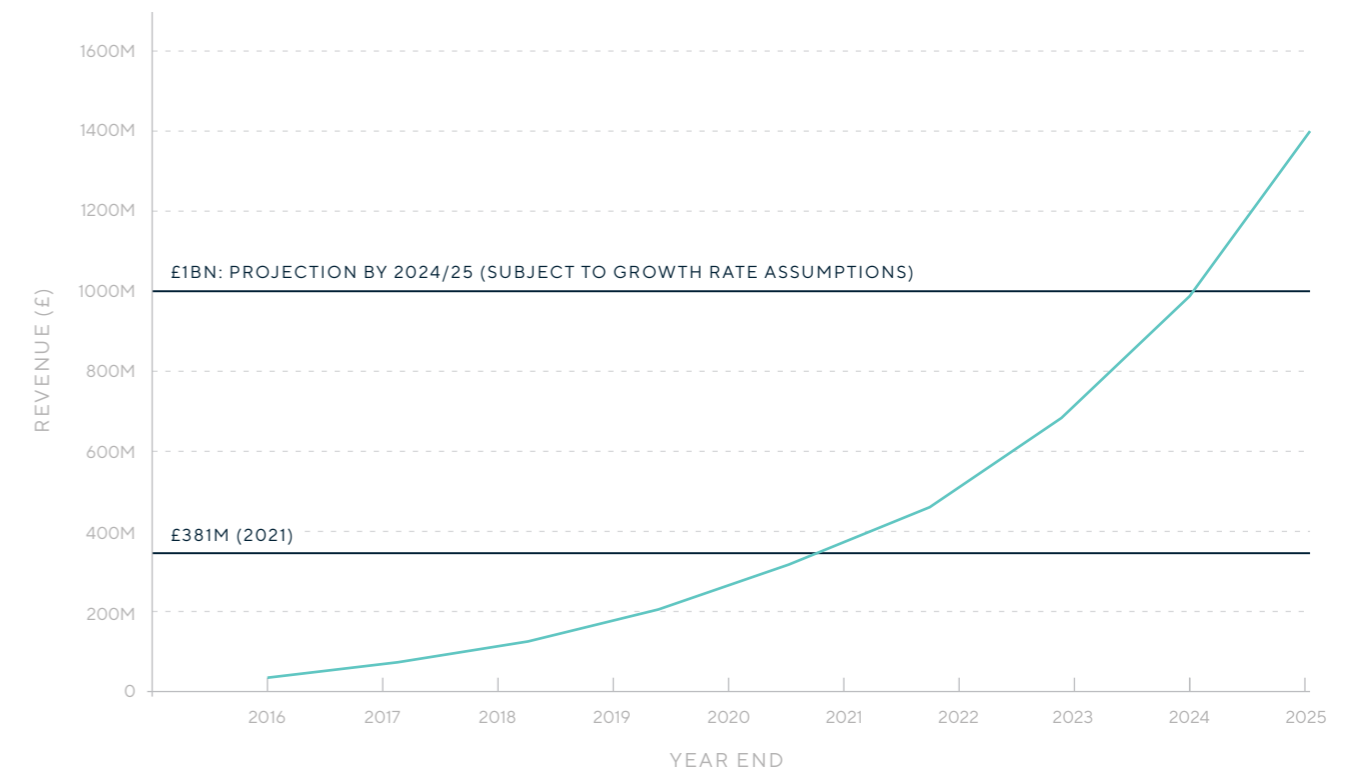
This reflects **an increase of 21% (£65m)** since last year's analysis, and is indicative of a sector that is moving from seed stage to greater maturity.

Overall, this means that safety tech is one of the UK's fastest growing emerging technology sectors. For example, in comparison, the rate of tech GVA contribution to the UK economy has grown on average by 7% per year since 2016.

Based on this year's performance, the sector remains broadly on track to hit its £1bn revenue target by the mid-2020s, as set out in last year's report.

**£1BN REVENUES BY 2024**  ■ Assuming a compound annual growth rate of 35% per annum from 2021



Source: BvD FAME Company Accounts Data, and Survey of Safety Tech firms (2022)

[1] https://technation.io/report2021/

**Employment:**

We estimate that across the safety tech sector, there are currently 2,850 Full-Time Equivalent (FTE) employees. This is an increase of 30% (650 people) since last year's report.

In May 2021, skills and capability research conducted for DCMS[2] highlighted that safety tech startups were **more likely than others to experience successful, longer-term hires,** with the companies studied experiencing an average tenure of three to five years for employees, twice as high as the normal rate for startups.

This high rate of retention was ascribed in the research to the sector's 'compelling mission of keeping users safe online, which results in high retention rates and employees who help access hard-to-reach talent by championing their companies' causes.

## GOING FOR GROWTH

In May 2022, DCMS and Perspective Economics issued a survey to UK safety tech providers asking about their growth expectations and ambitions, to which more than 30 percent of the sector responded.

**We found that the sector is optimistic about its growth potential, and key findings include:**

– 52% of respondents stated their revenues had grown by more than 25% in the last twelve months.

– 91% of respondents expect their revenues will grow in the next twelve months. 61% of respondents expect this revenue growth to exceed 50%, signalling an expectation of rapid growth.

– Safety tech firms are also recruiting for new talent, with 94% expecting to grow their team in the next twelve months. Further, 73% of respondents expect their team size will grow by more than 25%.

– Safety tech firms are also anticipating growth in the number of customers, with 67% of respondents expecting their customer base to increase by more than 50% in the next 12 months.

– Respondents cited social media platforms (55%), gaming and entertainment (49%), education (42%), law enforcement and counter-terrorism (33%), and telecommunications and networks (30%) as highly important markets for their business.

## INVESTMENT IN SAFETY TECH PROVIDERS

As a result of considerable growth within UK safety tech, there has been sustained interest from the investment community.

It remains likely that the UK could see its first safety tech unicorn (a company worth over $1 billion) emerge in the coming years.

2021 was an important year for investment in safety tech firms. The impact of COVID-19 has also raised new markets for some of these firms, driven by factors such as children using devices more at home during lockdowns, and the implementation of technology developed by safety tech firms e.g. ID verification and privacy-by-design to help tackle COVID-19.

## EXAMPLE INVESTMENTS RAISED IN 2021

– Overall, the total external investment raised by the sector in 2021 reached £63m across 16 deals.

– Example investments raised include £30m raised by Faculty, £15.2m raised by SafeToNet, £5.8m raised by Vault Platform, and £5m raised by Cyacomb.

## SUMMARY OF INVESTMENT TO DATE



Source: Perspective Economics analysis of Beauhurst data (2016 – 2021)

## EXPORTS AND INTERNATIONAL ACTIVITY

**The UK is a global market leader in safety tech, with the number of safety tech providers based in the UK being an estimated 25% of the total number of firms worldwide[3].**

Export markets have continued to grow. More than half (57%) of UK safety tech companies currently have an identifiable international presence - an increase of 10% from last year.

This reflects the keen desire among safety tech providers to export and work internationally, in recognition that technologies and solutions developed within the UK can have global relevance and application.

The export potential of safety tech was recognised in January 2022 at the launch of the second edition of the Directory of UK Safety Tech Providers by former DIT Export Minister Mike Freer, who hailed safety tech sector growth as reflective of the UK's standing as a **"science and technology superpower".**

"Fostering an inclusive internet is a moral imperative, and that is why the need and demand for safety technologies across the world is only going to grow", Minister Freer said. "I'm proud that British businesses are spearheading this international movement to bring about a safer internet."

The Directory launch event also saw former head of NCSC Professor Ciaran Martin tell more than 100 global investors and trade specialists that investing in online safety technologies is a "strategic and economic fit for doing the right thing".

"Changes in the way we innovate, the way we market, the way we buy and sell, will help to fix the problem of online harms", Professor Martin said, "and the UK is at the forefront of this." [4]

UK safety tech companies also played a leading role in the inaugural G7 Safety Tech Summit, which took place in November 2021. The summit saw more than 50 global voices from government, academia, non-profit and tech sectors come together to discuss the potential for safety tech to enable safer online environments for all. UK-based organisations represented at the conference included the Online Safety Tech Industry Association, Moonshot and Glitch, with speakers including Professor Mary Aiken and Australian eSafety Commissioner Julie Inman Grant.

> The appetite for transformational technologies in law enforcement is international. The opportunities for online safety products are also international and therefore represent a further export opportunity, potentially at even greater scale.
>
> **– CYACOMB**

UK companies have consolidated their presence in a number of key export markets through the year, including in US, Germany, France, Canada, Italy, Switzerland, Denmark and Australia, as visibility of the safety tech sector increases in G7 countries and beyond.

### GERMANY

*"We need multiple, individual solutions for different platforms, systems, applications, devices and types of content. This is why it is important that a diverse ecosystem of safety tech providers flourish in Europe." [5]*

**– Marie Nietan, Head of Media Policy, Bitkom**

The past year has seen safety tech steadily rise up the agenda in Germany, with UK safety tech companies supporting expert roundtables on the potential of the sector with organisations such as Bitcom, Impact Hub Berlin and the North Rhine Westphalian Cyber Crime Agency.

UK safety tech companies partnering with German organisations include Cyacomb, whose products detect child sexual abuse imagery, and SafeToNet, which has set up more than 70 "SafeToNet Family Stores" across Germany selling mobile phones and network contracts bundled with SafeToNet's cyber safety software.

### USA

*There's a growing market for solutions that address [online] risks and multifold opportunities for investors like Paladin, tech platforms, entrepreneurs, and policymakers to get behind these solutions." [6]*

**– Mike Steed,
Founder and Managing Partner
of Paladin Capital**

Research commissioned by Paladin Capital[6] in early 2022 found evidence of a growing and thriving safety tech sector in the United States, delivering solutions to "protect people from psychological risks, criminal dangers and online harm."

UK-headquartered Yoti, which has carried out more than 500 million age-checks on behalf of its partners worldwide, is working with some of the largest US global platforms and websites, including social media, live streaming, gaming, retail and e-commerce. Factmata, whose products help companies detect disinformation, is working with a leading US PR agency to help companies protect their audiences and brands. SafeToNet, having acquired US company NetNanny, now has a significant US presence and Cyacomb has more than 50 US and Canadian customers, including city police departments and federal agencies.

## AUSTRALIA

By embedding a 'safety lens' into current and future companies we will not only ensure that we bolster and drive-up standards of safety within companies themselves, but that this will also act as a catalyst to building a thriving and responsible technology ecosystem." [7]

– Julie Inman Grant,
Australia eSafety Commissioner

Australia's Online Safety Act 2021 has provided the Australian eSafety Commissioner with substantial new powers to protect all Australians across most online platforms and forums where people can experience abuse or be exposed to harmful content.

UK safety tech companies helping Australian organisations create safer platforms include GoBubble, which is partnering with A-Leagues and Professional Footballers Australia to protect their social media channels from hateful comments.

## SUPPORTING THE SAFETY TECH SECTOR

The 2020 Safety Tech Sectoral Analysis report[8] also set out a range of recommendations to help grow the safety tech ecosystem relating to:

– A need to promote and increase awareness of the UK safety tech sector

– Supporting safety tech firms to access the right forms of capital for growth

– Getting the policy landscape right – with government providing leadership, guidance and appropriate legislation to address online harms

– Enabling improved access to data, including promotion of data-sharing, privacy by design, and collaborative partnerships

– Supporting innovation, cross-disciplinary research and development in safety tech

These recommendations have been heard, and a range of actions have been taken forward by government, industry and academia in the last year. These include:

### April 2021

– G7 publishes its Internet Safety Principles, which include a commitment to collaborate on safety tech.

### May 2021

– Publication of the updated annual UK Safety Tech Sector Analysis 2021, demonstrating UK annual sector revenue growth of 39%.

– 'Safety Tech in the UK: Skills and Capabilities' report published, highlighting talent needs in the UK safety tech sector.

– The draft Online Safety Bill is published, establishing a new UK regulatory framework to tackle harmful content online.

### September 2021

– Launch of the UK government Safety Tech Challenge Fund, which provides funding to innovative companies to demonstrate how child sexual abuse material can be detected in end-to-end encryption environments whilst upholding user privacy.

– Two UK companies, Institute for Strategic Dialogue and Global Disinformation Index, are awarded funding by the US government to develop innovative solutions to tackle disinformation through the US-Paris Tech Challenge.

### October 2021

– Second anniversary of the launch of the Safety Tech Innovation Network. The network currently (May 2022) has more than 800 members.

– Nominet announces £5.1m funding of the UK Safer Internet Centre, helping to support operation and development of the centre's online child sexual abuse material reporting tools.

### November 2021

– The UK hosts the inaugural G7 Safety Tech Summit. The summit saw more than 50 global voices from government, academia, non-profit and tech sectors come together with representatives from countries including US, Canada, Germany, Japan, Italy, Australia and the EU, to discuss the potential of safety tech.

– The Future Tech Forum includes an in-depth panel on the role of technology in online safety.

### January 2022

– Launch of the second edition of the DCMS/DIT UK Safety Tech Providers Directory.

### February 2022

– Launch of the pilot Safety Tech Academy, a scheme to help UK safety tech SMEs scale up their businesses.

### April 2022

– The UK Safety Tech Association (OSTIA) marks its second birthday, announcing a 45% membership increase during the year. More than 38% of all UK safety tech businesses are now OSTIA members.

### May 2022

– Online Safety Bill passes Committee Stage.

[7] https://www.safetytechnetwork.org.uk/australias-esafety-commissioner-gives-keynote-address-at-g7-safety-tech-summit/
[8] https://www.gov.uk/government/publications/safer-technology-safer-users-the-uk-as-a-world-leader-in-safety-tech

Perspective Economics

48-60 High Street
BT1 2BE