

Energy survey 2023

The energy crisis:

Is it hurting enterprise networks?





Sustainable transition: accelerator or brake?

The current energy crisis is hitting businesses hard all around the world. We wanted to find out more about the impact it is having on network operations and, in particular, what effect it has had on the wider network sustainability agenda. Is it accelerating the transition to a greener network future, or slowing it down?

Our survey reached out to senior decision-makers across a range of industry verticals – from the manufacturing and pharmaceutical industries to financial services and IT. The respondents have a decision-making role in large companies (4000+ employees) in the US, UK, France and Germany.



Contract or not, the only way is up!

With energy prices escalating across the globe, most businesses are having to pay more for the energy they use. More than half of the businesses surveyed (58%) are seeing **energy price increases imposed on top of existing contract terms**, not just when contracts are renewed.

58%





45%
significantly
stressed about
energy costs



The research finds that 45% of leaders have suffered significant stress as a result of the recent surge in the cost of energy for their network operations, with **14% admitting to actually losing sleep over it**. And many leaders have concerns over the immediate future with 35% worrying about the ongoing impact of high costs in the year ahead.

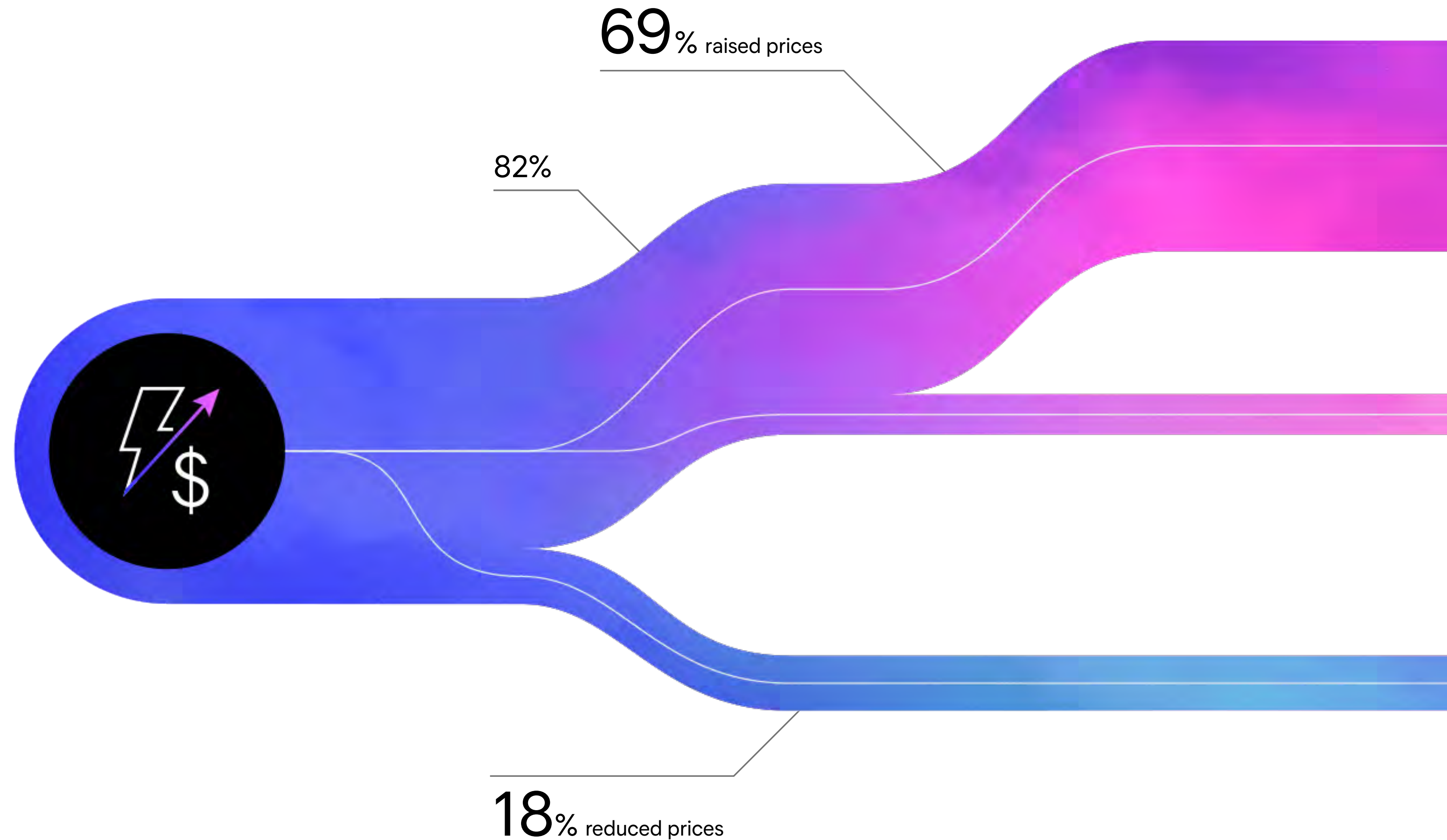
Our survey revealed that **escalating energy prices are clearly leaders' biggest worry** from a network operations perspective – with 53% putting it as their prime concern – but many are also anxious about possible energy supply shortages, with 43% citing this as their second-biggest concern.



Higher energy costs are being passed on

Higher energy prices are having a major knock-on effect. An overwhelming **82% of leaders say increased energy costs in the network have had a medium or high impact on the way they price their own services**, with 69%, raising their own prices as a result – effectively passing on some or all of their heavier cost burden.

Surprisingly, **18% say they have reduced prices** to their customers, perhaps swallowing the additional costs to boost competitiveness in a distressed business environment.





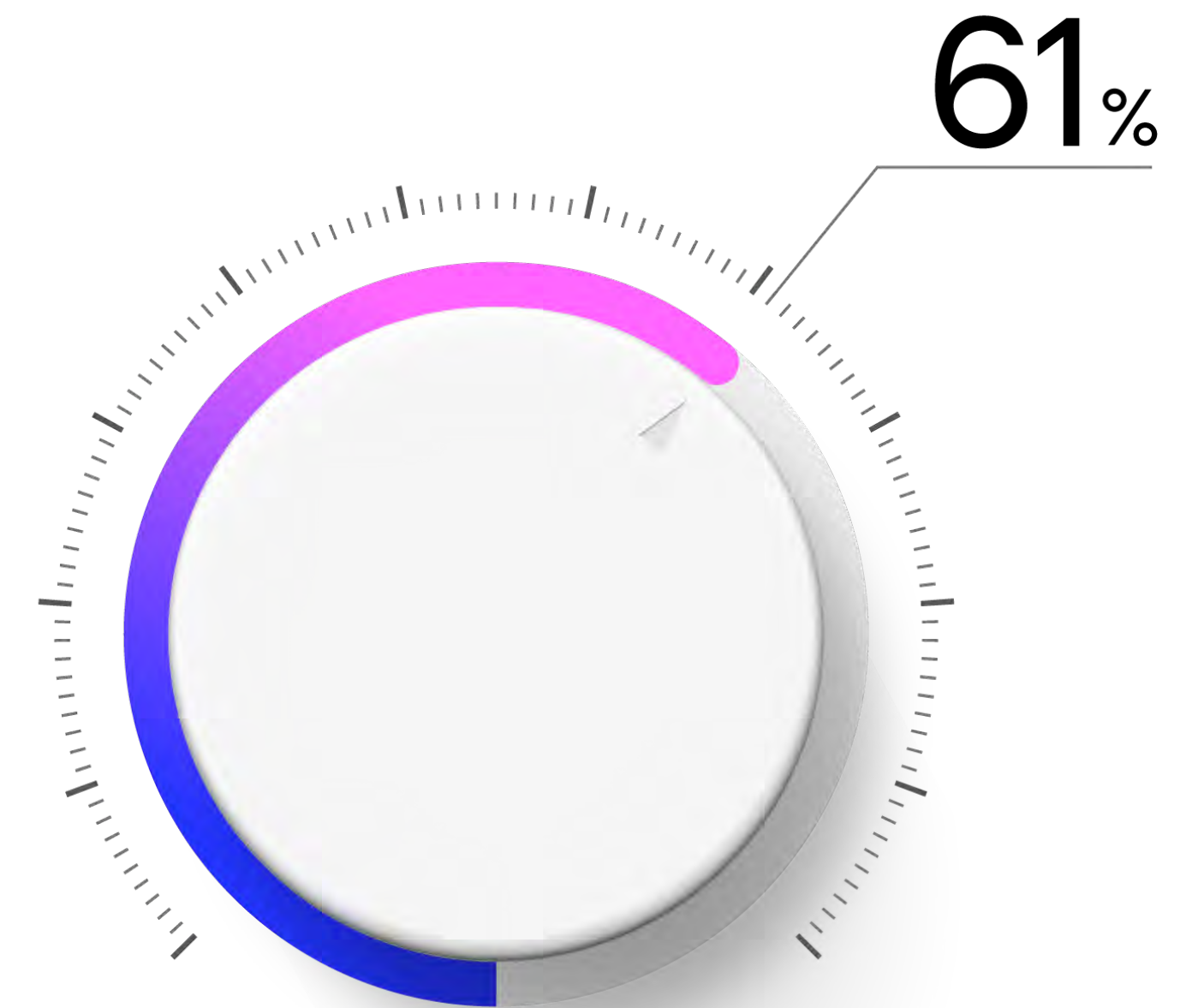
Scaling up to save

The twofold blow of high energy prices and uncertainty over supply has seen businesses striving to make their network operations more energy efficient. Importantly, however, the vast majority are **doing so whilst trying to maintain business continuity** or even scaling up their operations, rather than by cutting back on service capacity.

It may well be impractical for them to reduce their use of data centers, for example, and only 11% admit to 'consuming less by doing less'.

A noteworthy increase in network investments

The quest for improved energy efficiency has, in fact, spurred 61% of businesses to increase investment in their network operations.





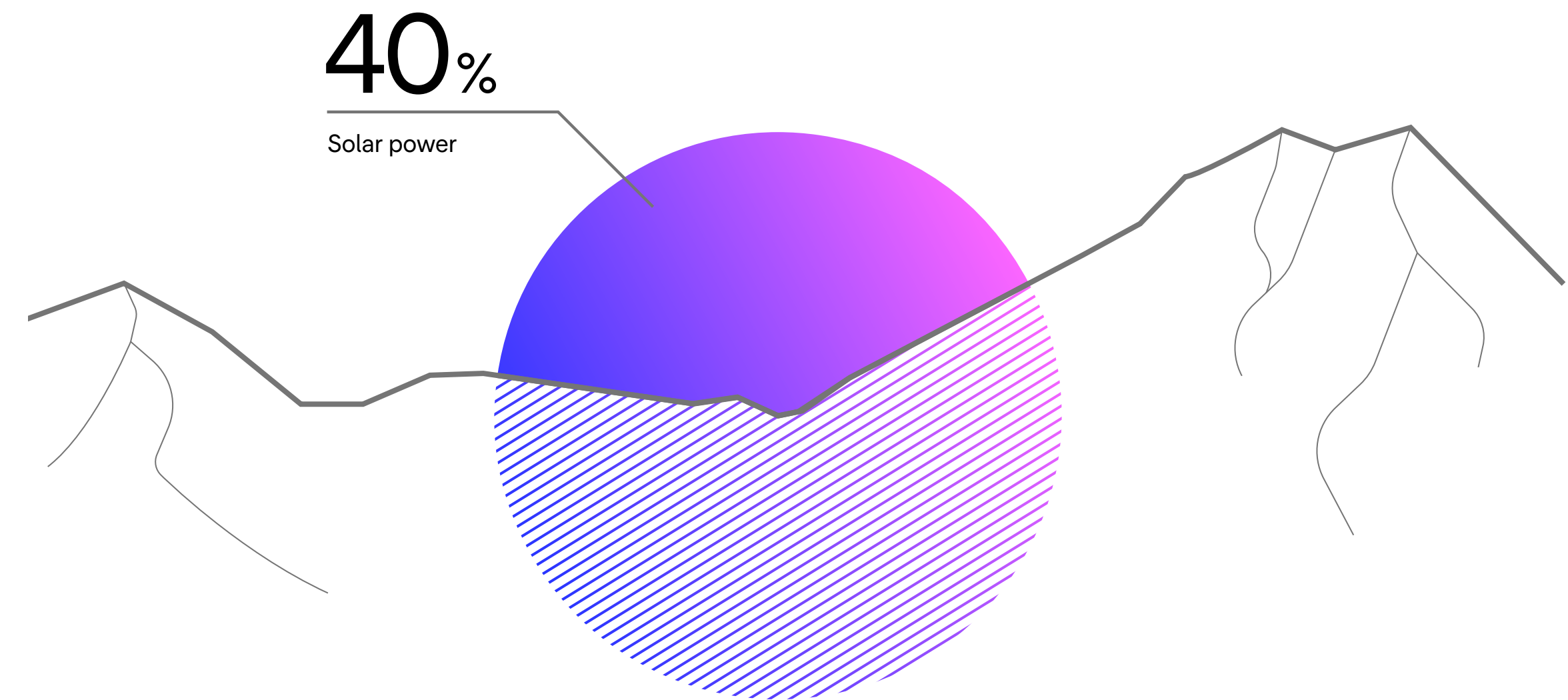
Over 50% speeding up their sustainability efforts

Alongside enhanced energy efficiency, another positive effect of the energy crisis has seen **over half of businesses speeding up and strengthening their network sustainability efforts**, with 40% seeing clean, renewable solar power as having the greatest potential to fulfil future needs.

That said, some cause for concern remains from the finding that **29% of businesses have seen their sustainability efforts impeded by the energy crisis**.

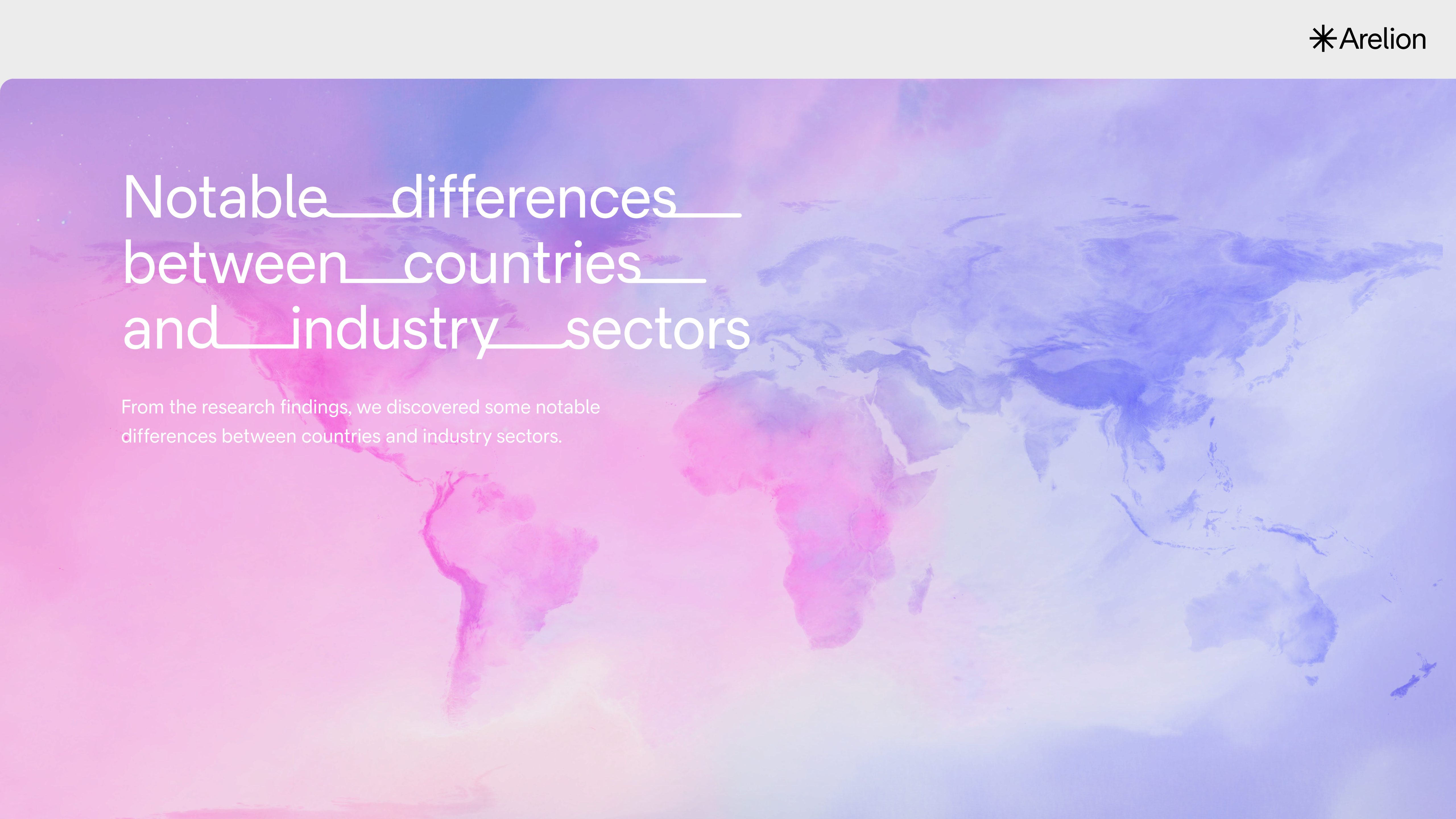
Solar power – the energy source with the greatest potential

Solar power is believed to have the greatest potential to secure the energy needs of future network operations.



Notable differences between countries and industry sectors

From the research findings, we discovered some notable differences between countries and industry sectors.





Regional variations

It is striking that **the work/life balance of US leaders seems more affected by the energy crisis** than that of European leaders, with 29% losing sleep in the US.

This could simply be down to the 'always on' business culture of the US, with leaders more prone to taking their work home with them, rather than a major difference in the impact of the crisis.

Leaders losing sleep
over the energy crisis





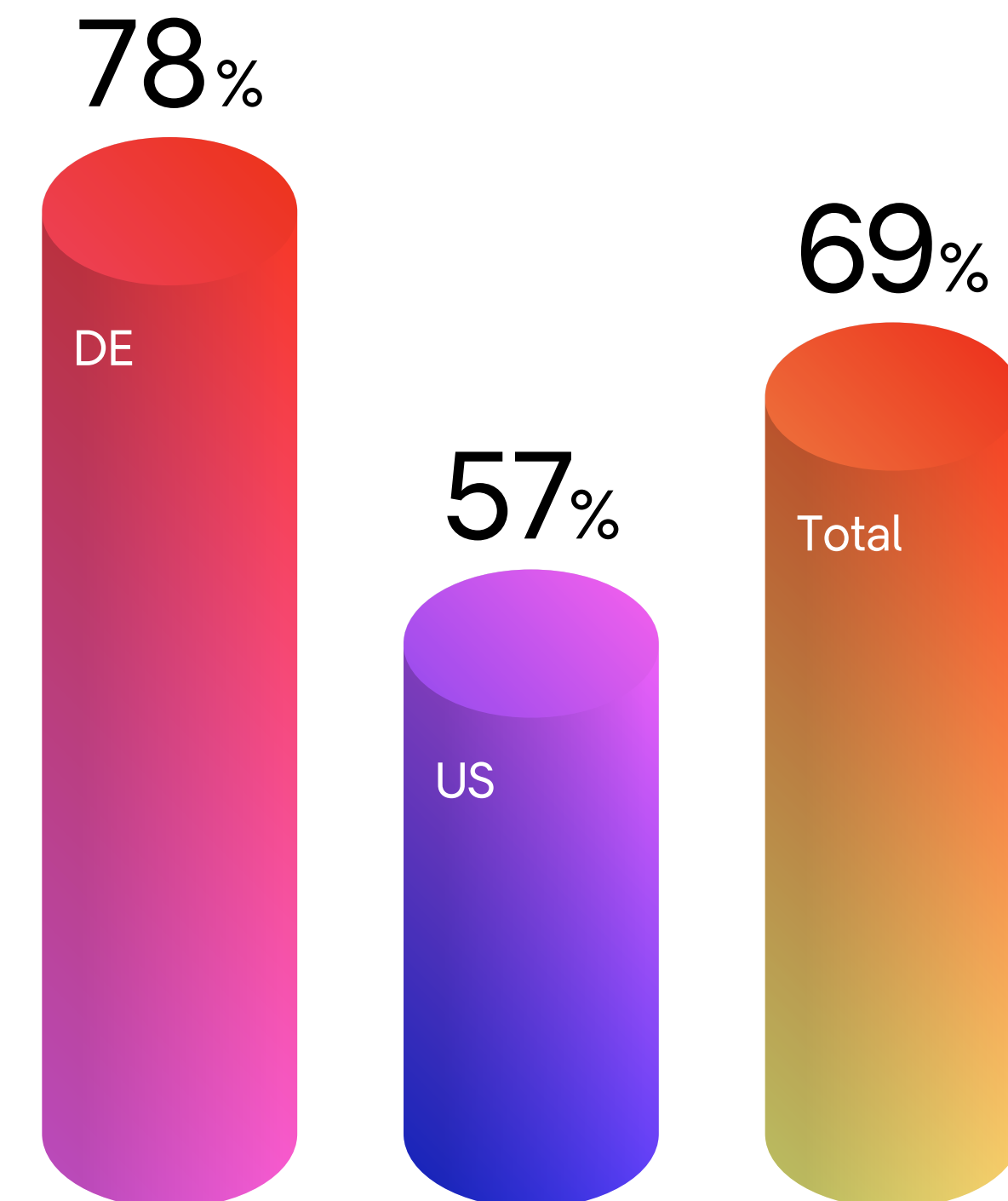
Worries about supply in the US and pricing in Europe

It is also noteworthy that **leaders in the US are more anxious about supply problems than higher prices**. In contrast, higher prices are the key issue for European businesses' network operations – with concern peaking among German leaders at 66%. This difference could stem from the US's relatively rich internal energy resources, including oil and shale gas, which have moderated price increases there.

In contrast, Germany has historically been dependent on Russian gas, which it can no longer rely upon and which has largely been replaced recently by shipments of liquefied natural gas from global suppliers.

This could explain why **fewer US businesses have pushed up their own prices to customers**, compared with those in Europe, particularly Germany where 78% have done so.

Businesses passing on higher energy prices





US businesses are investing
more in energy efficiency
and sustainability

US vs. European mindset

US businesses lead Europe in increasing investment to make their network operations more energy efficient, with 73% doing so. This falls to 69% in Germany, 49% in the UK and 48% in France. Overall, 65% of US decision-makers say they are boosting their sustainability efforts – as opposed to 55% in Germany, 42% in France and 40% in the UK.

Again, cultural differences may be playing a part here, with the US's reputation for a 'can do' business mindset leading to **higher levels of investment and sustainability commitment**. But other factors could also be at play.

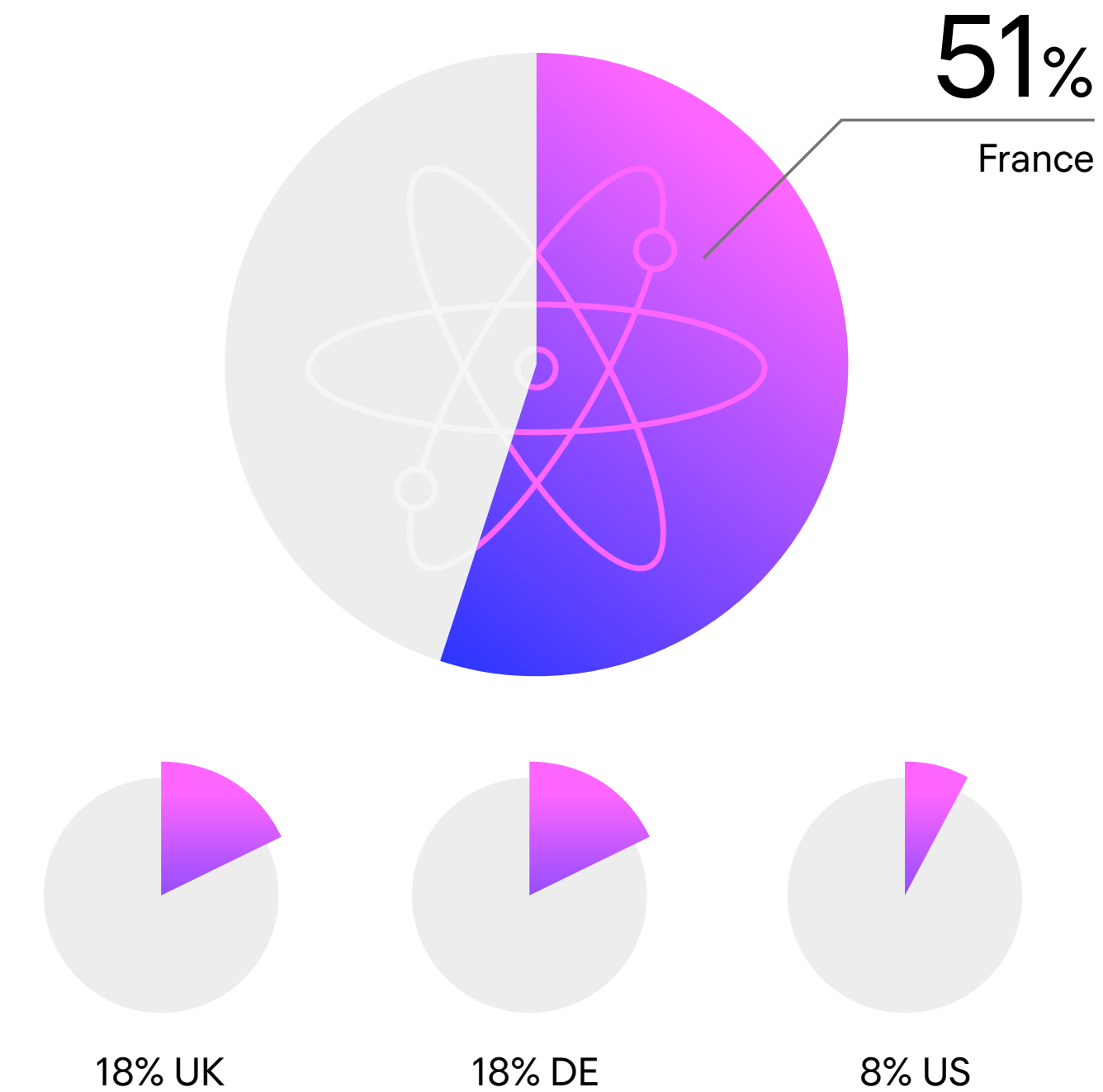


Nuclear power rules in France

While businesses in most countries generally see solar power as the way of the future for powering their network operations, **the notable exception is France, where 51% of leaders see nuclear power as having most potential – compared with a maximum of 18% elsewhere.**

This seems to reflect France's long history of investment in nuclear power production, relatively high dependence upon it, and cultural pro-nuclear acceptance.

See biggest potential
in nuclear power





Industry insights

A relatively high 20% of IT services leaders admit to losing sleep over the recent surge in energy costs. However, **concerns over the immediate future are most evident in the banking industry**, with half of leaders in this sector worrying about the ongoing impact of high costs on their operations in the year ahead.

Efforts to make **network operations more energy efficient are most clearly seen in manufacturing**, where 58% of businesses ‘consume the same, but try to do more by working more efficiently’, and 65% have increased investment in this area.



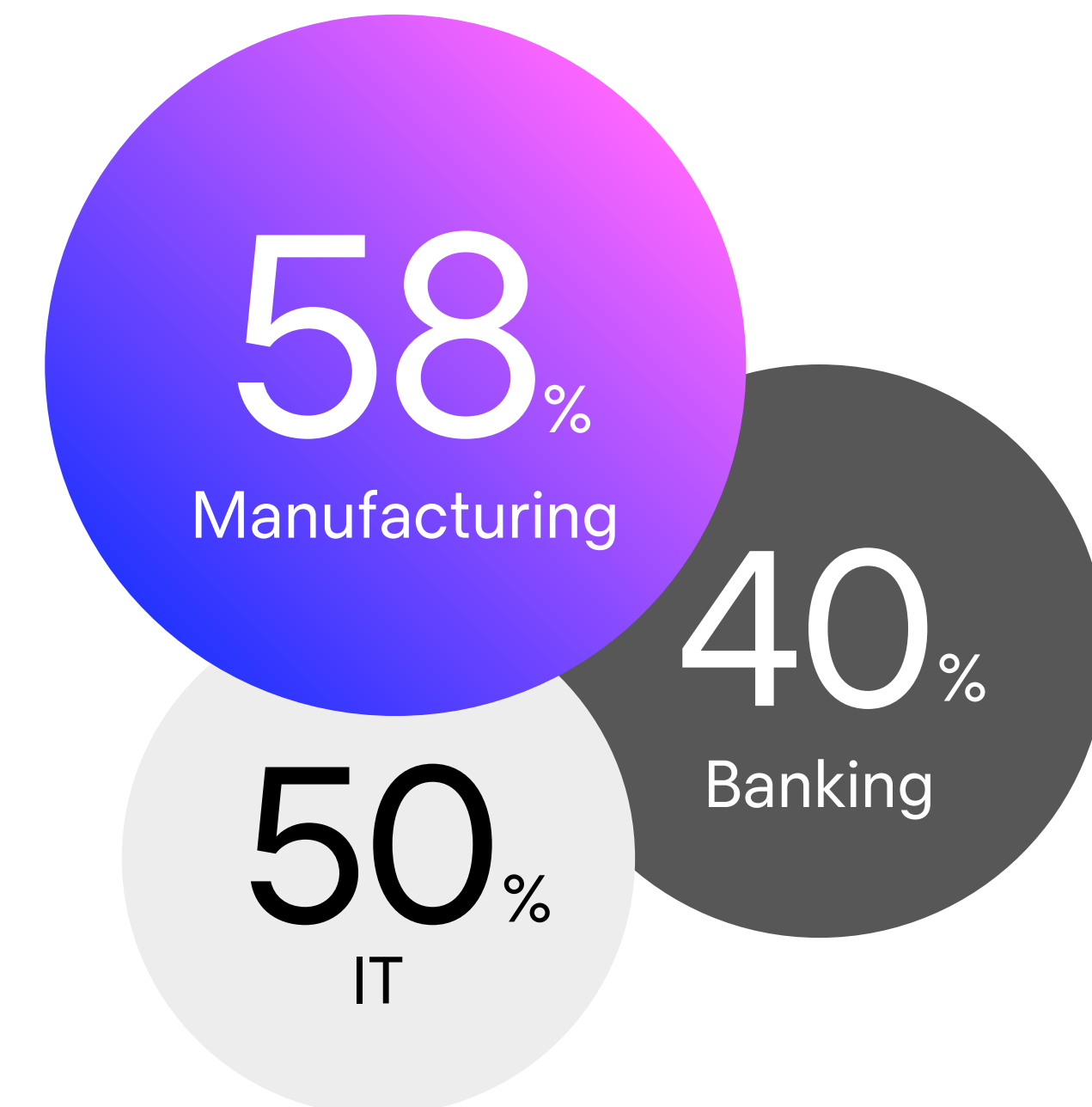


Manufacturing efficiency

Manufacturing may be where the greatest opportunities for energy efficiency lie. **Manufacturing industry is a major energy consumer and network energy is generally only a small part of the overall power it draws** – especially in ‘heavy’ industries. Opportunities to improve energy efficiency (both in terms of cost and consumption) in this vertical are significant, and network energy efficiency can undoubtedly benefit from overall improvements.

In contrast, it is probably more **difficult for banks or IT services businesses** to reduce their existential dependence on critical network and data center infrastructure, and improvements in efficiency are often harder to achieve. This could explain why we see the greatest impact of higher energy costs on the work/life balance of leaders in these sectors – they may feel stressed by how little they can do.

Industries that consume the same, but try to do more by working more efficiently





The energy crisis isn't all bad

The majority of manufacturers (60%) are seeing **a positive impact from the energy crisis on their sustainability efforts** within their network, a higher proportion than other sectors.

Manufacturing is also the most bullish sector on the future potential of solar energy to power their network operations.





Conclusions

Impact varies across industry verticals

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The business impact of network energy consumption varies across different industry verticals and is ultimately far greater for businesses whose networks are a significant part of their operational expenditure. Network operators are particularly vulnerable to a volatile energy market. As a large global network operator ourselves, we are challenged by these increasing costs. With 15% of our production cost being energy-related, increased energy costs hit especially hard.

Energy concerns reflect national legislation & culture

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National energy legislation, production and policies have a large impact on attitudes to the energy crisis. There are clear differences in the impact of energy costs and supply across different geographical regions.

Crisis accelerates transition

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The transition towards more sustainable networks has hastened as a result of the energy crisis. Investments in power efficiency are shortening the upgrade cycle for network infrastructure.

Solar power is a surprise

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The view that solar power will fuel the networks of the future is puzzling, especially considering the intermittent nature of solar power. Successful network operations depend upon a reliable and consistent source of energy, and until we see a paradigm shift in battery technology, solar and wind power are essentially just complementary power sources that serve to reduce the costs and carbon footprint of a network.

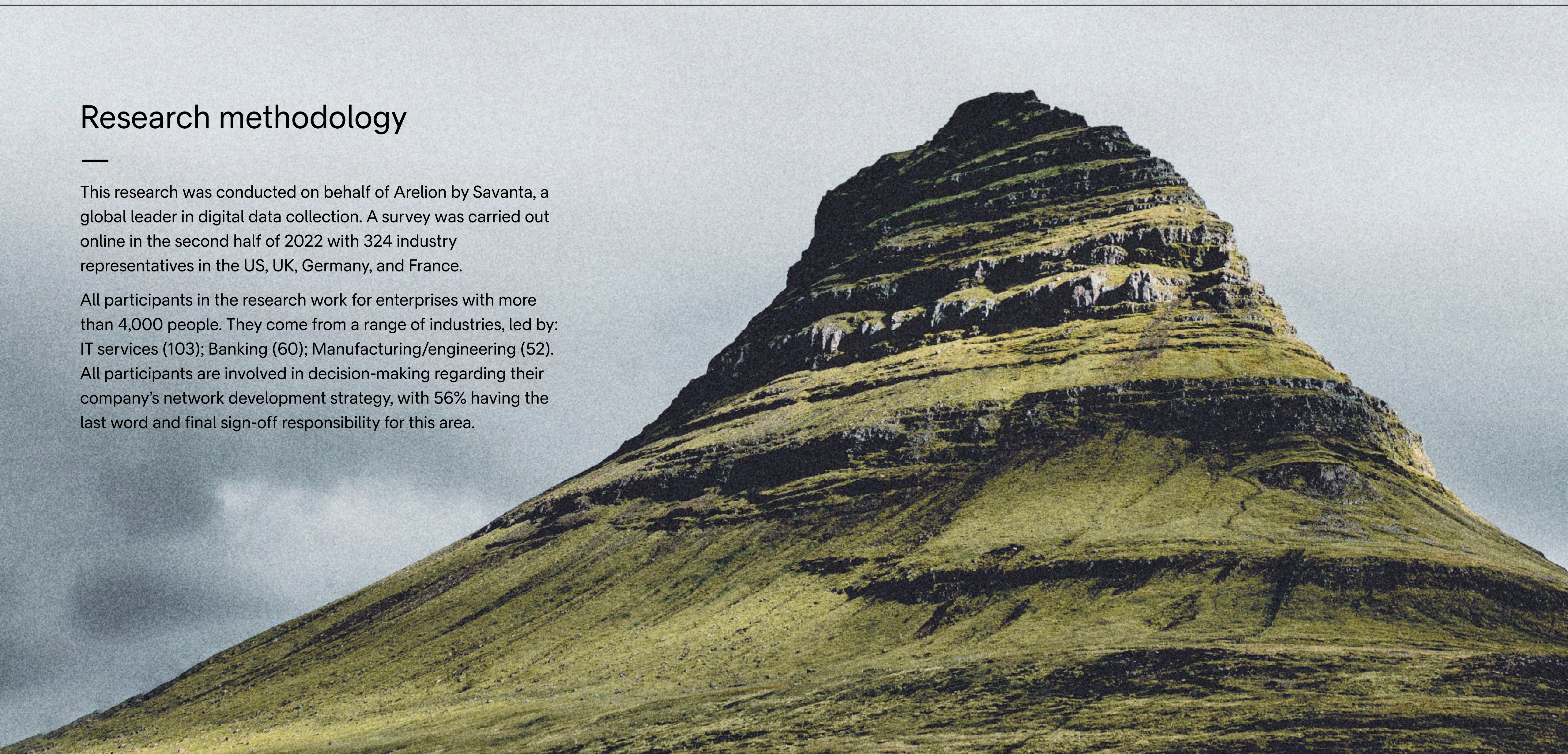
Although survey respondents were asked specifically to comment on energy from a network operations perspective, overall energy considerations may, of course, have colored the final results.



Research methodology

This research was conducted on behalf of Arelion by Savanta, a global leader in digital data collection. A survey was carried out online in the second half of 2022 with 324 industry representatives in the US, UK, Germany, and France.

All participants in the research work for enterprises with more than 4,000 people. They come from a range of industries, led by: IT services (103); Banking (60); Manufacturing/engineering (52). All participants are involved in decision-making regarding their company's network development strategy, with 56% having the last word and final sign-off responsibility for this area.





About us

Formerly Telia Carrier, Arelion is a leading light in global connectivity services. We've been keeping the world connected since 1993 and today our global IP backbone, AS1299, is ranked number one in the world.

Our network spans Europe, North America and Asia, with 70,000 km of optical fiber and 1,700 MPLS end points. Our award-winning customer service team supports our expansive customer base, who rely on us for their business-critical services.

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