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Navigating the Next Wave of Innovation

John White

Chief Operating Officer

me

- 20+ years in Infrastructure
- Various Innovation titles
- Ex-AWS
- Creator of multiple Gartner recognized products
- Responsible for: Solution Architecture, Product, Engineering, Operations, Delivery
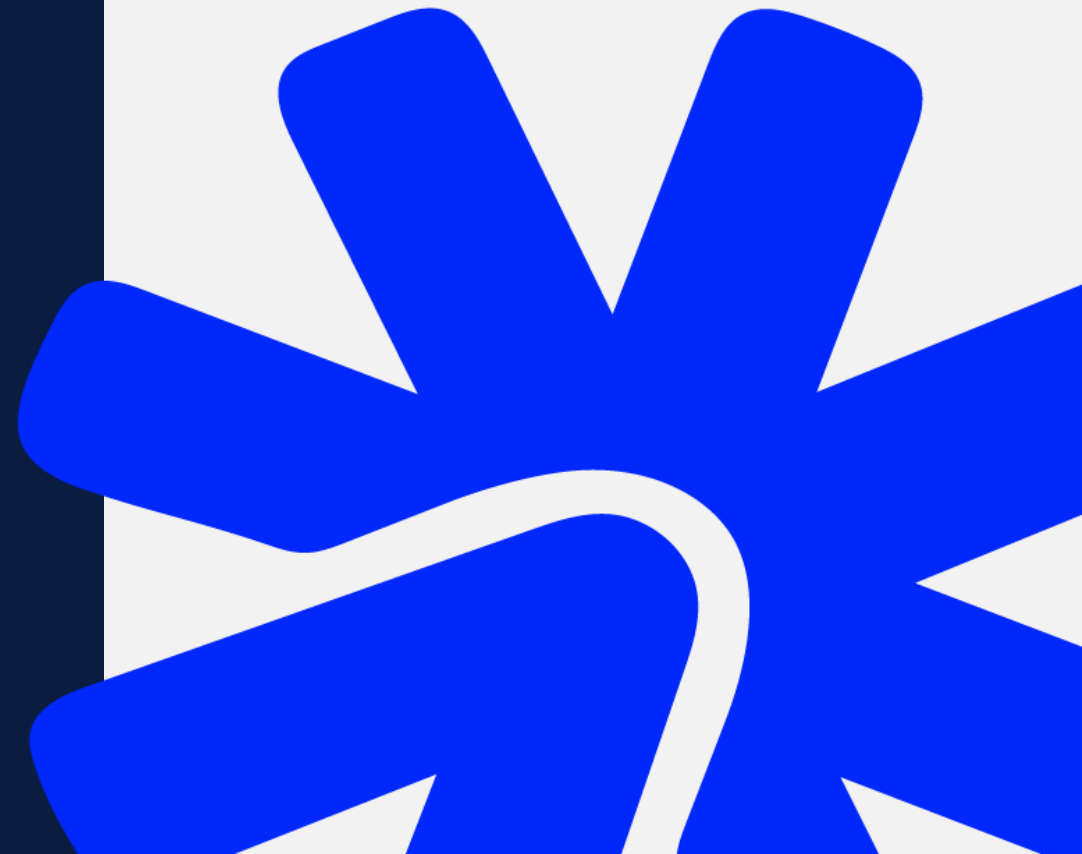
company

- Founded in 2001
- Connectivity and Data Center two core competencies focus
- Security, Managed Services, Cloud one step adjacencies
- 2500+ customers across the US
- 16 data centers
- 9,500 route miles of fiber

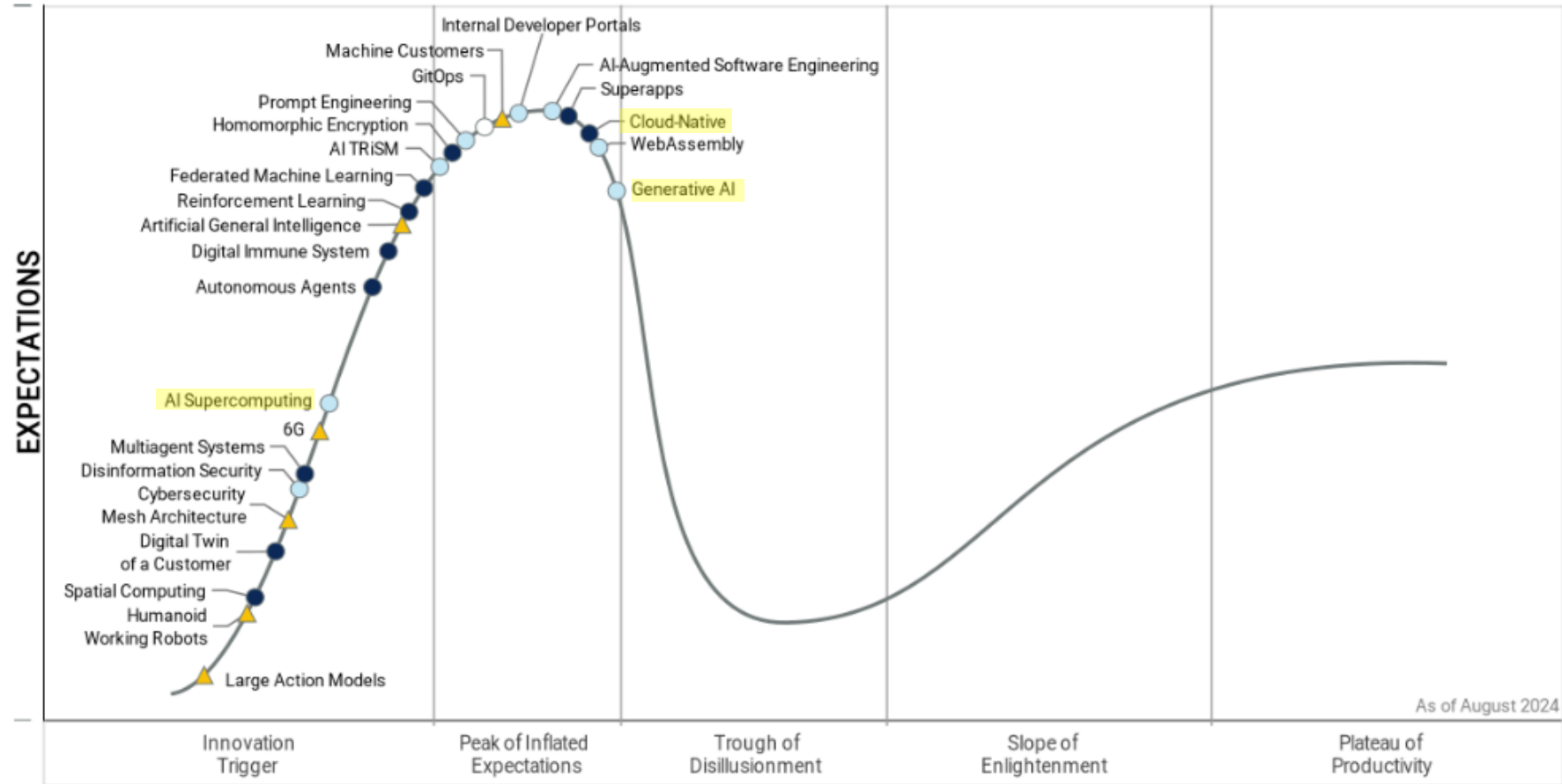# the why?

Finding trends that matter.

trends to watch

Wave(s)

- AI
- Cloud-Native
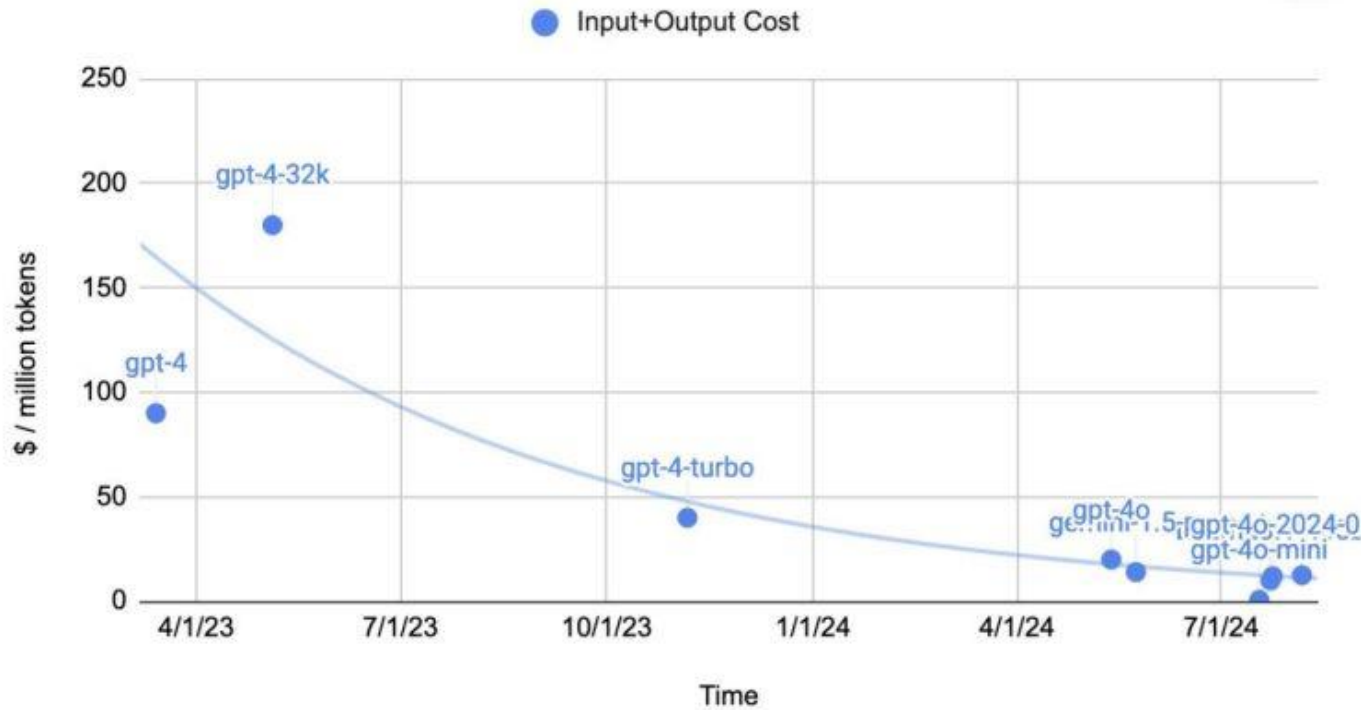
Accelerants

- Repatriation
- Edge

artificial intelligence

The shift from Training to Inference is the big opportunity for infrastructure providers.

Cloud will be needed to provide the resources that will end up doing the inference work. Think CDN.

training

90%

inference

10%

Today
100 GW+

training

10%

inference

90%

2030
300GW+

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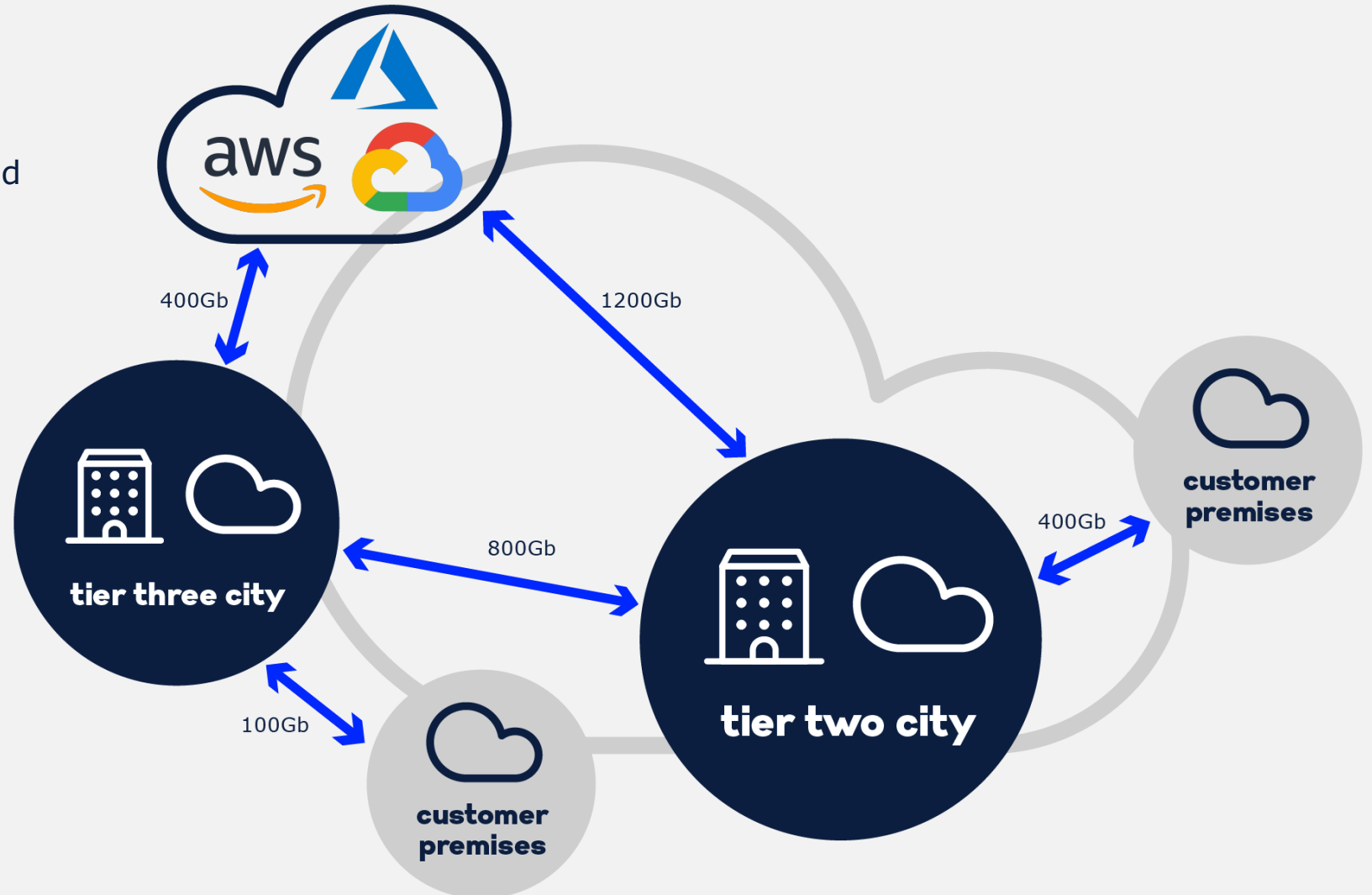Token Cost of GPT-4 level models over time

Input+Output Cost

Cost for 2 million tokens (input+output) decreased from $180->$0.75 in 2 years. 240x cheaper

generative Ai

Token cost is dropping at a dramatic rate which will open the door for an even larger user base tackling problems past human communication.

cloud native

Edge will drive application design from monolithic to cloud native due to the distribution of data to reduce latency and get applications closer to the consumer.

cloud repatriation

Enterprises are owning up to failed cloud journeys. Geico has started a multi-year journey to repatriate from Azure to OpenStack for better economics and SLA.
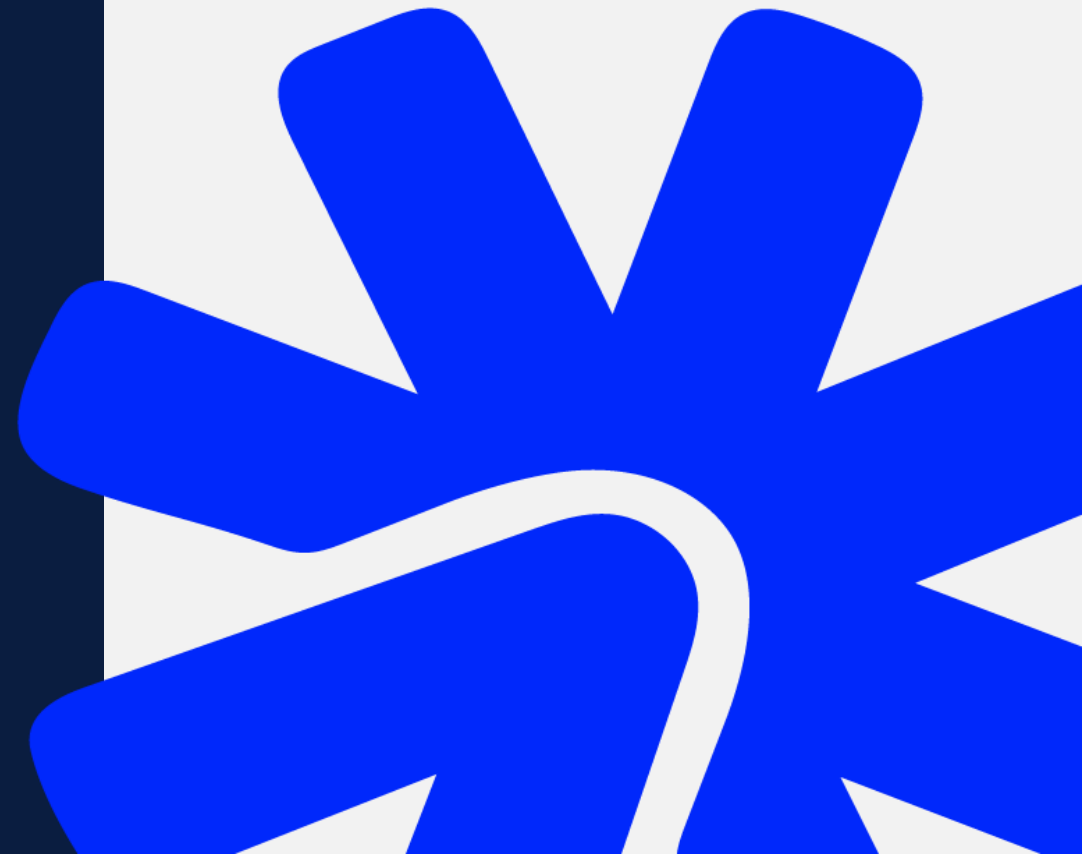

10 Years Cloud Journey

2.5x Increase in Spend
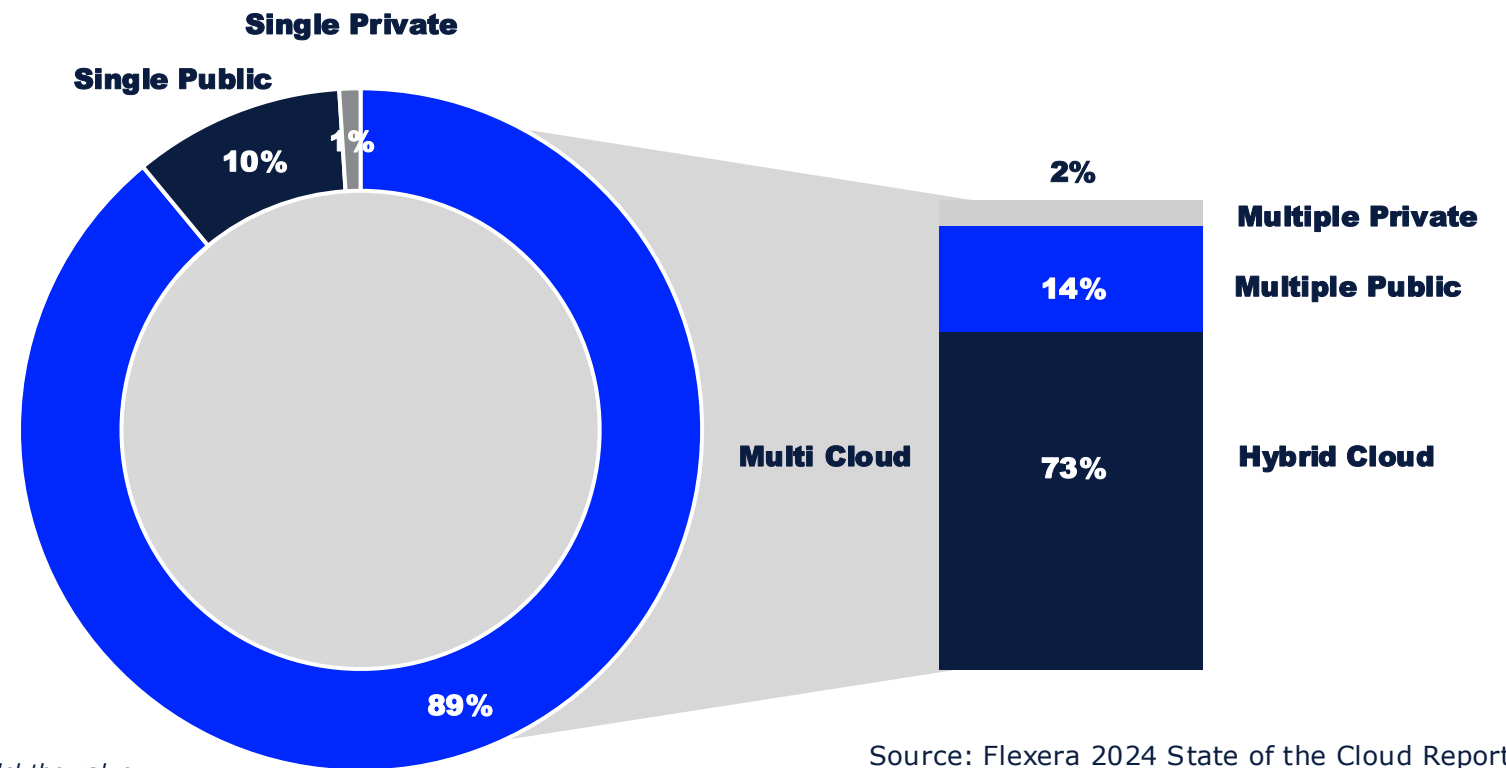
97.3% SLA

future state

How will customers operate?

the future is multi-cloud

According to Forbes, a consistent multi-cloud environment is on average, 33.6% less expensive than a single major cloud provider and 25.8% less expensive than updating your current data center.

organizations embrace multi-cloud

Single Private

Single Public

10% 1%

89%

Multi Cloud

2%

Multiple Private

14%

Multiple Public

73%

Hybrid Cloud

https://www.forbes.com/sites/vmware/2022/01/21/using-cloud-economics-to-model-the-value-of-multi-cloud/?sh=4f75a06b2875

Source: Flexera 2024 State of the Cloud Report (Figure 8)

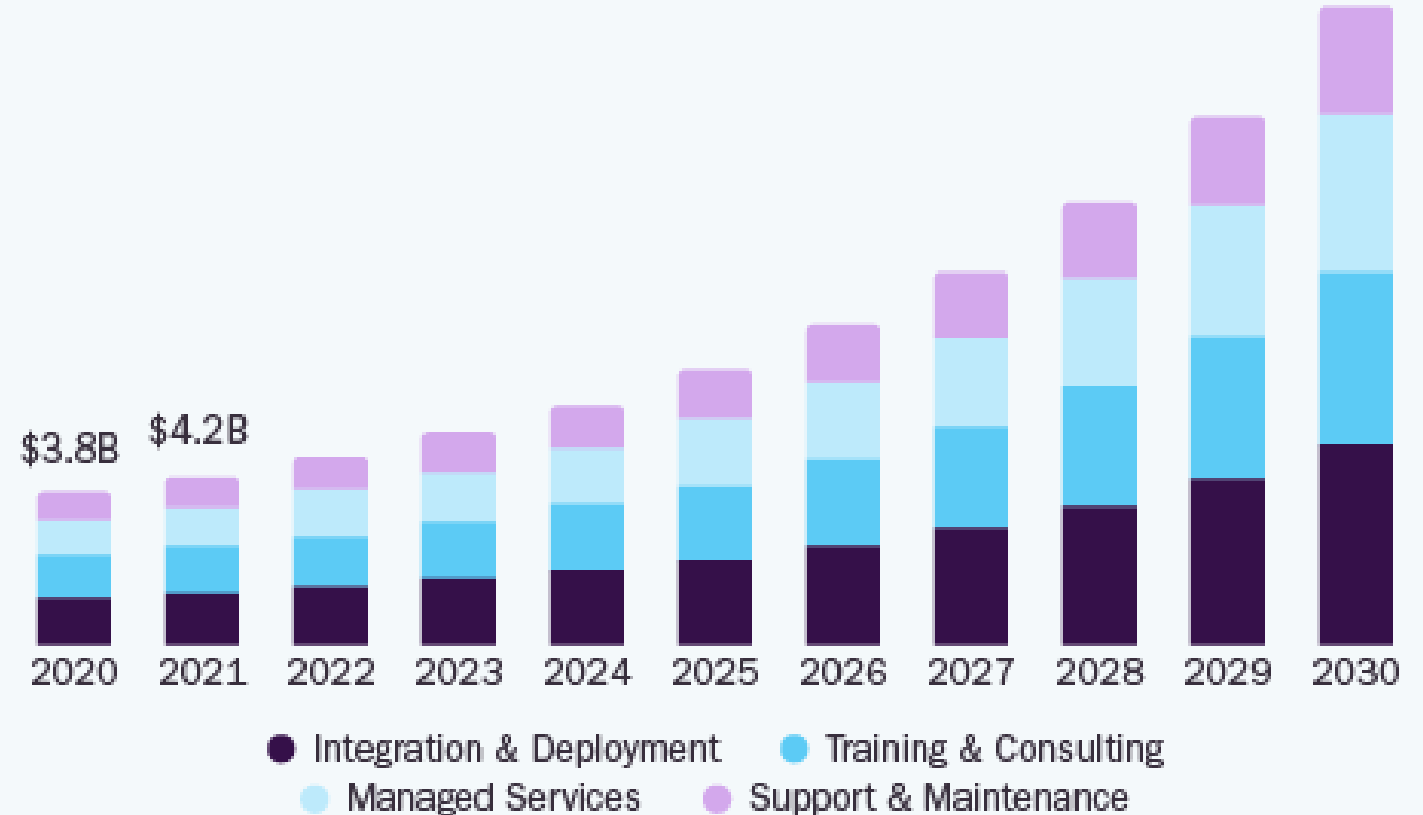us signal

open source is the way

AI/ML, mis-steps by ISVs, Generative AI, and new cultural norms are all driving towards Open Source utilization and development.

17.1%

US Market CAGR, 2023-2030

U.S. Open Source Services Market

Size, by Services, 2020 - 2030 (USD Billion)

$3.8B $4.2B

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

● Integration & Deployment   ● Training & Consulting
● Managed Services   ● Support & Maintenance

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latency is the new currency

High throughput and low latency will drive the telecommunications industry to the next stage with investment and consolidation of hardware vendors and significant investment to provide data center to data center connectivity and human to internet connectivity.

CLOUD

Network is the new scarce resource and that's good news for Lumen

By Diana Goovaerts · Jul 24, 2024 3:19pm

yahoo!finance

HPE is positioned for AI gains with Juniper Networks deal: CEO

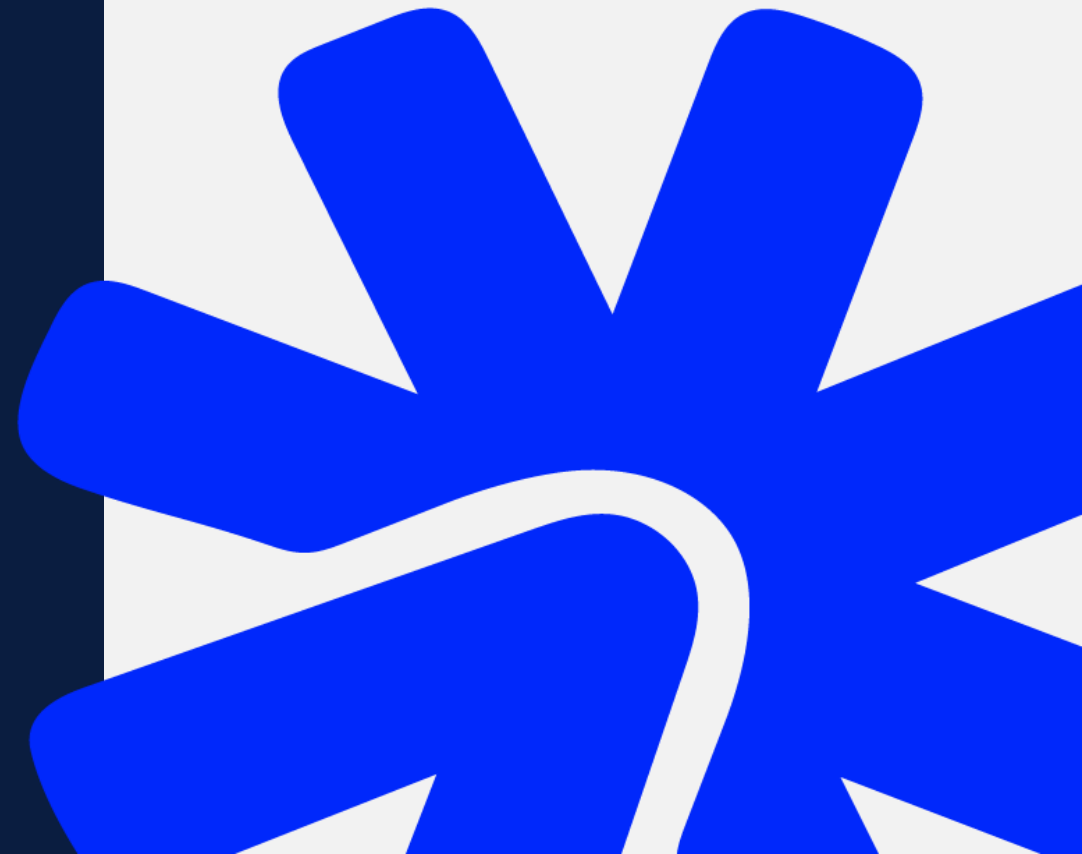## Next-gen 6G cellular networks may be 9,000 times faster than 5G

By Joshua Hawkins   Published Oct 16th, 2024 5:12PM EDT
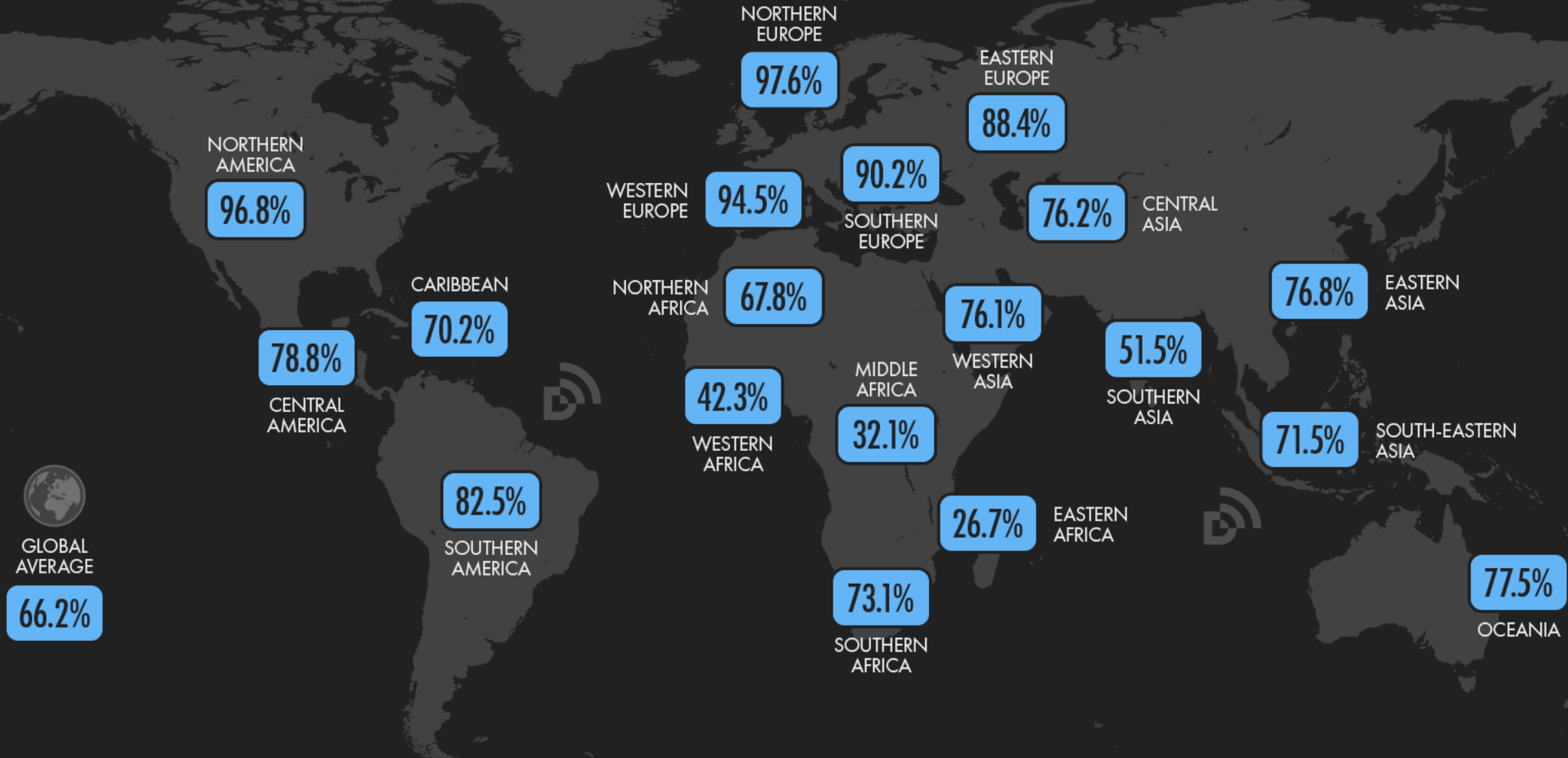
limiting factors

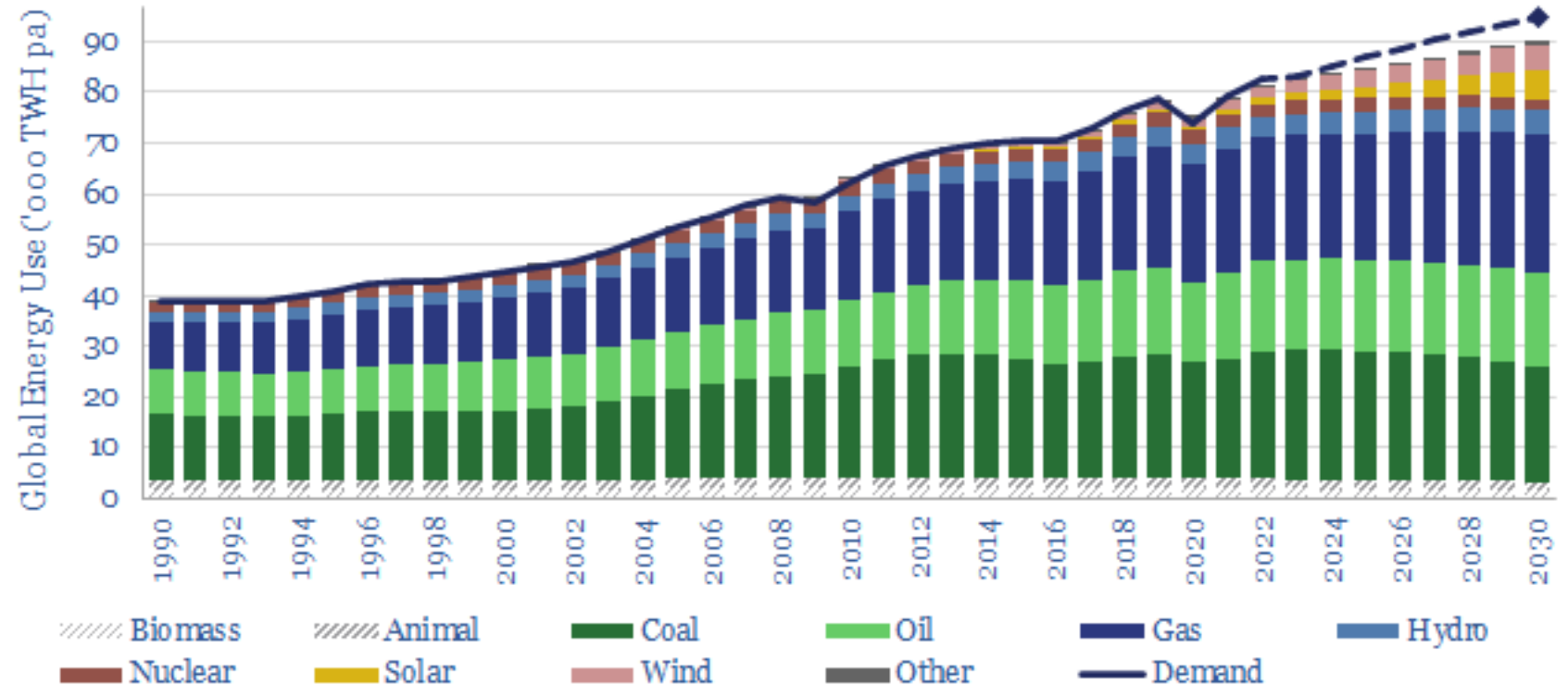**What are the headwinds?**

INTERNET ADOPTION

JAN 2024

INDIVIDUALS USING THE INTERNET AS A PERCENTAGE OF TOTAL POPULATION

An estimated 3.7 billion people currently do not have access to the Internet.

NORTHERN EUROPE
97.6%

EASTERN EUROPE
88.4%

NORTHERN AMERICA
96.8%

WESTERN EUROPE
94.5%

SOUTHERN EUROPE
90.2%

CENTRAL ASIA
76.2%

CARIBBEAN
70.2%

NORTHERN AFRICA
67.8%

EASTERN ASIA
76.8%

CENTRAL AMERICA
78.8%

WESTERN ASIA
76.1%

SOUTHERN ASIA
51.5%

MIDDLE AFRICA
32.1%

WESTERN AFRICA
42.3%

SOUTH-EASTERN ASIA
71.5%

SOUTHERN AMERICA
82.5%

EASTERN AFRICA
26.7%

GLOBAL AVERAGE
66.2%

SOUTHERN AFRICA
73.1%

OCEANIA
77.5%

36

we are social

Meltwater

power

Electrical grids are outdated, nuclear power is behind,
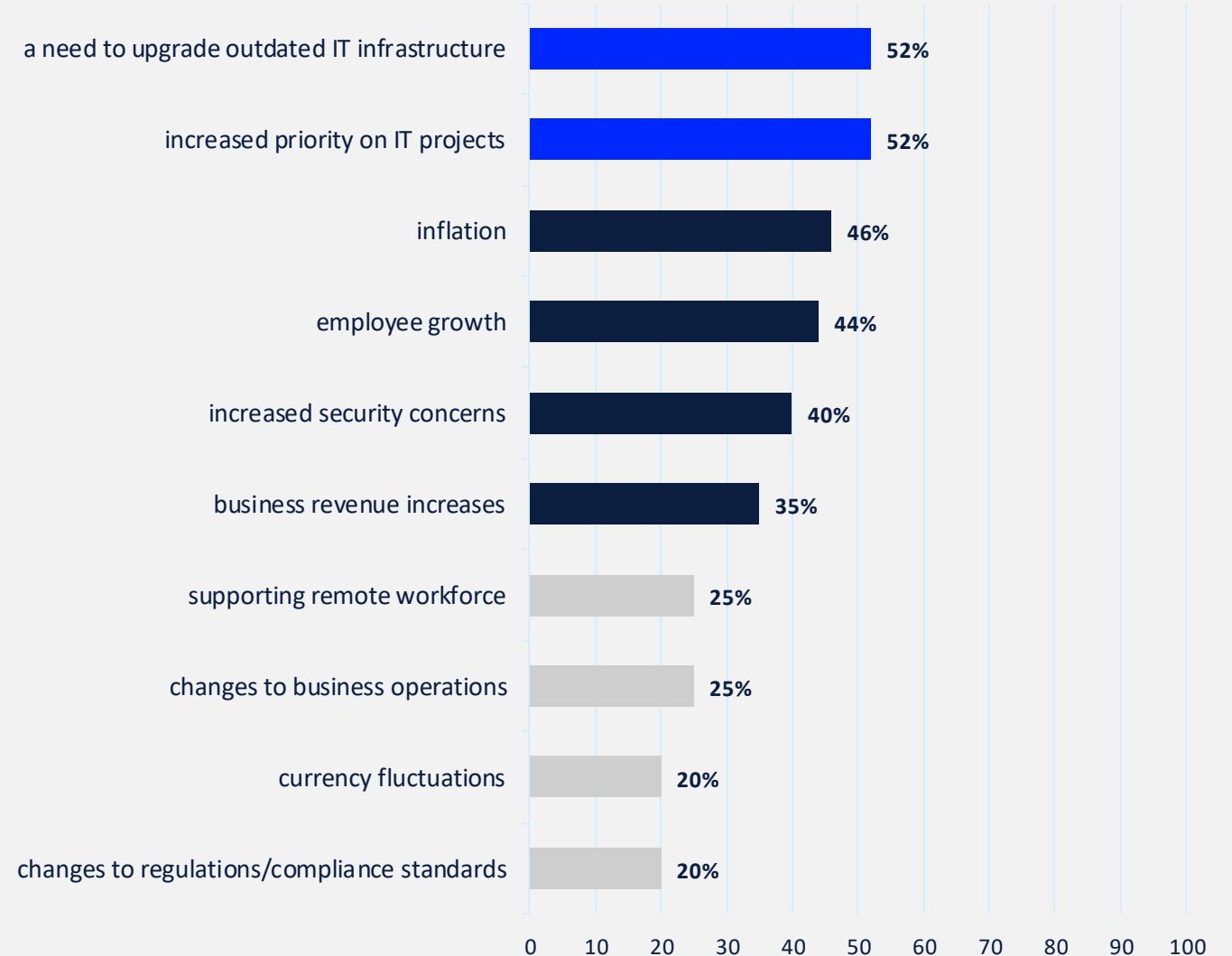
renewables are unpredictable.
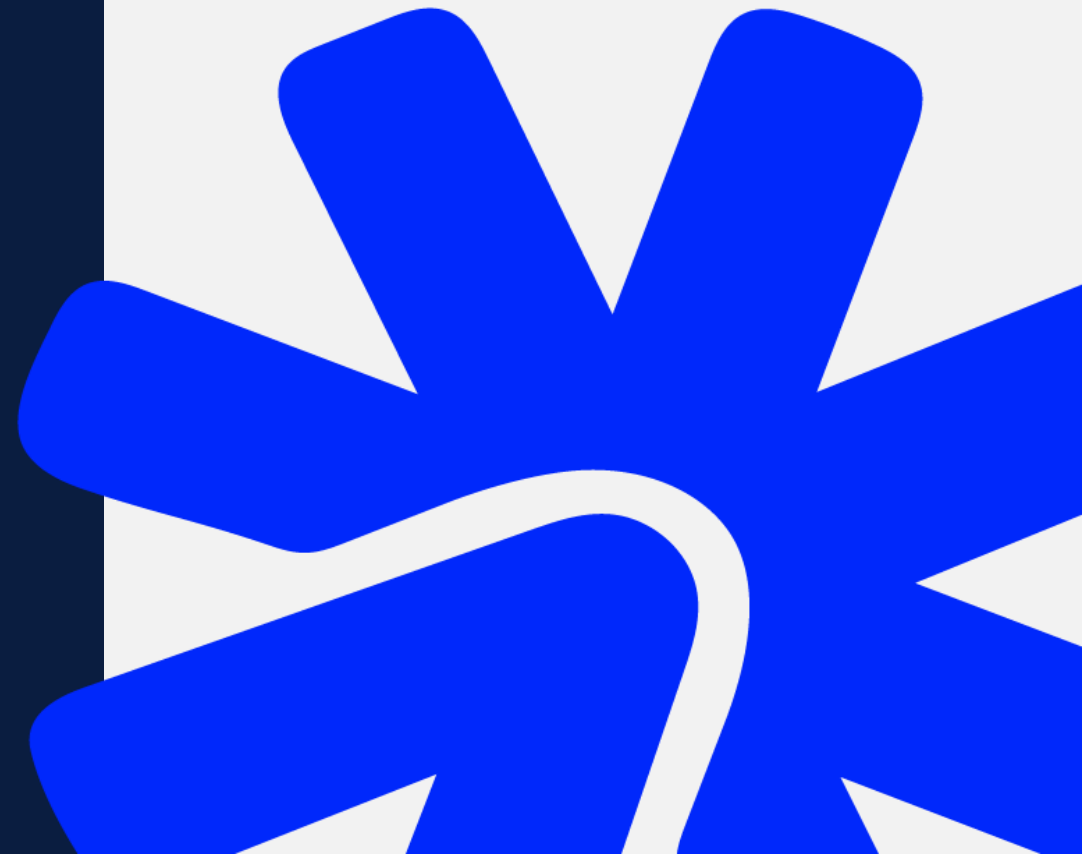
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technical debt

Investment into the future without results has compounded technical debt. Cost of capital has impacted spending creating a lack of budget and people to get strategic work done.

Which of the following factors have led to an increase in IT budgets at your organization?

Factor	Percentage
a need to upgrade outdated IT infrastructure	52%
increased priority on IT projects	52%
inflation	46%
employee growth	44%
increased security concerns	40%
business revenue increases	35%
supporting remote workforce	25%
changes to business operations	25%
currency fluctuations	20%
changes to regulations/compliance standards	20%

gotchas

This path will lead to failure.

data governance, security, cloud outages

Rapid growth of data, multi-cloud solutions, increase of ransom being paid, and reliance on single vendors have created uncertainty and lack of control in a growing global market.

CROWDSTRIKE OUTAGE

OpenAI breach is a reminder that AI companies are treasure troves for hackers

Devin Coldewey — 12:49 PM PDT · July 5, 2024

ARTIFICIAL INTELLIGENCE

Oops: Samsung Employees Leaked Confidential Data to ChatGPT

Employees submitted source code and internal meetings to ChatGPT just weeks after the company lifted a ban on using the chatbot.

https://gizmodo.com/chatgpt-ai-samsung-employees-leak-data-1850307376
https://techcrunch.com/2024/07/05/openai-breach-is-a-reminder-that-ai-companies-are-treasure-troves-for-hackers/

failing business models

.COM is known for its failures; AI will follow suit. Avoid failures by focusing on the infrastructure.

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During the Gold Rush, most would-be miners lost money, but people who sold them picks, shovels, tents, and blue-jeans (Levi Strauss) made a nice profit.
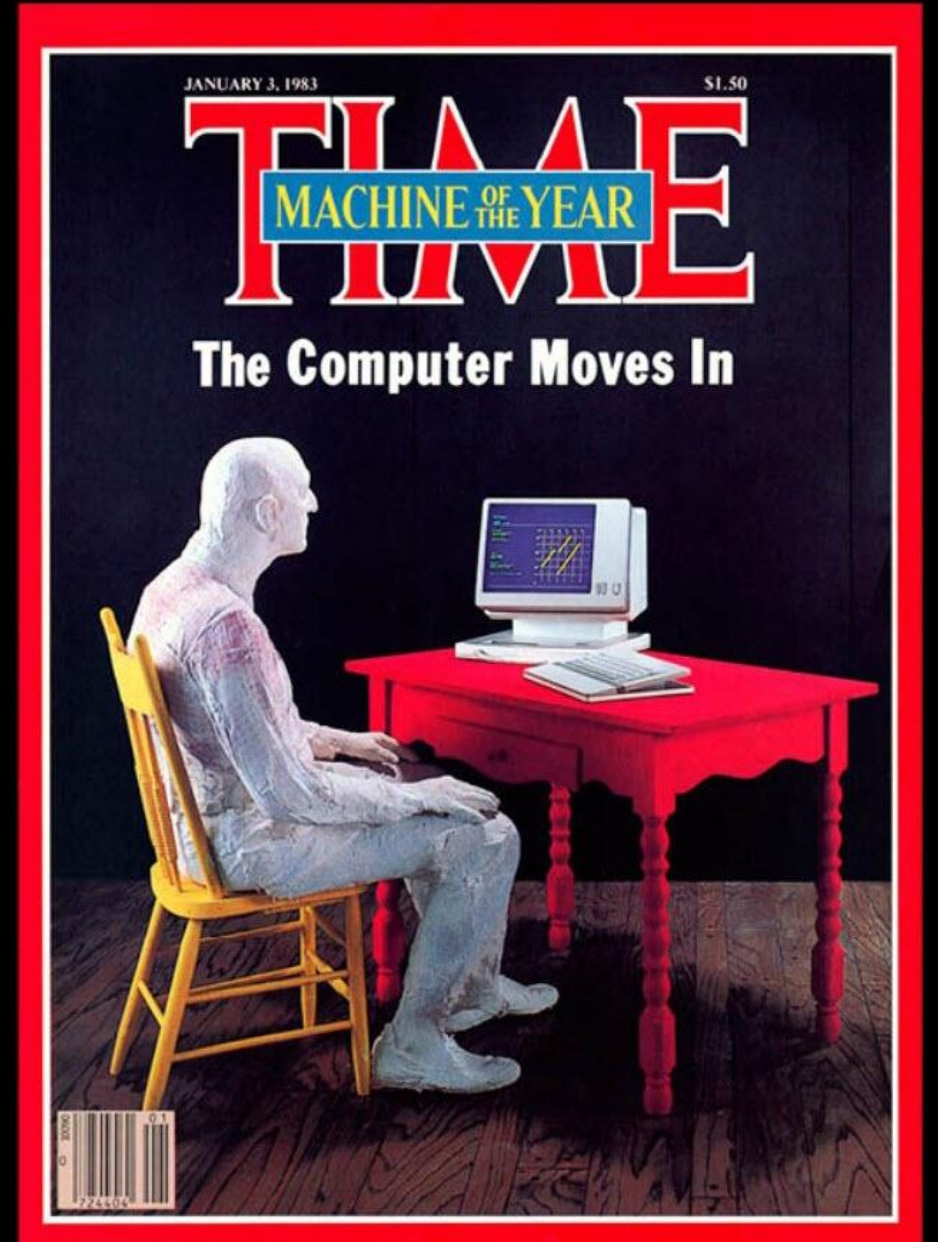
Peter Lynch
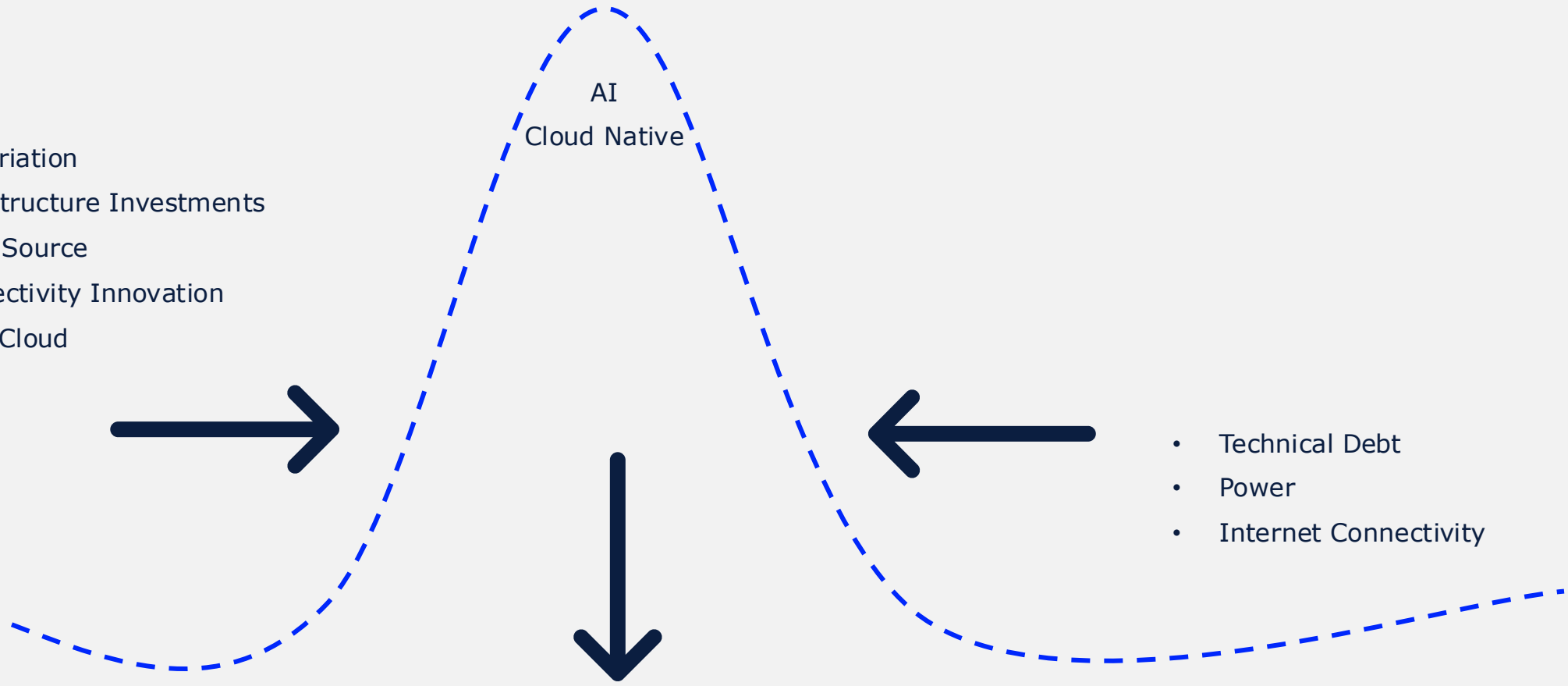
lack of patience

Days are long, years are short.

AI is moving fast, don't forget that personal computing took over 25 years to evolve.

JW wave

- Repatriation
- Infrastructure Investments
- Open Source
- Connectivity Innovation
- Multi-Cloud

AI
Cloud Native

- Technical Debt
- Power
- Internet Connectivity

Global Failure **Failed Business Models** **Lack of Patience**

$ $$$$

TAM

thank you!

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