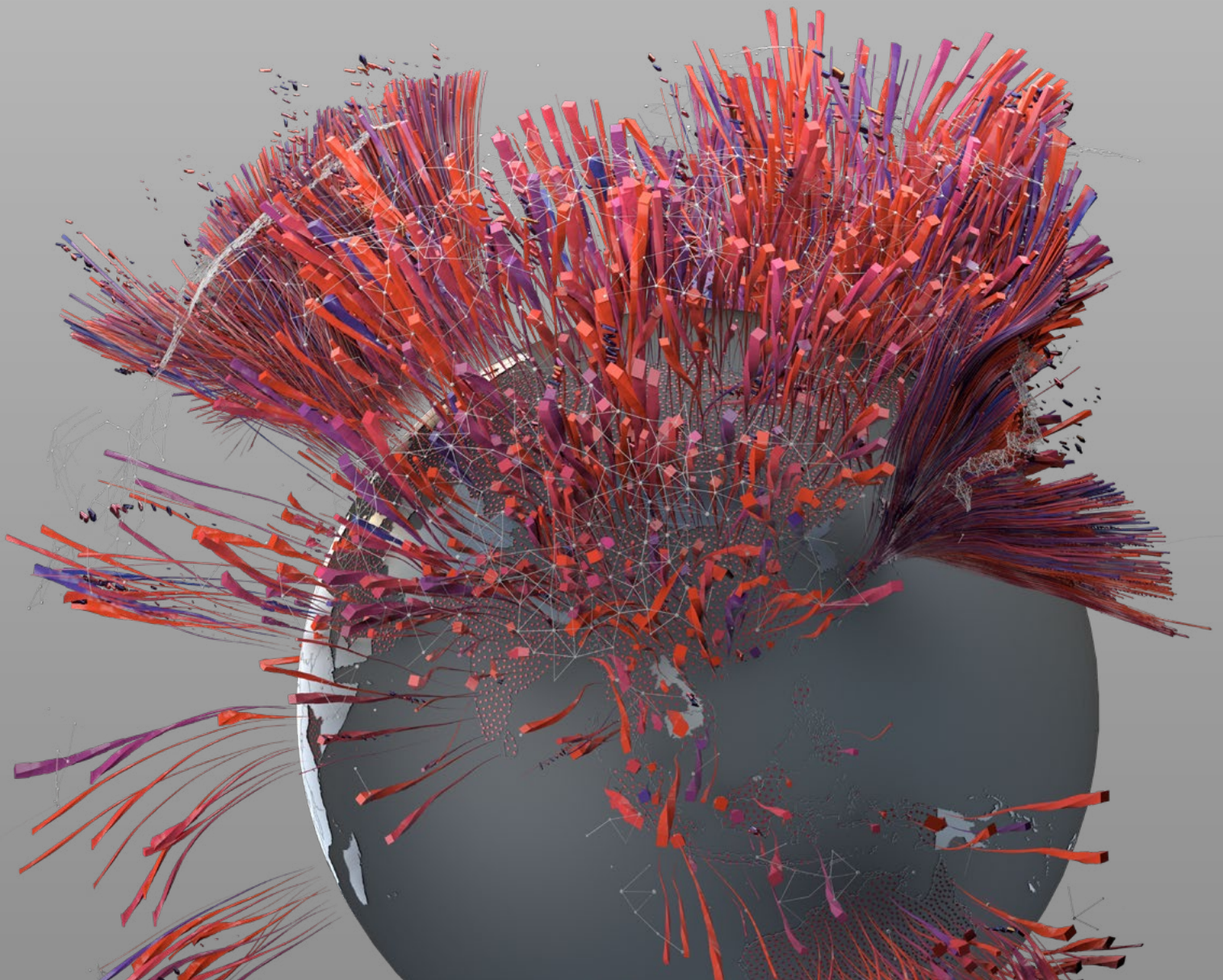


A global study

MAPPING THE DIGITAL ATTACK SURFACE:

Why global telcos are struggling
to manage cyber risk



Introduction

There's a simple but powerful dynamic driving cyber risk for most telcos today. The more they invest in digital infrastructure and tooling to drive sustainable growth, the more they might expose themselves to attack. According [to experts](#), digital transformation during the pandemic pushed many organisations over a technology “tipping point” from which they will never return. The telecommunications sector is certainly no different. In short, the future of telecoms is digital—from hybrid working to cloud-powered customer experiences. That creates a challenge for CISOs.

This challenge is often articulated in terms of the digital attack surface—that is, the collection of applications, websites, cloud infrastructure, on-premises servers, operational technology (OT) and other elements which are often exposed to remote threat actors. The risks associated with attack can be mitigated if telcos have visibility into all of these assets, calculate their risk exposure accurately and then take steps to secure the attack surface. Yet many struggle to do so.

To find out more, Trend Micro commissioned Sapio Research to carry out a survey in April 2022. It polled 241 telco business and IT decision makers as part of a wider survey of 6297 decision makers across 29 countries: the UK, Belgium, Czech Republic, Netherlands, Spain, Sweden, Norway, Finland, Denmark, France, Germany, Switzerland, Austria, USA, Italy, Canada, Taiwan, Japan, Singapore, Australia, India, Poland, Hong Kong, Malaysia, Philippines, Indonesia, Mexico, Colombia, Chile.



6,297

IT security decision makers



29

countries

How malicious actors target the attack surface

As the latest Trend Micro [annual cybersecurity report for 2021](#) highlights, threat actors deploy a range of tactics, techniques and procedures (TTPs) to target various elements of victim organisations' corporate attack surface. These included:

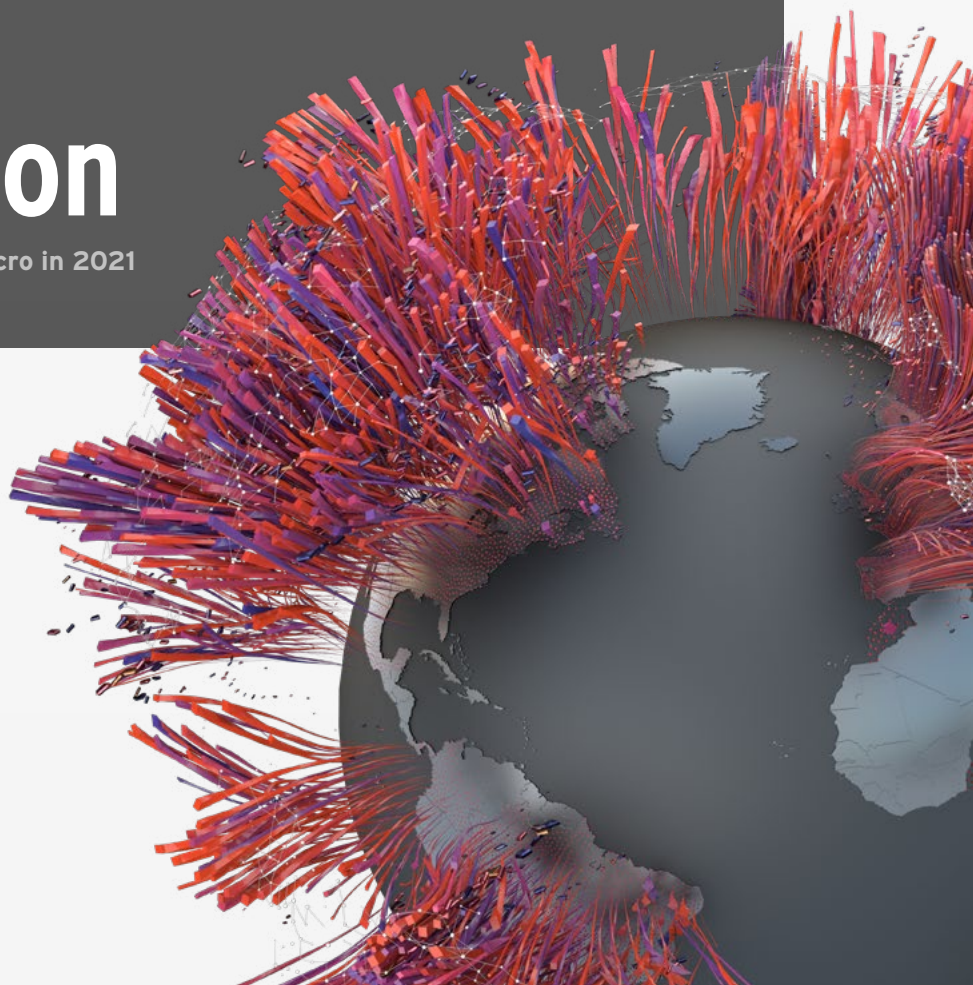
- Email inboxes
- IoT endpoints
- Mobile applications
- Remote desktop protocol (RDP) endpoints
- Virtual private networks (VPNs)
- PCs
- Websites
- Servers
- Certificates
- Public cloud services
- Supply chain infrastructure and services

They do so via phishing, vulnerability exploits, compromise of misconfigured services and other techniques—to deploy ransomware, banking Trojans, info-stealers, botnets, and much more. And they were astonishingly persistent last year. Trend Micro alone blocked over 94 billion such threats for customers in 2021. Many other organisations were doubtless not so lucky.



94 billion

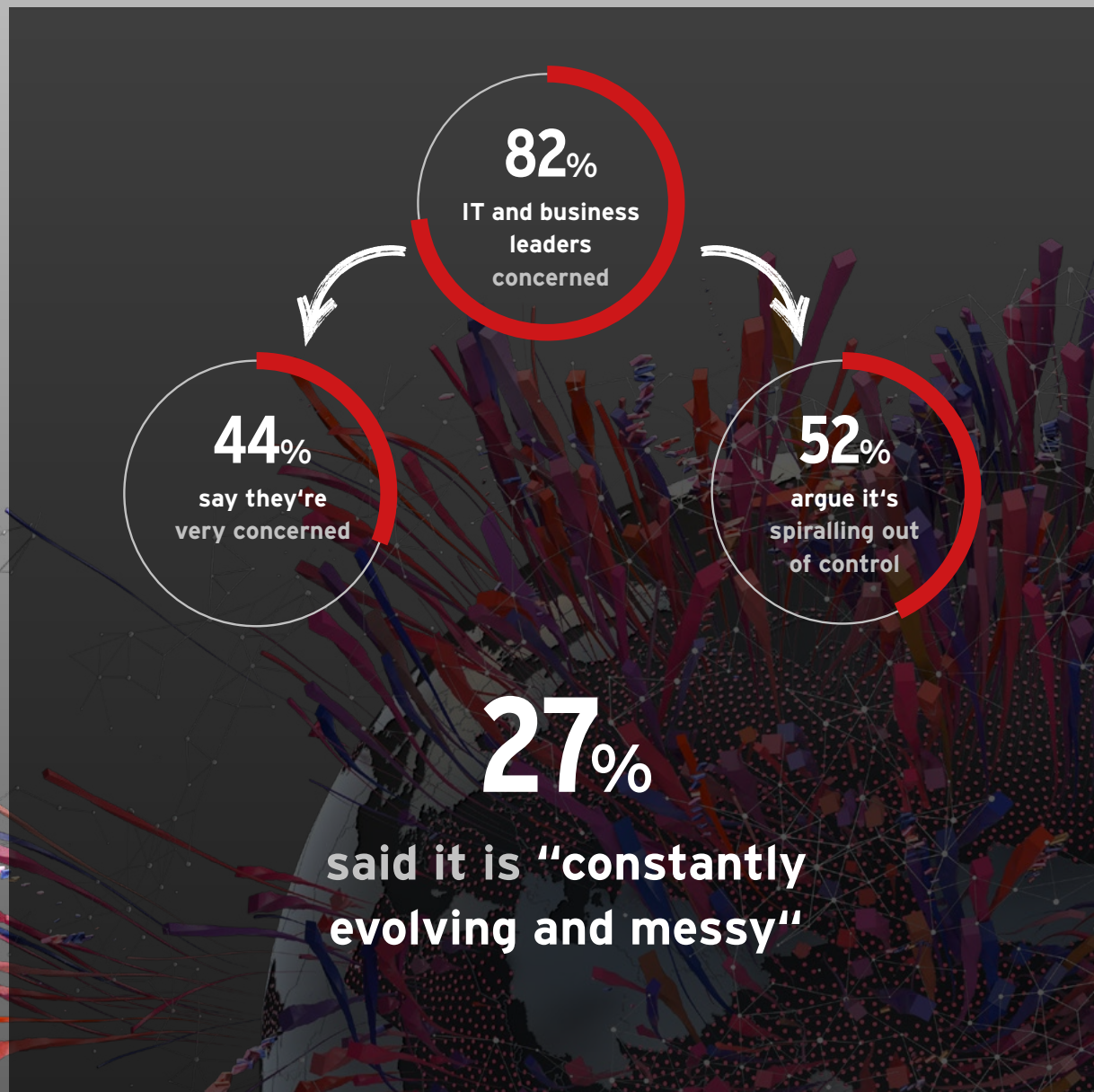
threats blocked by Trend Micro in 2021



Telcos are concerned

With stats like these, it's perhaps not surprising that 82% of IT and business leaders we polled from the sector are concerned with the size of their digital attack surface. Over two-fifths (44%) say they're "very concerned". Yet there's more. Some 52% go even further, arguing that the attack surface is spiralling out of control.

There's a sense that major investments in IT modernisation over the past few years have created a momentum that is increasingly difficult to manage. When asked to describe their attack surface, over a quarter (27%) of telcos claimed that it is "constantly evolving and messy". This hints at the challenge their security teams have: an attack surface that is expanding faster than their ability to control it. In fact, only two-thirds (65%) of respondents claim to have completely defined their attack surface. Gaining visibility of this kind is surely the first step towards effectively mitigating risk.



The visibility challenge

Unfortunately, over two-thirds (68%) of the IT and business leaders we spoke to admit they have blind spots in trying to secure their attack surface. On average, responding telco organisations have only an estimated 60% visibility into their total attack surface—among the lowest of any sector. Yet even this is only a best guess. The likelihood is that it is even lower.

End user assets are considered to be the area where organisations have the least insight (40%), followed by cloud environments (35%) and network assets (25%). In the cloud, change is the only constant. VMs, containers and other assets appear and disappear with mind-boggling frequency. Business users may bypass IT altogether when setting up new digital initiatives. And continuous innovation from platform providers means the whole edifice is built on constantly shifting sands.

Organisations operating across borders are also impacted. Almost three-quarters (72%) of telcos claimed that the fact they are global makes managing the attack surface more challenging. Yet a quarter (25%) are still mapping their environments manually, and 29% are doing it regionally, which runs the risk of creating information silos.

Let's run down some of those key reasons why attack surface visibility is so challenging today:

- Organisations don't have the right tools to gain visibility into all their assets
- CISOs and their teams have too many tools, creating information silos
- Opaque supply chains
- An environment in constant flux: especially in the cloud where assets are dynamic and ephemeral
- The sheer size, complexity and distributed nature of modern IT environments
- Constant technology innovation, especially from cloud vendors
- Business units investing in new products and services without telling IT (shadow IT)
- An explosion in remote working endpoints and shadow IT during the pandemic

Why is it so difficult to understand and manage cyber risk?

35%

said it is simply
hard to quantify

34%

claim they don't have
the resources to do so

39%

said that they have
too many alerts

Many of these challenges were borne out by responses to our question: “Why is it so difficult to understand and manage cyber risk?” The largest number of respondents said too many alerts were the problem (39%). A further 35% said it was hard to quantify, and 34% complained of compliance pressures. Complaints of alert overload illustrate the need for a unified platform-based approach. A fifth (20%) spoke of data silos.

The problem with managing risk

The end goal of gaining visibility and control of the digital attack surface is ultimately to better understand and manage cyber risk. Yet over three-fifths (61%) of telcos we spoke to admit their method of assessing risk exposure isn't sophisticated enough. Just 59% claim to have a completely well-defined process for this.

Part of this is likely down to a lack of investment in the right tools. Yet strategy and process also matter. A third (33%) of respondents admit to only reviewing or updating risk exposure every month or less. Given the pace of technology innovation, the rate of digital investment and the velocity at which the threat landscape is evolving, regular assessments are critical to full visibility and improved control over the attack surface.

Building a more risk-aware organisation

So how can telecoms CISOs build a more risk-aware organisation?

It comes down to three important steps:

- 1) Gain visibility into all assets and attack vectors
- 2) Use that data to continuously calculate risk exposure
- 3) Invest in the right controls to mitigate that risk

The benefit of a platform-based approach here should be clear. If the platform is extensive enough to cover the entire attack surface—from email and endpoints to networks and the cloud—it will help to eliminate data silos and provide comprehensive visibility into assets. That same platform could be configured to deliver continuous protection of those assets via prevention, detection and response tools and techniques, to minimise security gaps and improve decision making.

A platform-based approach will not only reduce expenditure on renewing and managing point products, it also saves stretched IT teams time and effort—freeing them to work on high value proactive security tasks rather than swivel-chair fire-fighting.

To find out more, head to www.trendmicro.com



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The global shift of Trend Micro customers from on-premises to SaaS-based security. **Created with real data by artist Brendan Dawes.**