

GLOBAL TECH & INNOVATION

Presented by Ryan Mahon
Global Technology Portfolio Manager

NOVEMBER 2024






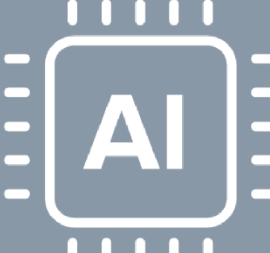



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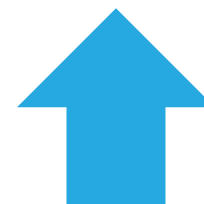
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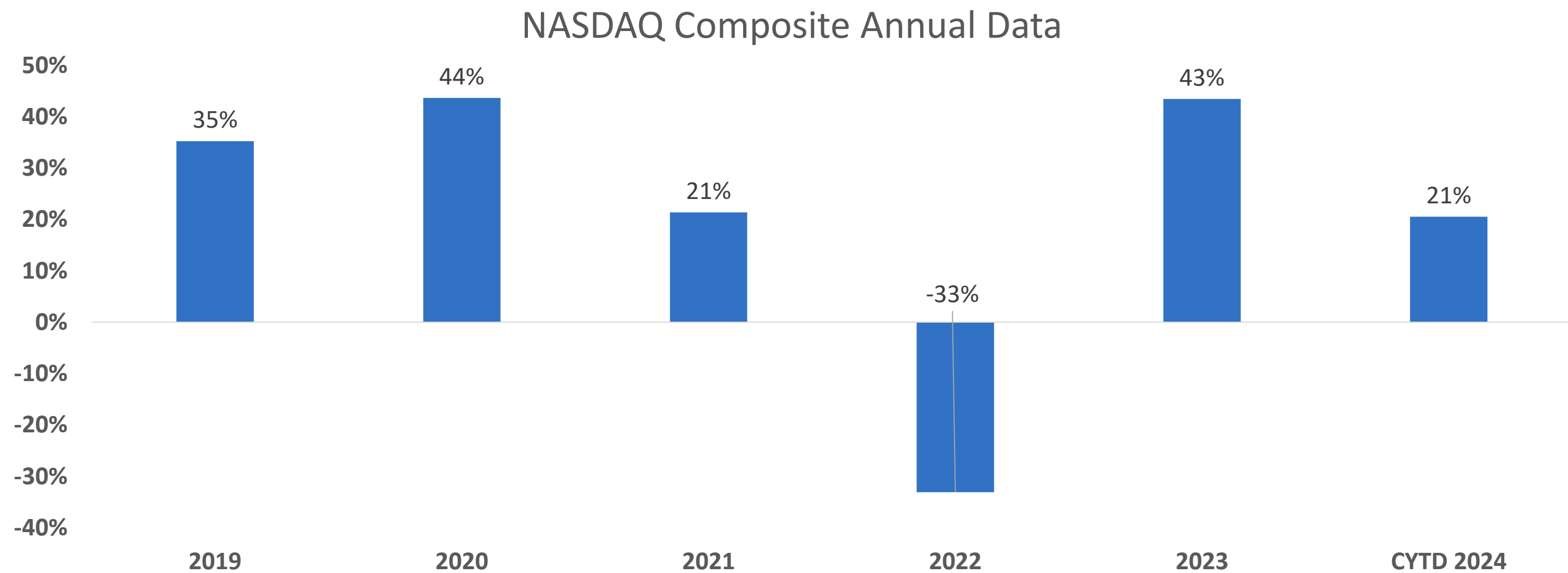
Our Investment Platform

EQUITIES				OTHER ASSET CLASSES		
AUSTRALIAN		GLOBAL		PROPERTY		PRIVATE DEBT
						
AUSTRALIA ALL CAP	SMALL CAP INCOME	GLOBAL HIGH CONVICTION	GLOBAL TECH AND INNOVATION	TAMIM PROPERTY	LISTED PROPERTY	TAMIM CREDIT FUND



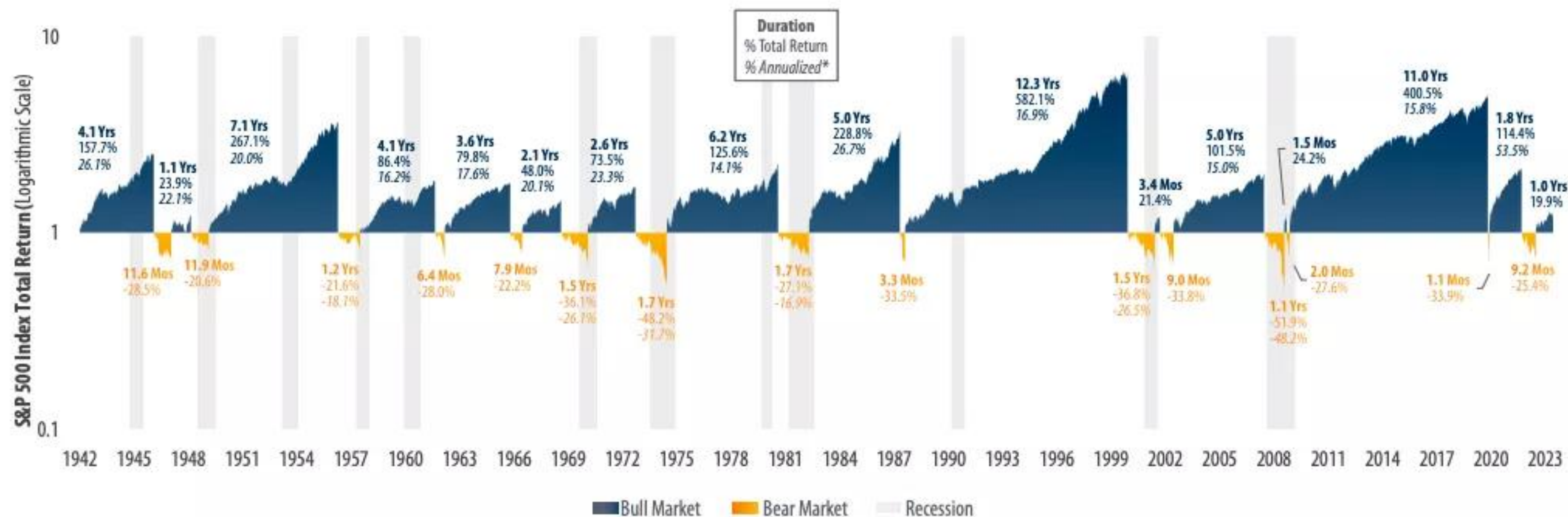
The Nasdaq

Tech has Performed Exceptionally Well



Best Time to Invest?

Over 80 years of share market history tells us that markets go up over long period of times with drawdowns which are generally short and brief in nature.



PORTFOLIO MANAGER

RYAN MAHON



Ryan Mahon is an investor, technologist, and outdoor enthusiast. Ryan recently founded Aquavis Advisors – an investment advisory firm that acts as the sub-manager for the Tamim Global Technology & Innovation Strategy. Prior to that, Ryan ran the Mobility Strategy at Ibex Investors, and worked as a Sector Head (Internet) and Associate Portfolio Manager at Millennium Management and as an Investment Analyst (Global Technology) at Folger Hill Asset Management.

He graduated magna cum laude from Georgetown University, McDonough School of Business, with a BSBA in Finance, Accounting, and Psychology, and is a CFA Charterholder. Born in Cleveland and living in Denver, he loves the outdoors and sports, and is passionate about investing in and applying technology to improve the world and drive sustainability.

Discussion Points

1. Global System Backdrop
2. The Confluence Leads To...
3. And Trump will Add Fuel
4. Technology: The Age of AI has Begun
5. Technology: Its Early, Its Big, Its Growing
6. ROBOT + AI = PRODUCTIVITY
7. Energy: The Base Layer
8. Demand Acceleration
9. Money: An Overlooked Pillar of Power
10. Money: the “Store” of Value
11. Why Now?
12. Top Picks for 2025+

Simple Outline

WHO

AQUAVIS + TAMIM

WHY

The Global Order is Changing, Driving an Acceleration in Targeted Investment

WHAT

A Product Built to Invest in & Capitalise on the Targeted Investment

WHEN

Now

WHERE

Here



Who We Are

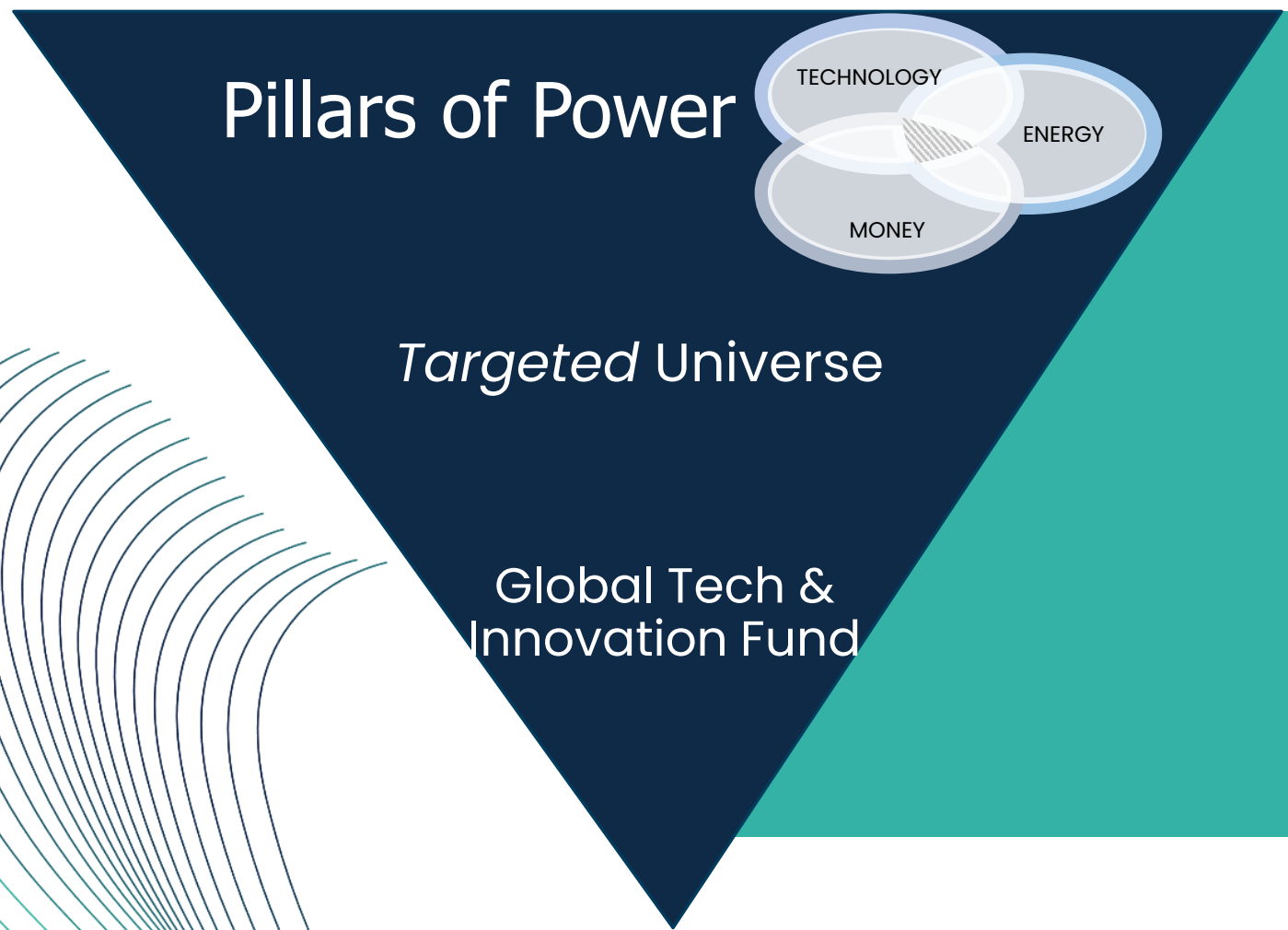
AQUAVIS + TAMIM

- Deep experience in **Semiconductors/Technology** and **Investing**
- Focused on clear, independent **first principles** thinking
- Driven by complex problem-solving and foundational truth-seeking
- Active observer of **Nature** and other **complex systems**

Our Investment Process

INVESTMENT PROCESS FUNNEL

DESCRIPTION



Evaluate & Monitor Major Themes & Path
Assess & Construct Universe of Major Winners
Analyze & Select Subset Using Framework & Tools

Quotes

“The world is **changing**. We’re at a **significant inflection point in world history**. And our country and the world—the United States of America has always been able to chart the future in times of great change...”

Joe Biden

President of the United States
[National Security Strategy](https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf) Speech (October 2022)¹

“Right now there are **changes** – the **likes of which we haven’t seen for 100 years** – and we are the ones driving these changes together.”

”

Xi Jinping

President of the People’s Republic of China
[Speaking to President Vladimir Putin](https://www.aljazeera.com/news/2023/3/22/xi-tells-putin-of-changes-not-seen-for-100) (March 2023)²

Global System Backdrop

Rising geopolitical tensions and global power struggle

- Peter Zeihan's The End of the World is Just the Beginning ¹
- Unipolar world moving toward multipolar world
- Efficient supply chains moving toward resilient

Aging demographics and increasing wealth inequality

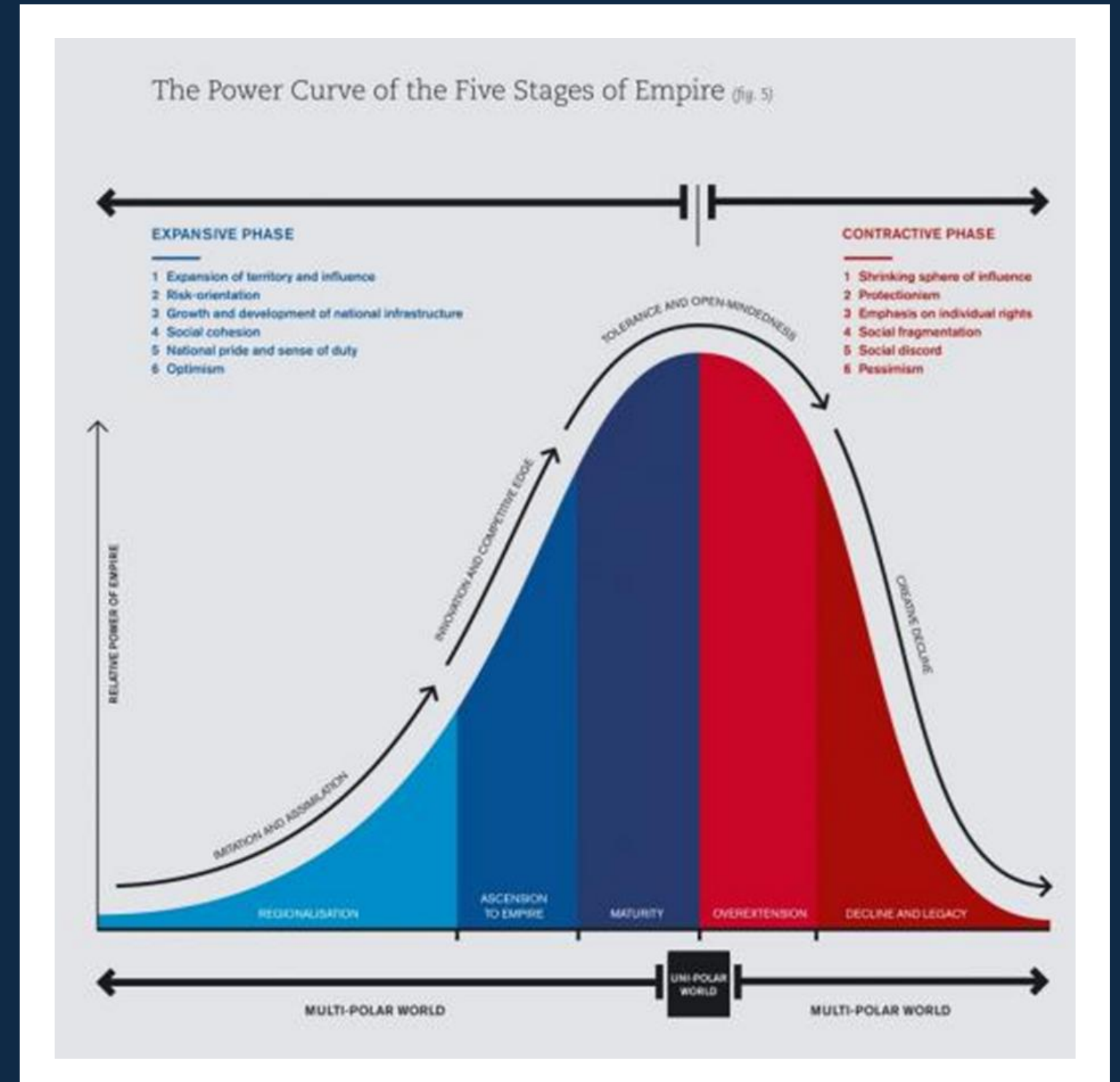
- Neil Howe's The Fourth Turning is Here ²

Overleveraged Sovereign Governments

- Ray Dalio's Principles for Navigating Big Debt Crises ³

Challenges to the current Order and Empire

- David Murrin's Life Cycle of Empires ⁴



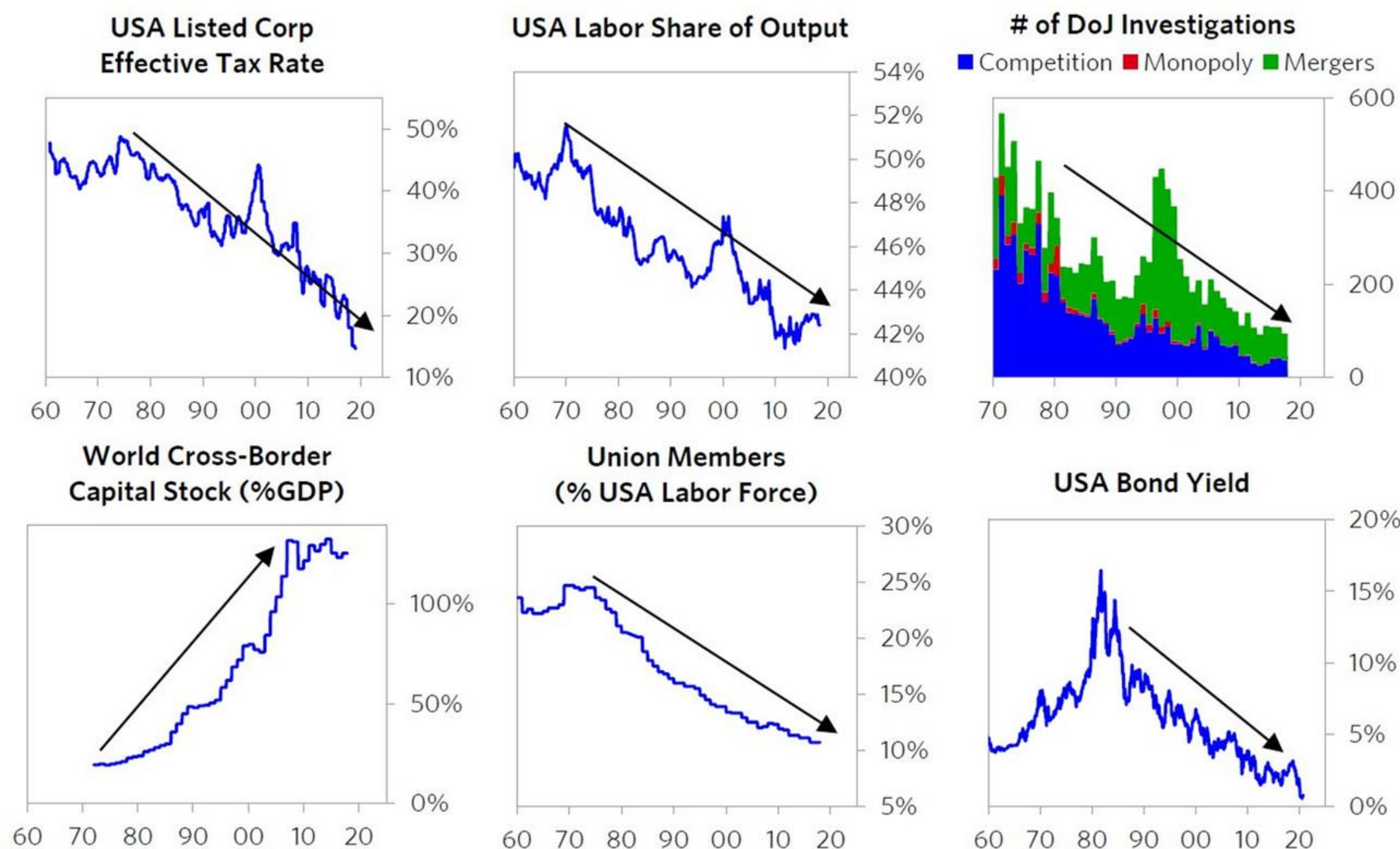
¹ <https://zeihan.com/end-of-the-world/>

² <https://www.amazon.com/Fourth-Turning-Here-Seasons-History/dp/1982173734>

³ <https://www.bridgewater.com/big-debt-crises/principles-for-navigating-big-debt-crises-by-ray-dalio.pdf>

⁴ <https://www.davidmurrin.co.uk/article/5-phase-life-cycle> (chart on right)

The Confluence Leads To...



Rising:

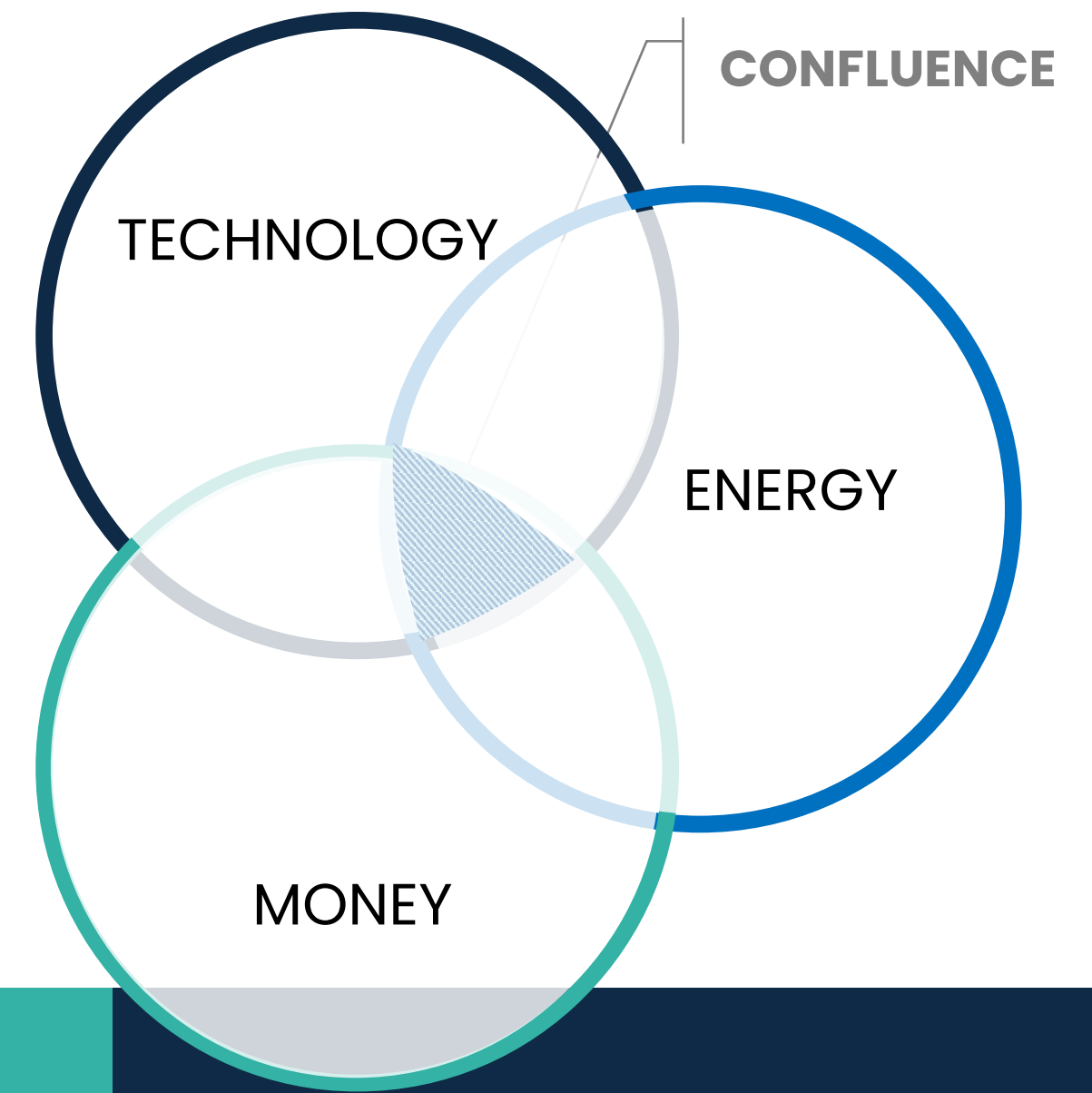
- Labor & Capital Costs
- Energy & Inflation
- Taxes
- Populism
- Conflicts

A Reversal of Many Trends from the Last 40+ Years¹

Which Forces an Acceleration of...

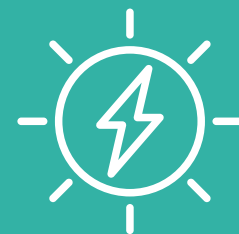
These are our three **Pillars of Power** and the core focus areas of the **Global Technology & Innovation Fund**

The pillars are synergistic, self-reinforcing, and collectively construct the **foundations** of geostrategic **Power**



TECHNOLOGY

Innovation to more efficiently transform Energy & save Time



ENERGY

Base input into any system



MONEY

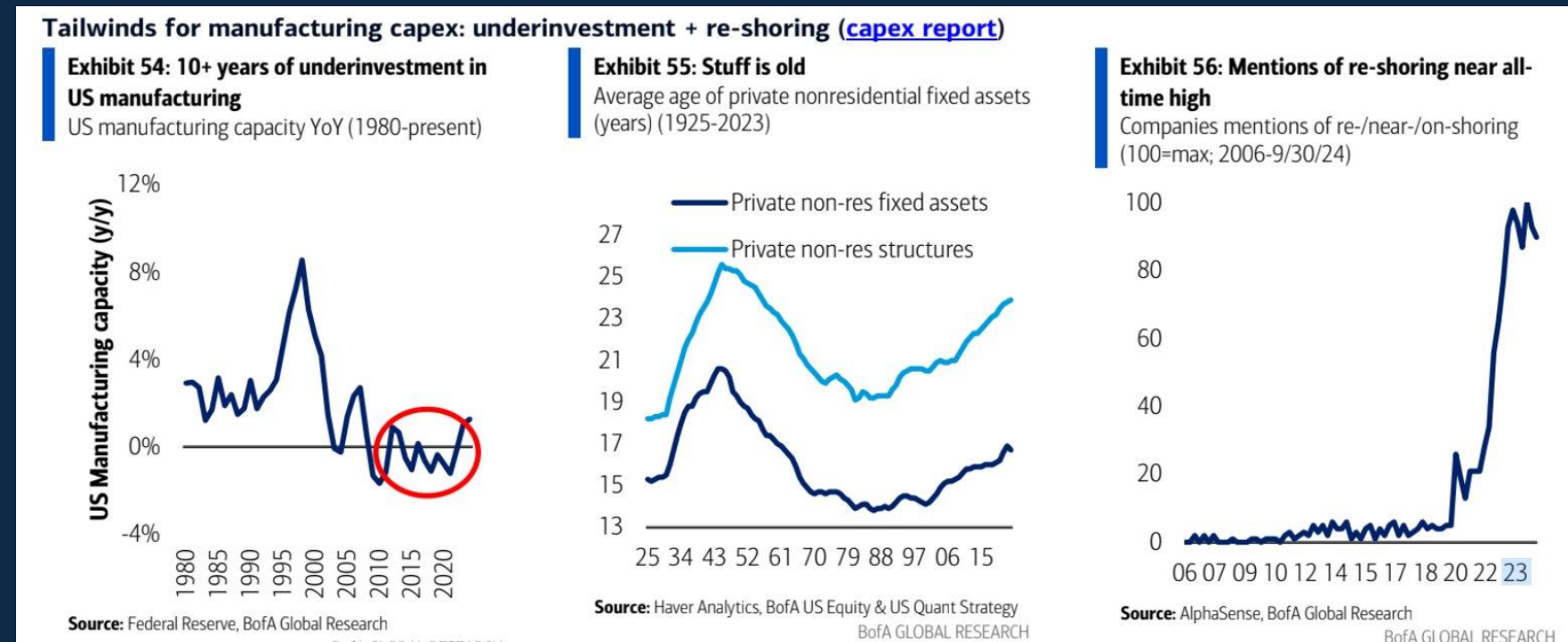
Money (or Capital) as stored Energy
(Dimensions of Labor/Energy and Time)

... And Trump Will Add Fuel

Focus Areas:

- Reshoring Manufacturing
- Technology (AI)
- Revamping Defense
- Energy Independence
- Sovereign Wealth Fund

They understand the **Pillars of Power** and will **accelerate investment** to **strengthen** them



News Headlines:

Trump Team Is Seeking to Ease US Rules for Self-Driving Cars

Anduril's Chair Consulted With Trump on Revamping US Military

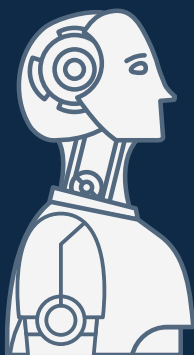
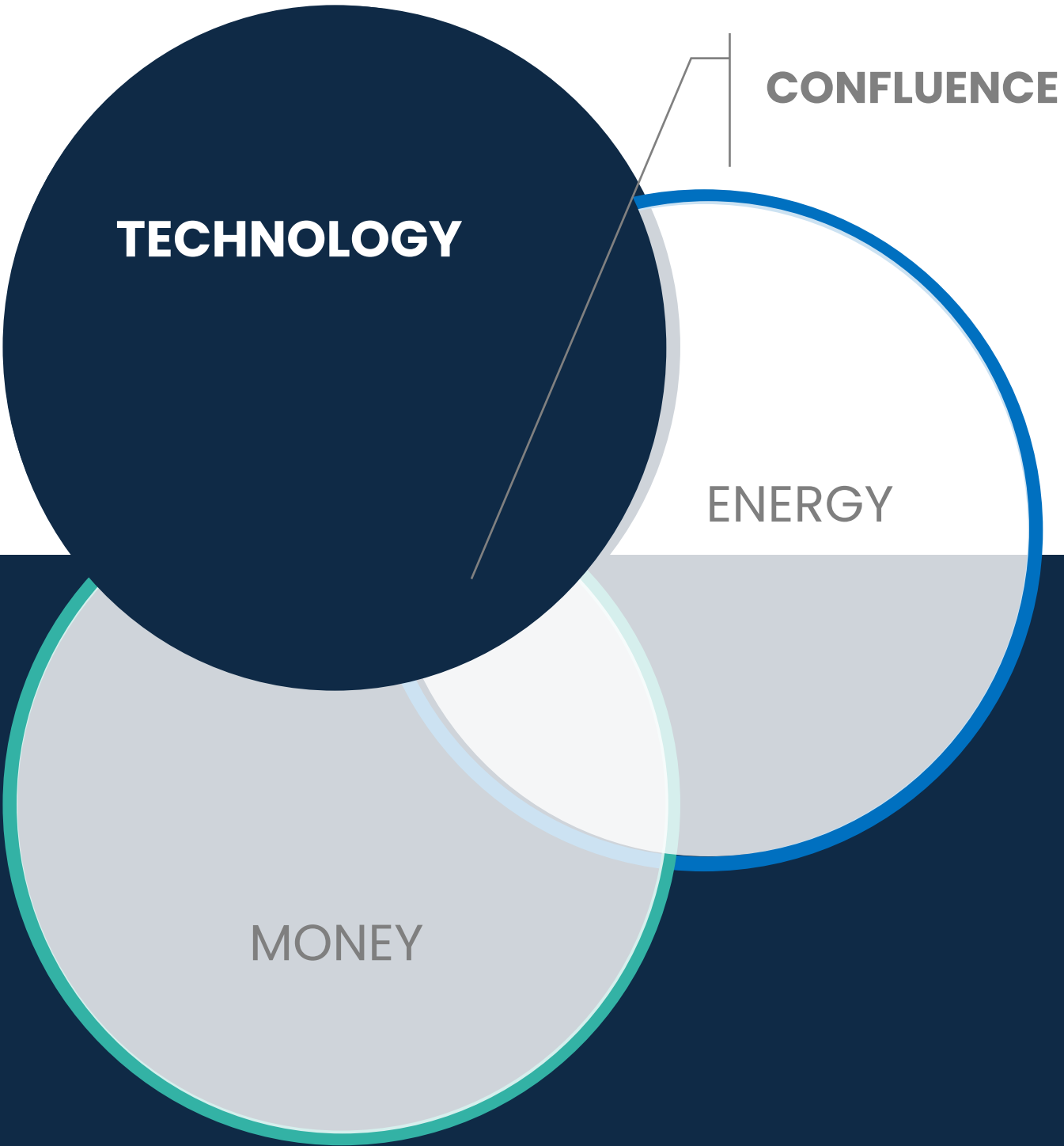
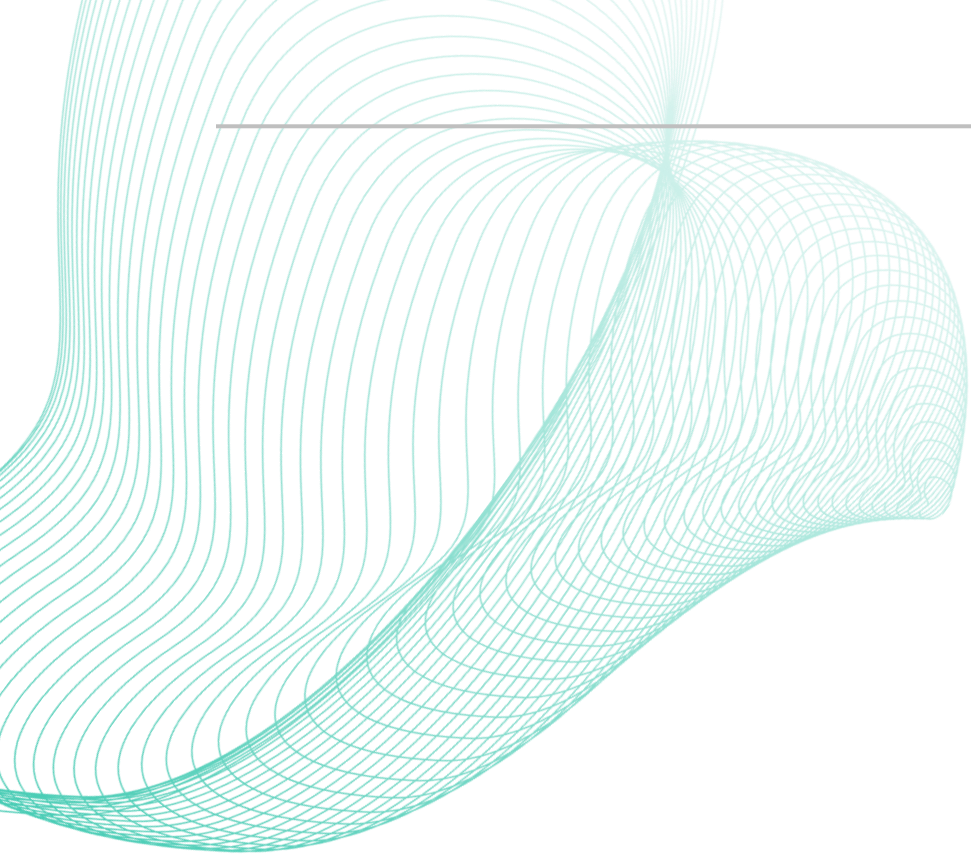
Trump is laying the groundwork for his 'drill, baby, drill' agenda

Trump floats US sovereign wealth fund as part of economic pitch



SPACE = THE NEXT FRONTIER





TECHNOLOGY

Quotes

“While **technology development** has always been a **critical defining force** and while it is well known that **whoever wins the technology war wins the economic, geopolitical, and military wars**, this **has never been truer than now**, and China and the US are the leaders and big adversaries.”

Ray Dalio

Founder of Bridgewater

[100-Year Storm on the Horizon & How the Five Big Forces Are Playing Out \(March 2024\)](https://www.linkedin.com/pulse/china-100-year-storm-horizon-how-five-big-forces-playing-ray-dalio-wysbc)¹

“We must complement the innovative power of the private sector with a modern industrial strategy that makes strategic public investments in America’s workforce, and in strategic sectors and supply chains, especially critical and emerging technologies, such as microelectronics, advanced computing, biotechnologies, clean energy technologies, and advanced telecommunications”

National Security Council

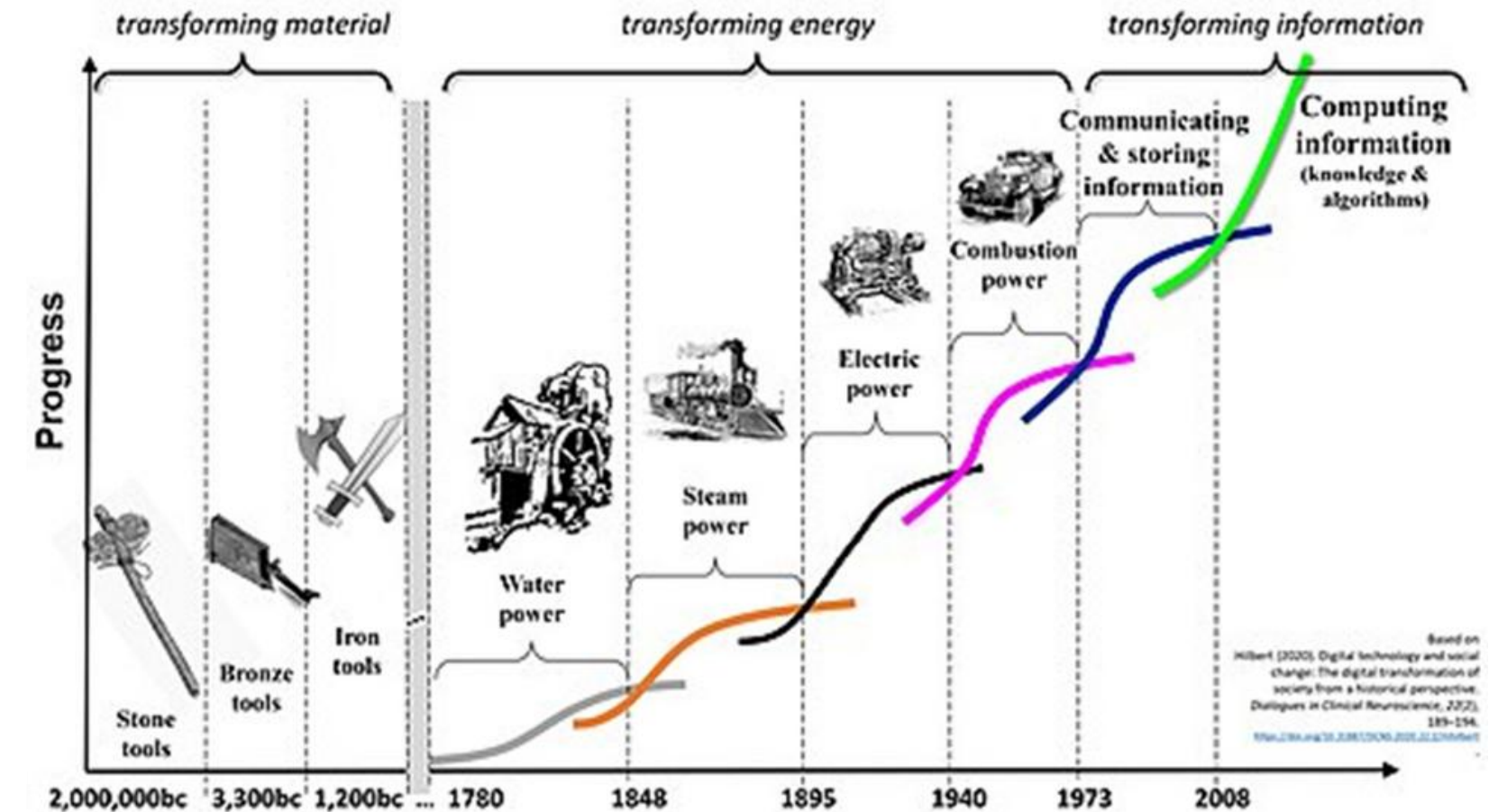
[National Security Strategy](https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf) Report (October 2022)²

The Age of AI has Begun

Semiconductors are the foundational enabling Technology.
Artificial Intelligence is the next Revolution.

Table 1. Five successive technological revolutions, 1770s to 2000s

Technological revolution	Popular name for the period	Core country or countries	Big-bang initiating the revolution	Year
FIRST	The 'Industrial Revolution'	Britain	Arkwright's mill opens in Cromford	1771
SECOND	Age of Steam and Railways	Britain (spreading to Continent and USA)	Test of the 'Rocket' steam engine for the Liverpool-Manchester railway	1829
THIRD	Age of Steel, Electricity and Heavy Engineering	USA and Germany forging ahead and overtaking Britain	The Carnegie Bessemer steel plant opens in Pittsburgh, Pennsylvania	1875
FOURTH	Age of Oil, the Automobile and Mass Production	USA (with Germany at first vying for world leadership), later spreading to Europe	First Model-T comes out of the Ford plant in Detroit, Michigan	1908
FIFTH	Age of Information and Telecommunications	USA (spreading to Europe and Asia)	The Intel microprocessor is announced in Santa Clara, California	1971

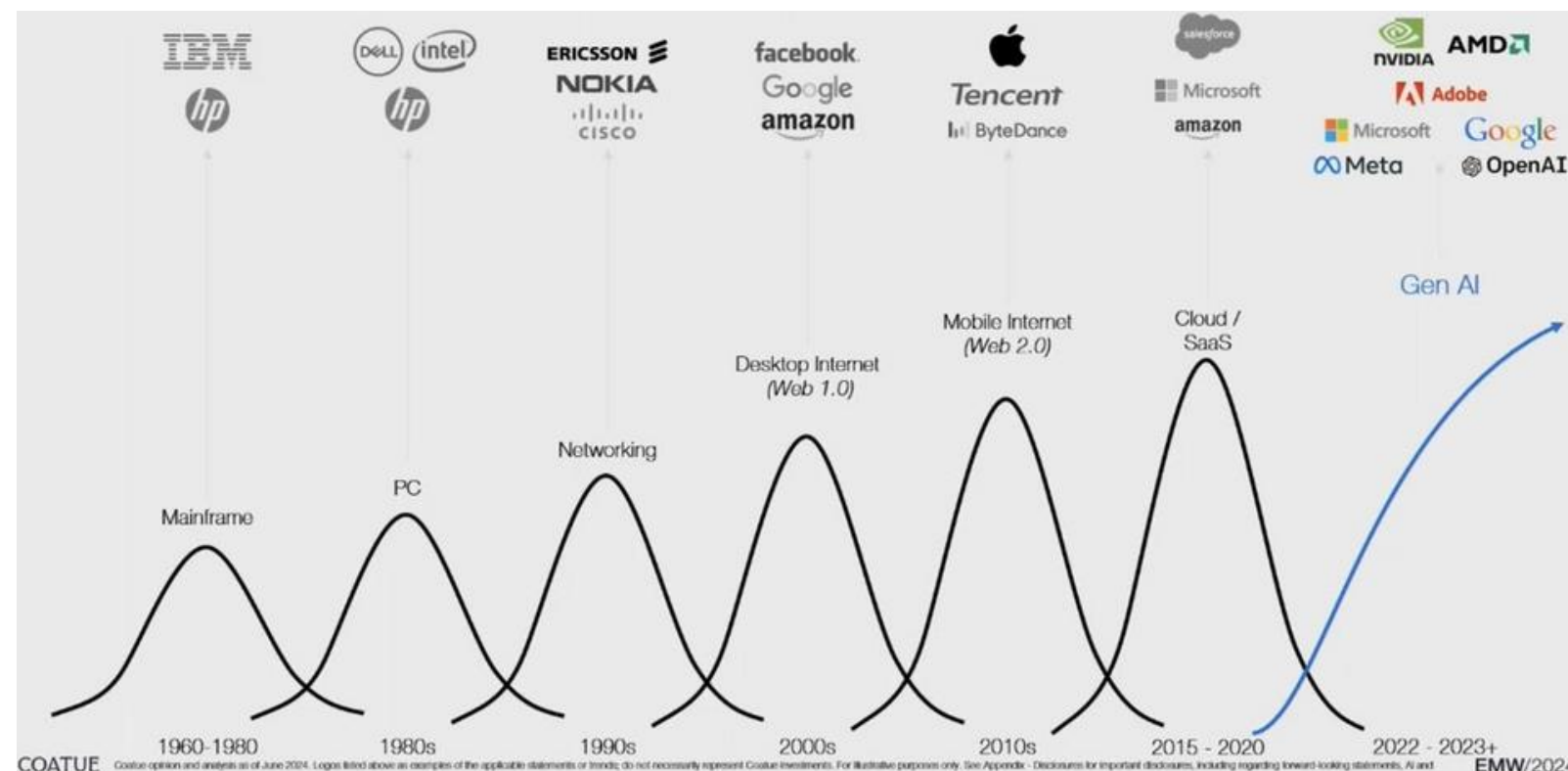


It's EARLY

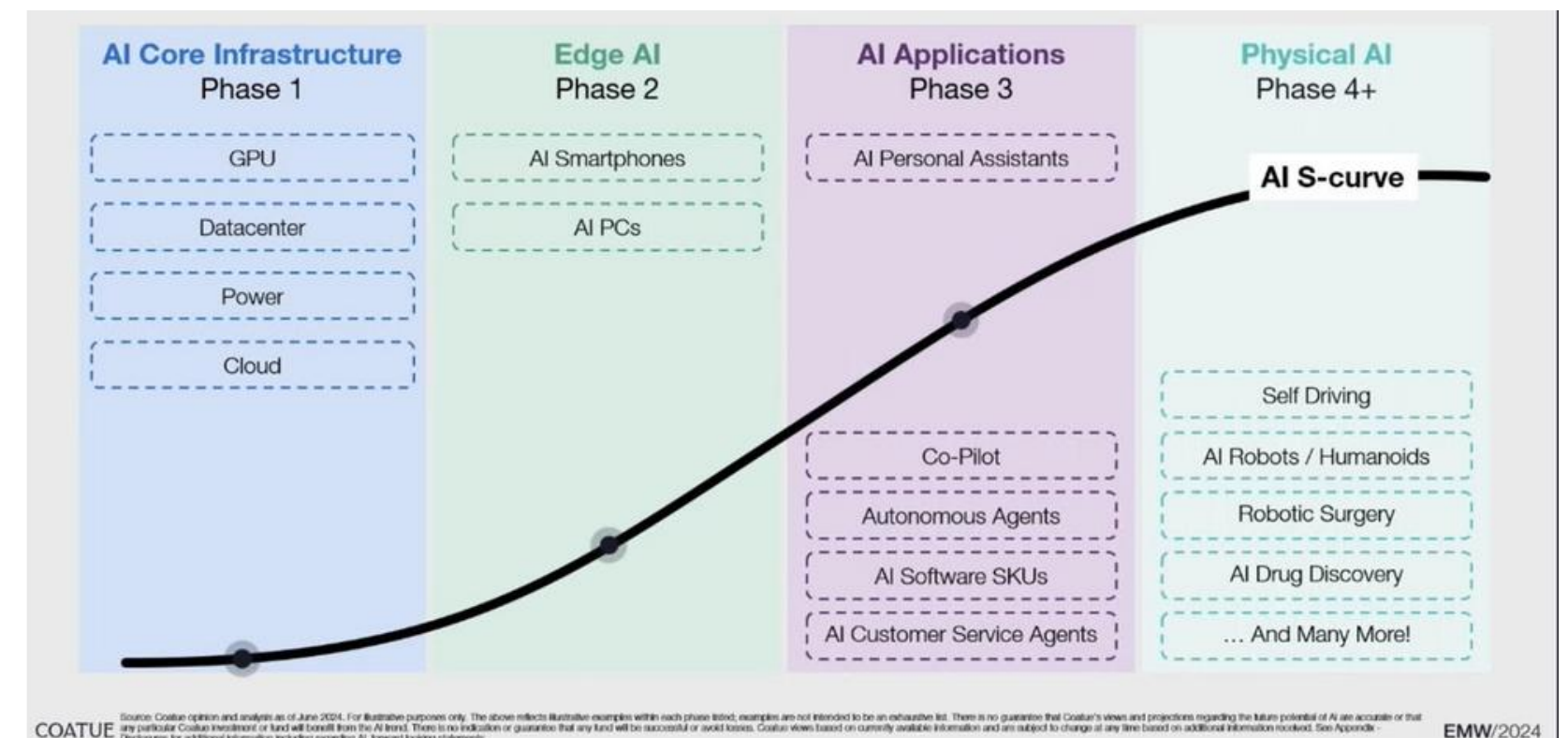
“Over time, AI will be the biggest technological shift we see in our lifetimes. It's bigger than the shift from desktop computing to mobile, and it may be bigger than the internet itself. It's a fundamental rewiring of technology and an incredible accelerant of human ingenuity. ”

Sundar Pichai (CEO of Google)¹

AI is the next major cycle...



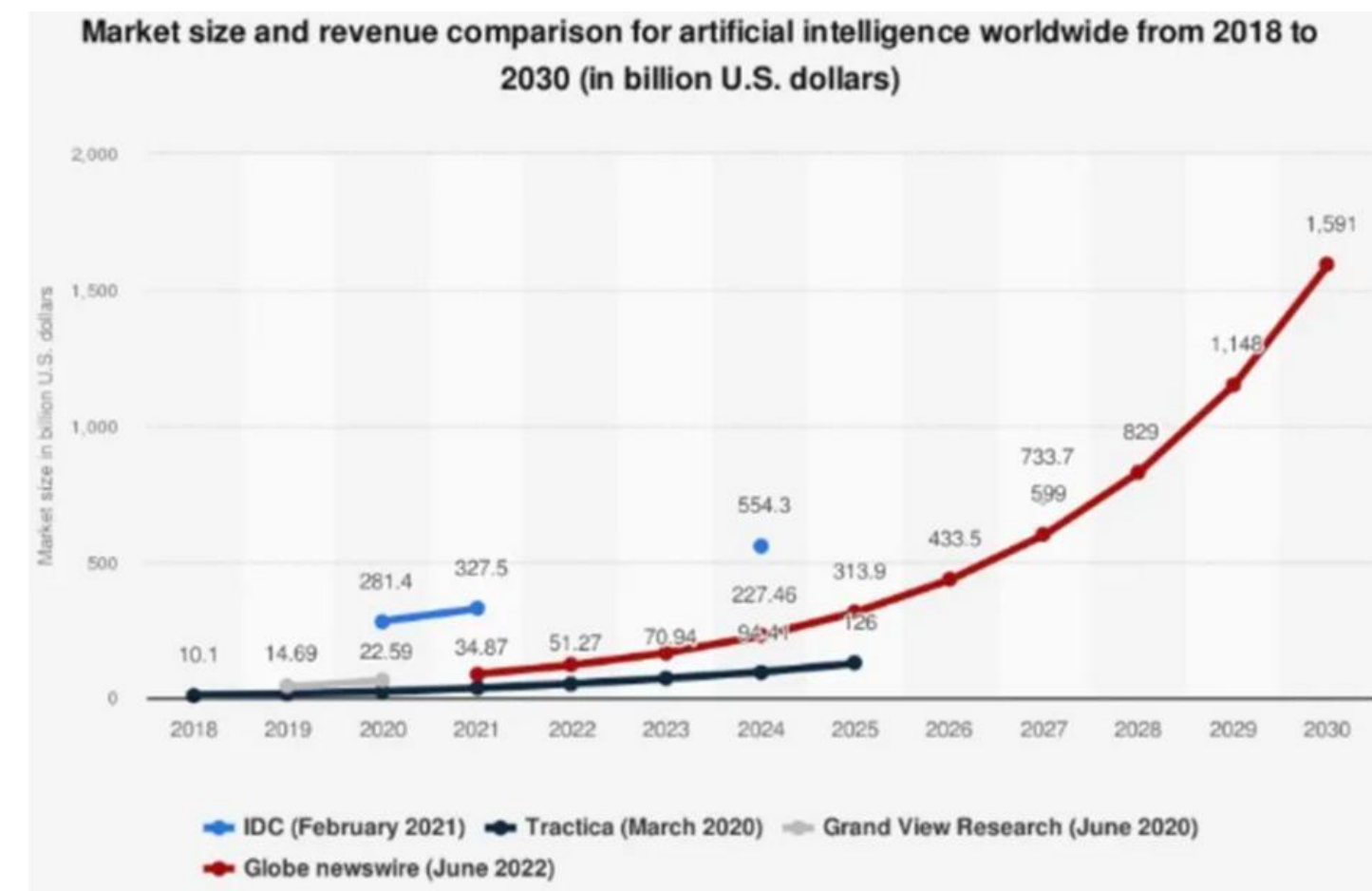
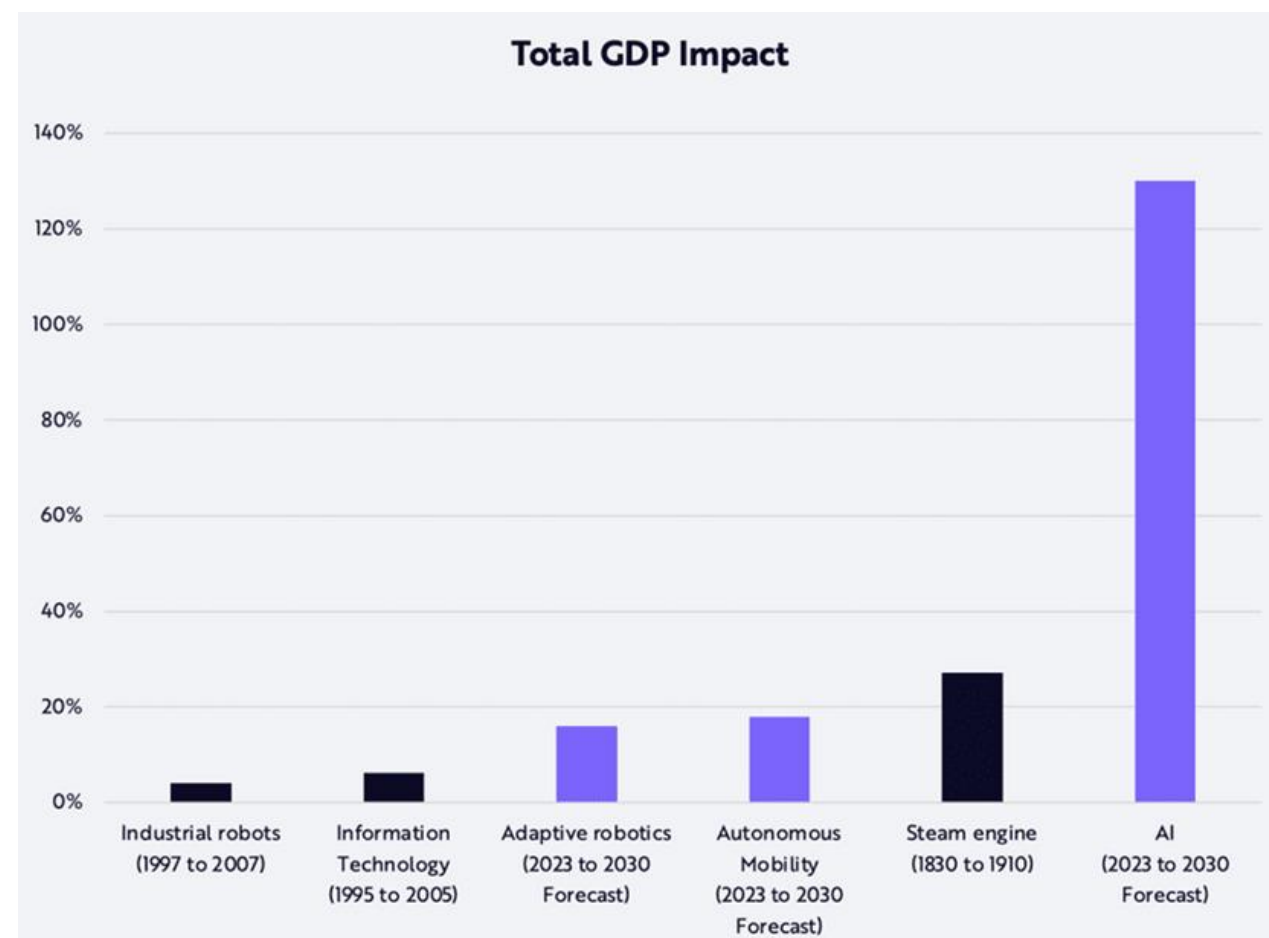
And we are early...



Its BIG

“ The development of AI is as fundamental as the creation of the microprocessor, the personal computer, the Internet, and the mobile phone. It will change the way people work, learn, travel, get health care, and communicate with each other. ”

Bill Gates (Founder of Microsoft)¹

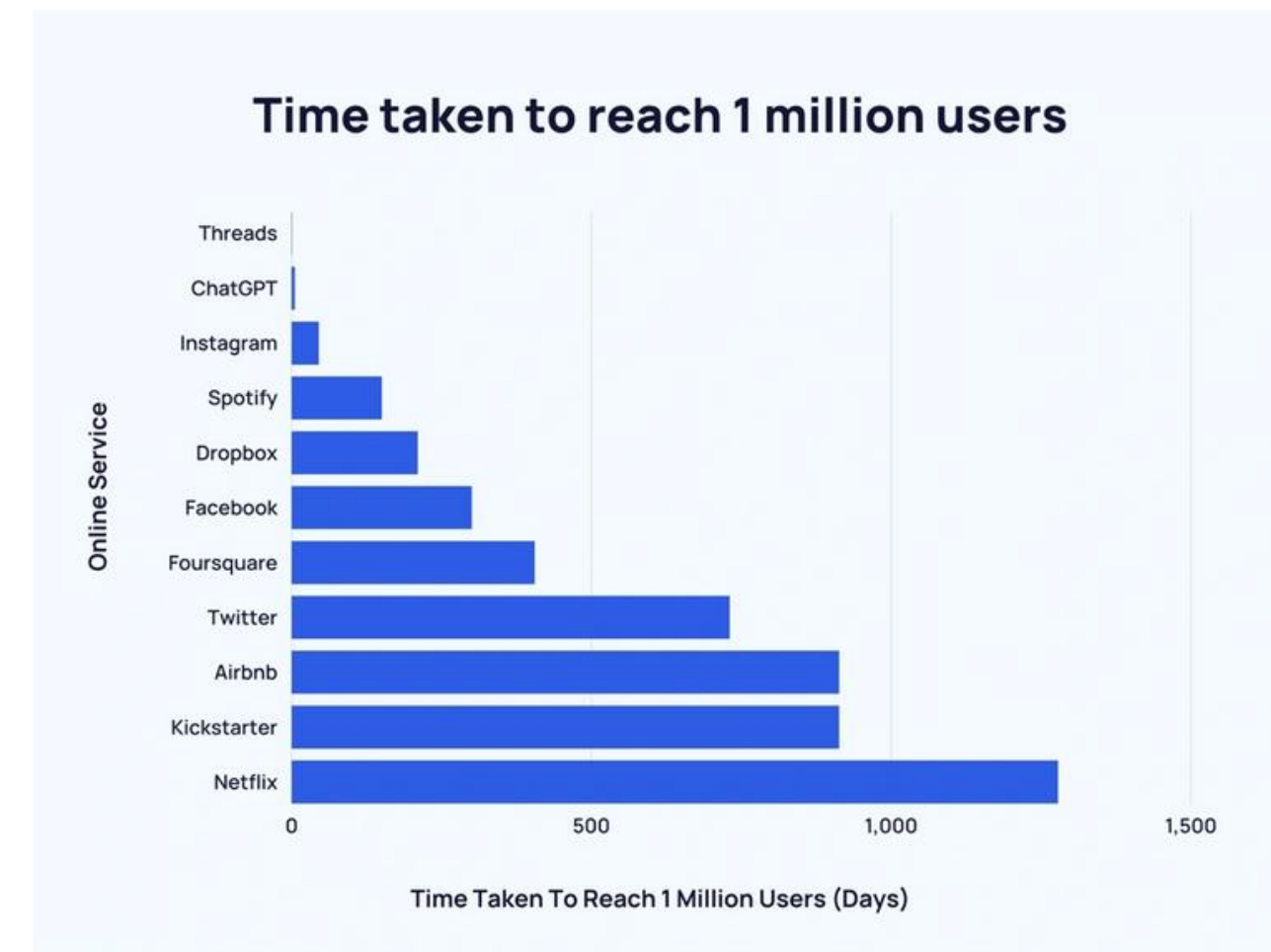
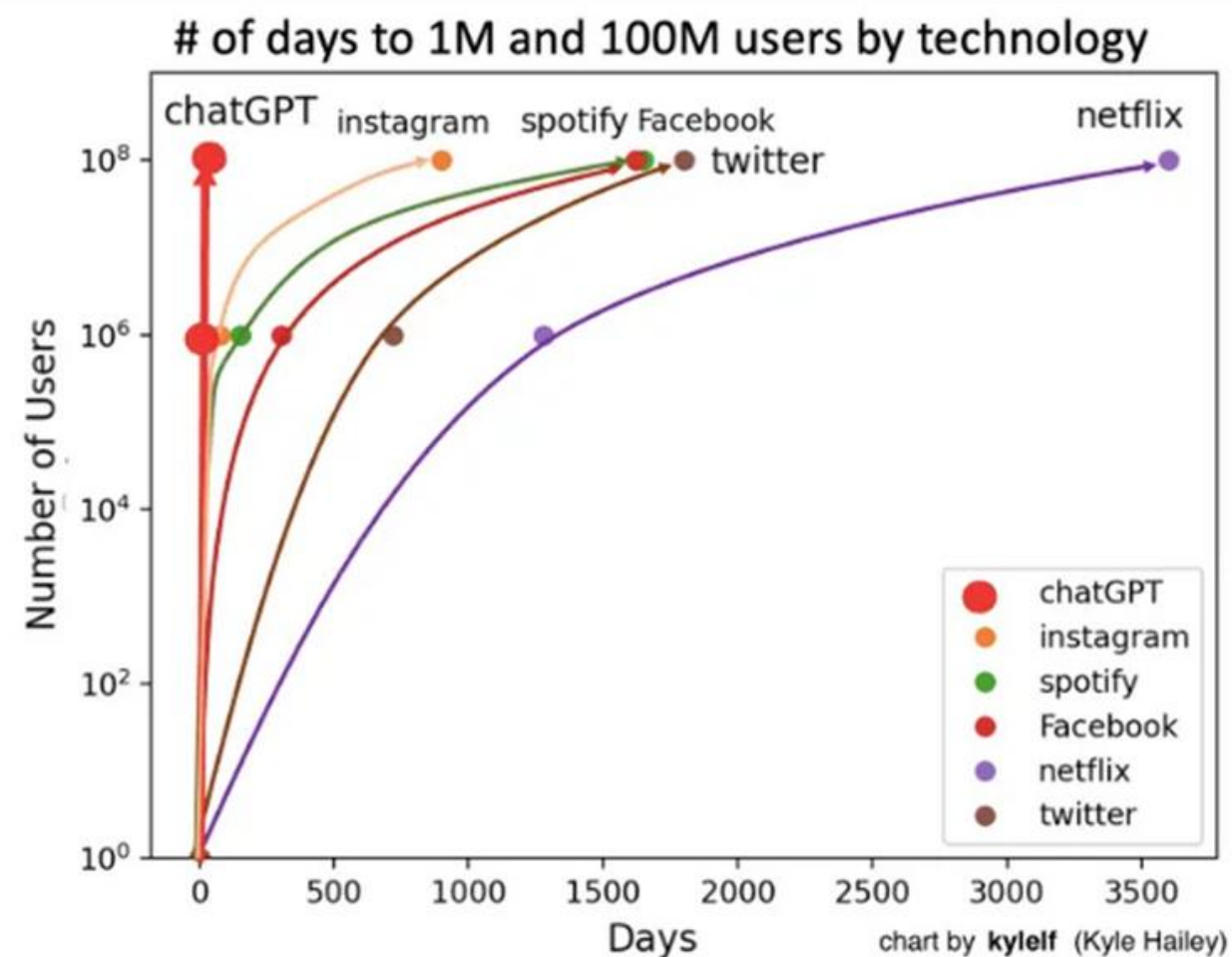


¹ <https://www.gatesnotes.com/The-Age-of-AI-Has-Begun> Left <https://ark-invest.com/big-ideas-2024>. Right <https://www.benparr.com/p/future-of-ai-investing-report>

Its GROWING

Technological progress is cumulative – current technologies build upon prior technologies and their networks

The result is explosive exponential growth – it took ChatGPT 5 days to reach 1 million users; it took Netflix 3.5 years...



But What is It?

For the Technology layer for this cycle, we are primarily focused on **Artificial Intelligence (AI)**

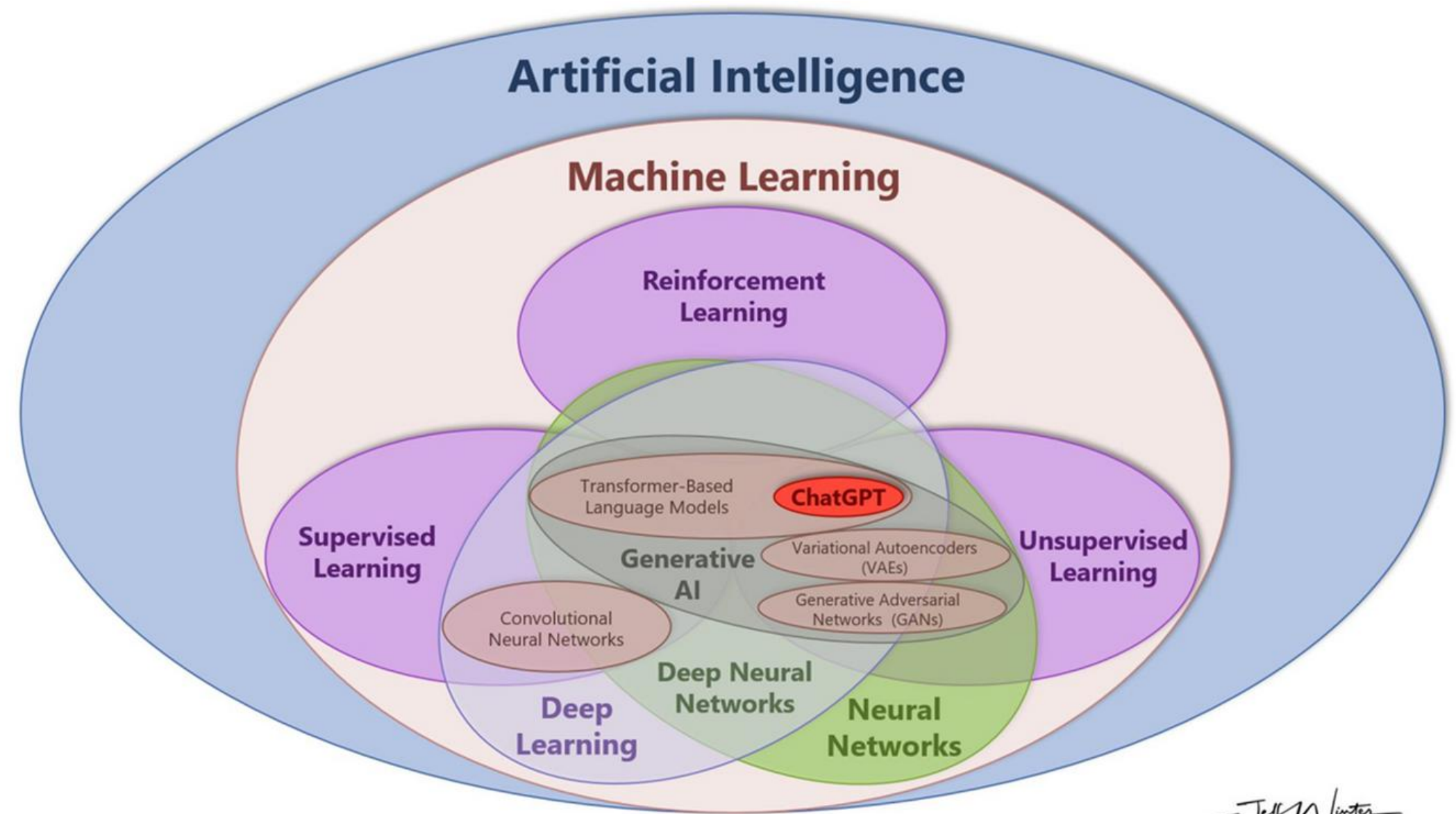
AI is decomposed into **Compute, Data**, and **Algorithms**

Semiconductors are the base layer of the **Compute engine** – the 'oil' of Compute

Data is the critical input into **Algorithms** – the 'oil' of Algorithms

The Confluence of the three effectively composes AI – which will be the **foundation layer to build on for the next decade+**

AI allows you to more efficiently **transform untapped data (potential energy) into actionable intelligence (value)**, to save you time and energy



Jeff Winter

And Who is Involved?

Early version of the **AI Tech Stack** (right)

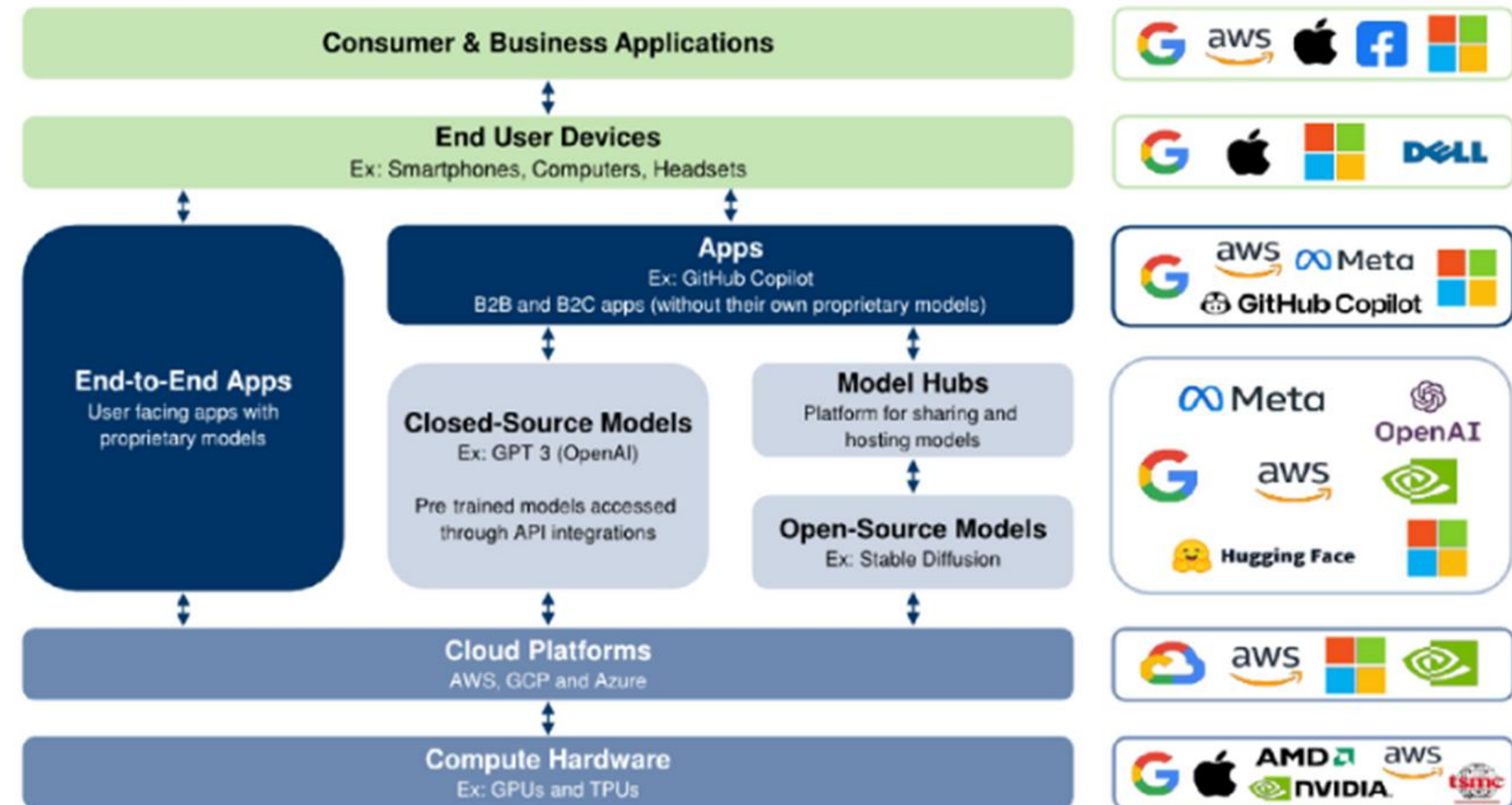
The major initial beneficiaries are the **AI Core Infrastructure** players (**Phase 1** – see slide 14), which are generally **Compute-focused** and are at the **foundation** of the AI Tech Stack

For everything else to work, you need to build out and **rearchitect Data Centers** (base layer; Phase 1B) – analogous to laying **railroad tracks or fiberoptic cables**

The following leg of beneficiaries will be focused more on **Phase 2 – Edge AI** – as we begin to move up the Tech Stack and AI (notably Inference) moves to the edge (e.g., smartphones, PCs, robots)

Phases 3 and 4 will be focused on **AI Applications** – both digital and physical – ranging from **AI Agents** that complete tasks (i.e., book trips, answer emails) to **self-driving cars** and **robot assistants**

Ultimately, **innovation** and **ingenuity** mean the sky is the limit... we underestimate change over the long run



Solving the Bottlenecks

We are now in **Phase 1B** of this AI cycle – still focused on **infrastructure** and the **foundation layer**, but moving toward solving **bottlenecks**, most notably in Networking and Memory

Nvidia is the key **Compute** player and they have been the dominant force enabling and accelerating this **Technological Revolution**

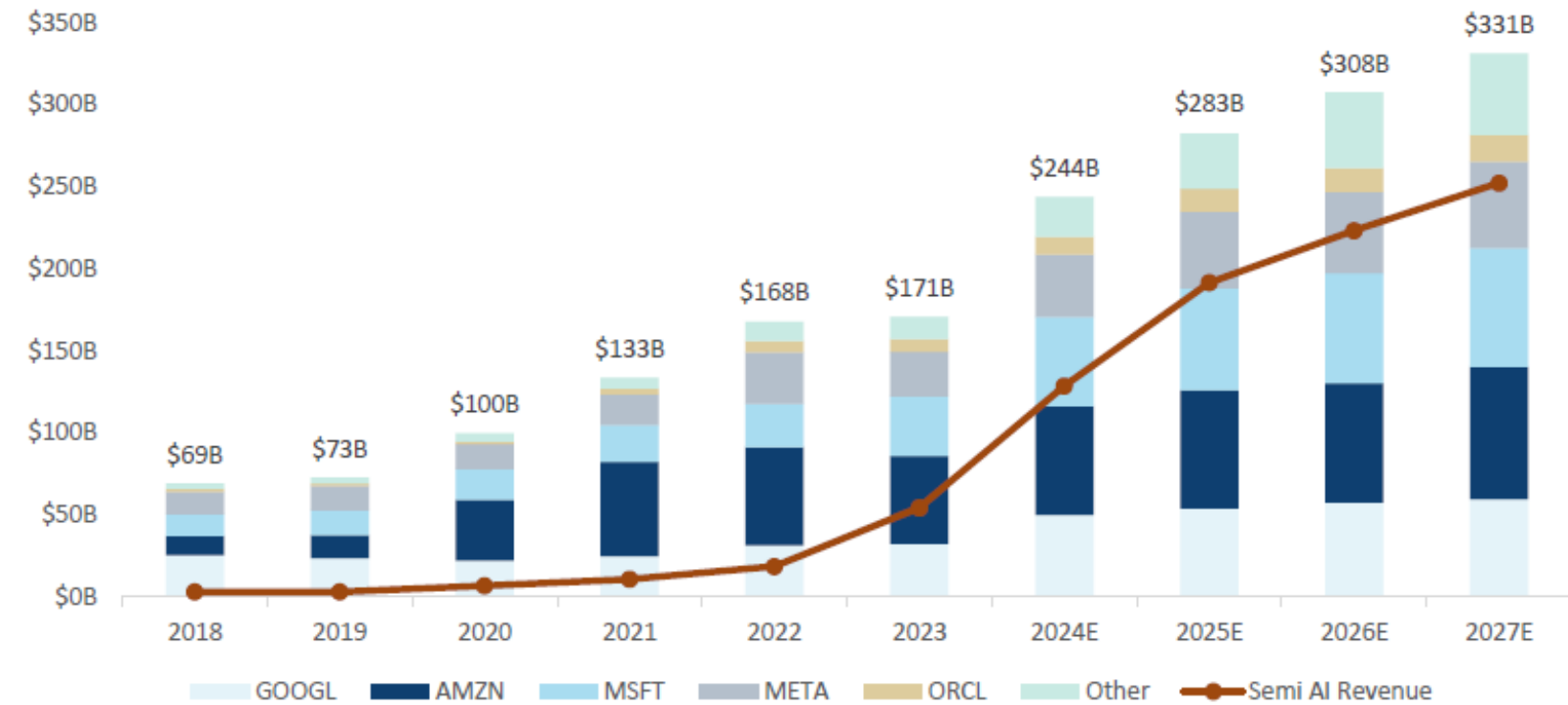
However, Data Centers were historically built to optimize for CPUs, not GPUs. To optimize for these AI workloads, you need to **rearchitect** the Data Center – which requires a **historic capital expenditure boom** (trillions of dollars)

As you roll out this new **Compute** layer (GPU-based), you run into bottlenecks that effectively limit or throttle the Compute (i.e., not getting as much out of chip as you should)

Our major investments are focused on companies resolving these bottlenecks (**Networking** and **Memory**), as well as big content winners in the Nvidia **Blackwell** platform which just launched (November 2024)

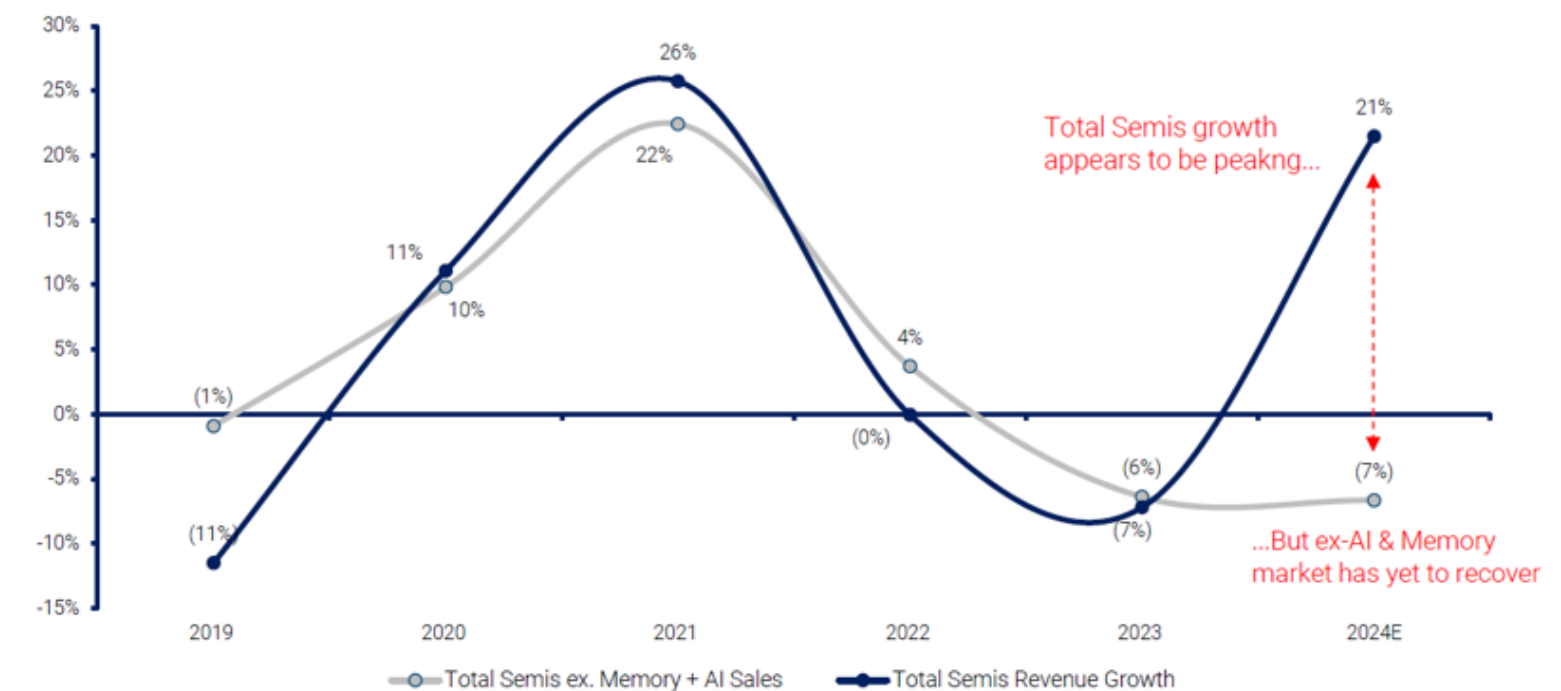


Figure 1: Hyperscaler Capex Plans Growing with AI Spend

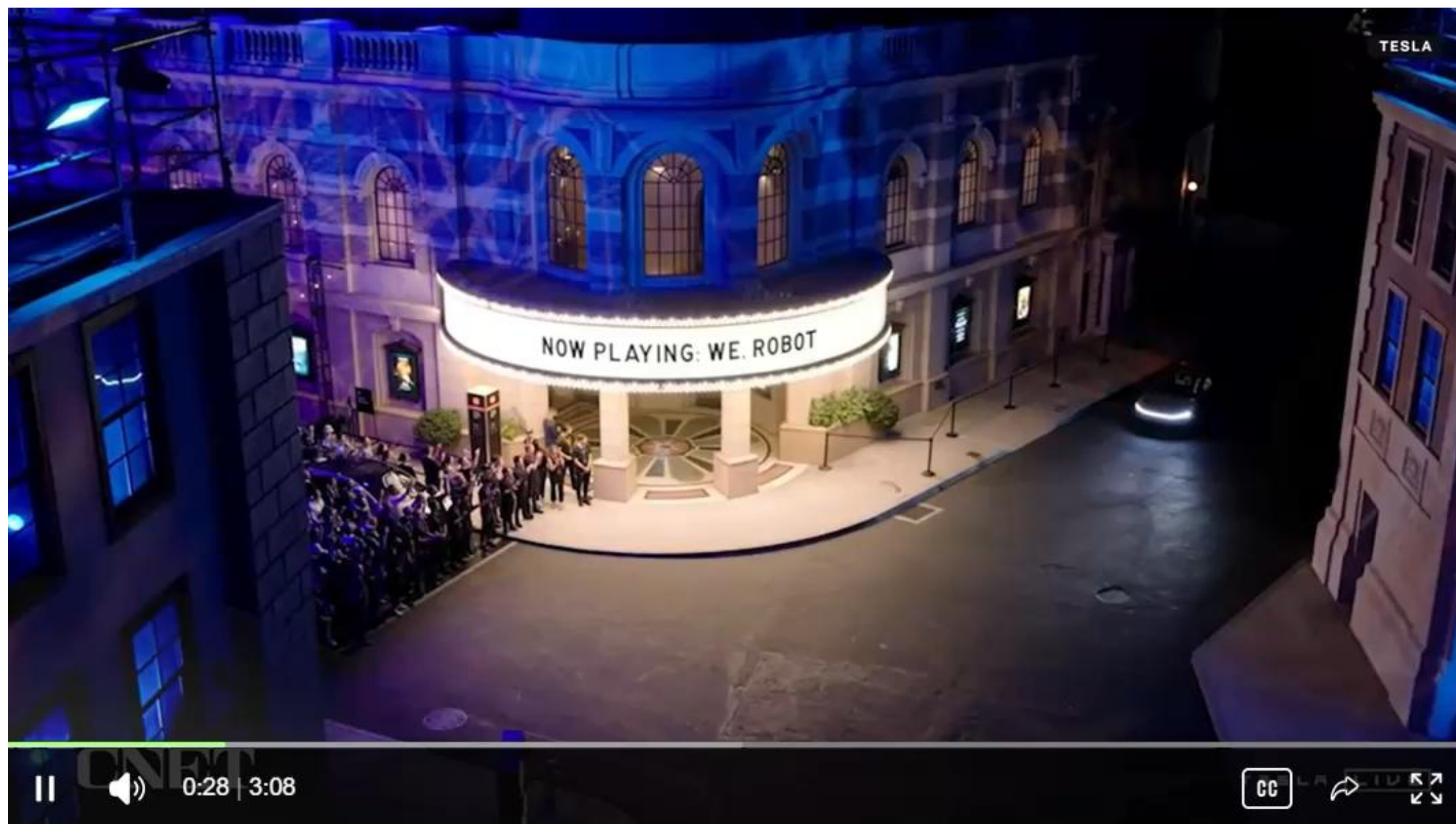


Source: Gartner, Company Reports, FactSet, Jefferies Research

The cycle is accelerating sharply; we model the next peak in 2025

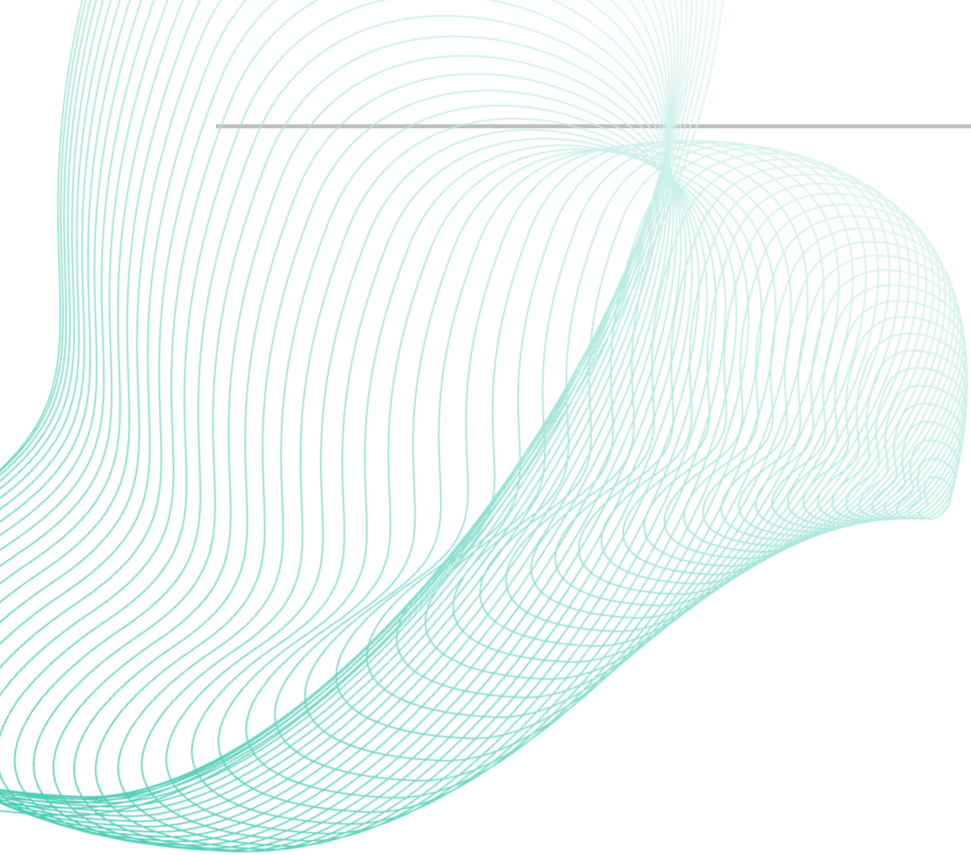


Source: Company Reports, Jefferies Research, Gartner

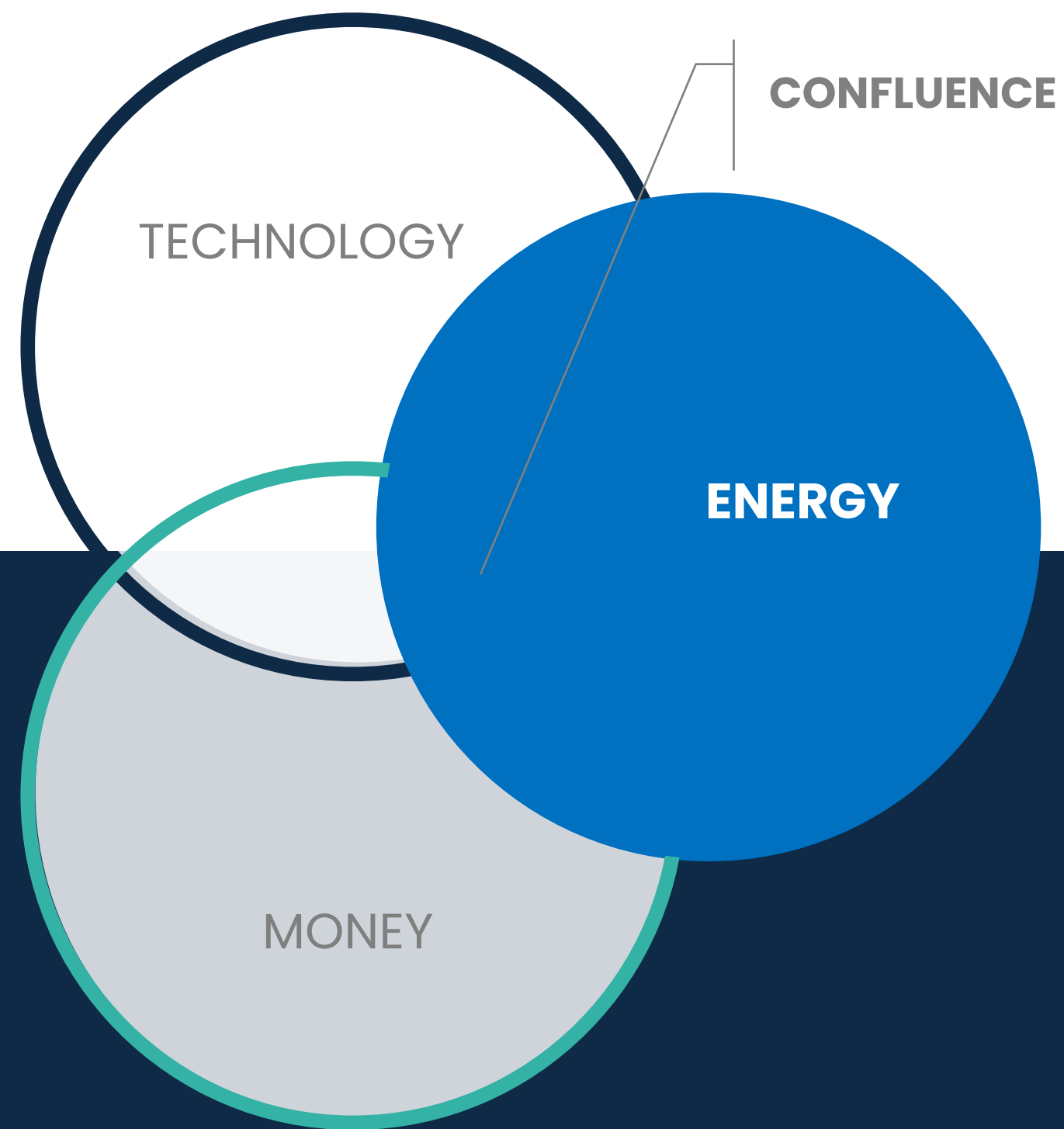


ROBOT + AI = PRODUCTIVITY

<https://www.cnet.com/videos/elon-musk-shares-vision-for-optimus-robots-at-we-robot-event/>



ENERGY



Energy is a **critical input into any system** – the base layer for both **Technology** and **Money**

Overall consumption of Energy is a one-way trend higher since the first Industrial Revolution

Eventually, Technology makes Energy **cheaper/more efficient** – but investment is typically required upfront to Power the Technological Revolutions, hence commodity capex boom/bust cycles

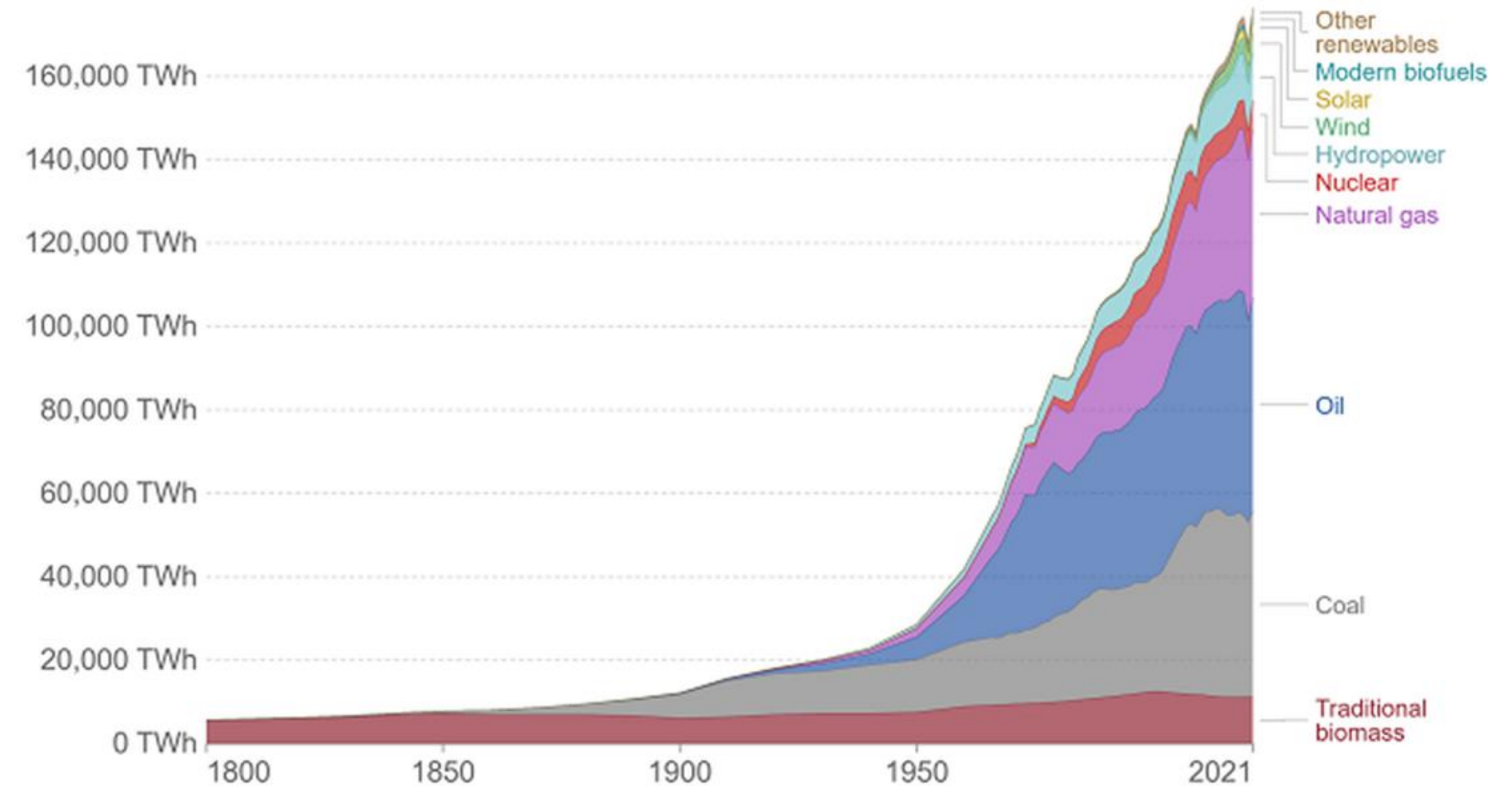
The most **powerful** Nations are energy independent, have access to the lowest cost energy resources, and have abundant supply of these energy resources

Similar to Technological leadership, **Energy is a National Security priority**

Global primary energy consumption by source

Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as fossil fuels.

Our World
in Data



Source: Our World in Data based on Vaclav Smil (2017) and BP Statistical Review of World Energy

OurWorldInData.org/energy • CC BY

Right <https://www.lyndal.com/energy-problems/>

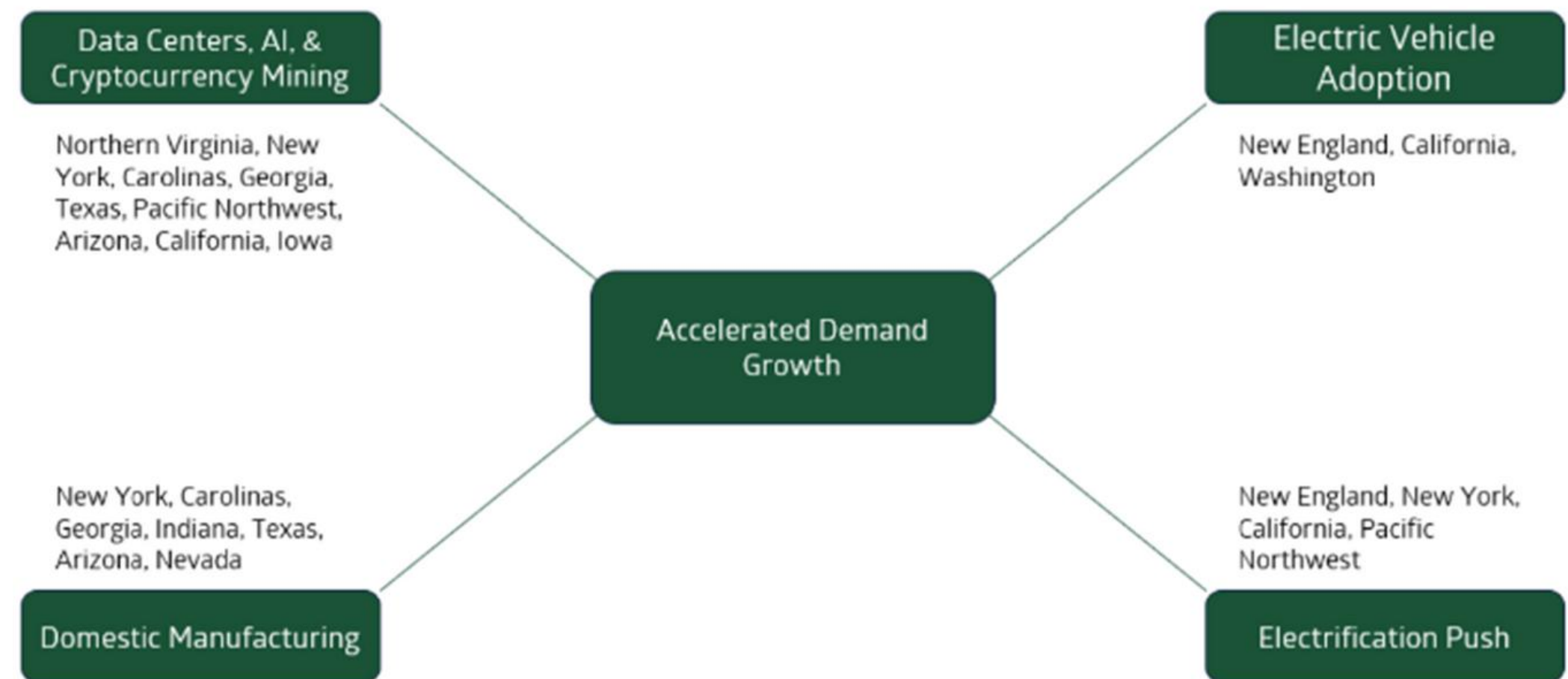
Energy: The Base Layer

After 20+ years of cheap labor and cheap energy, trends are reversing

AI is a massive secular theme that will not only require a **revamping of data centers**, but also will require a **massive increase in baseload energy** and **electricity transmission** to power it

Add on top of that supply **chain reshoring**, **electrification of the grid**, **EV adoption**, and **rising global conflicts** – and you have quite the Confluence of **drivers for Energy** over the next decade+

We look to invest across the chain – from power/electricity transmission infrastructure, to baseload energy, to emerging energy sources and storage



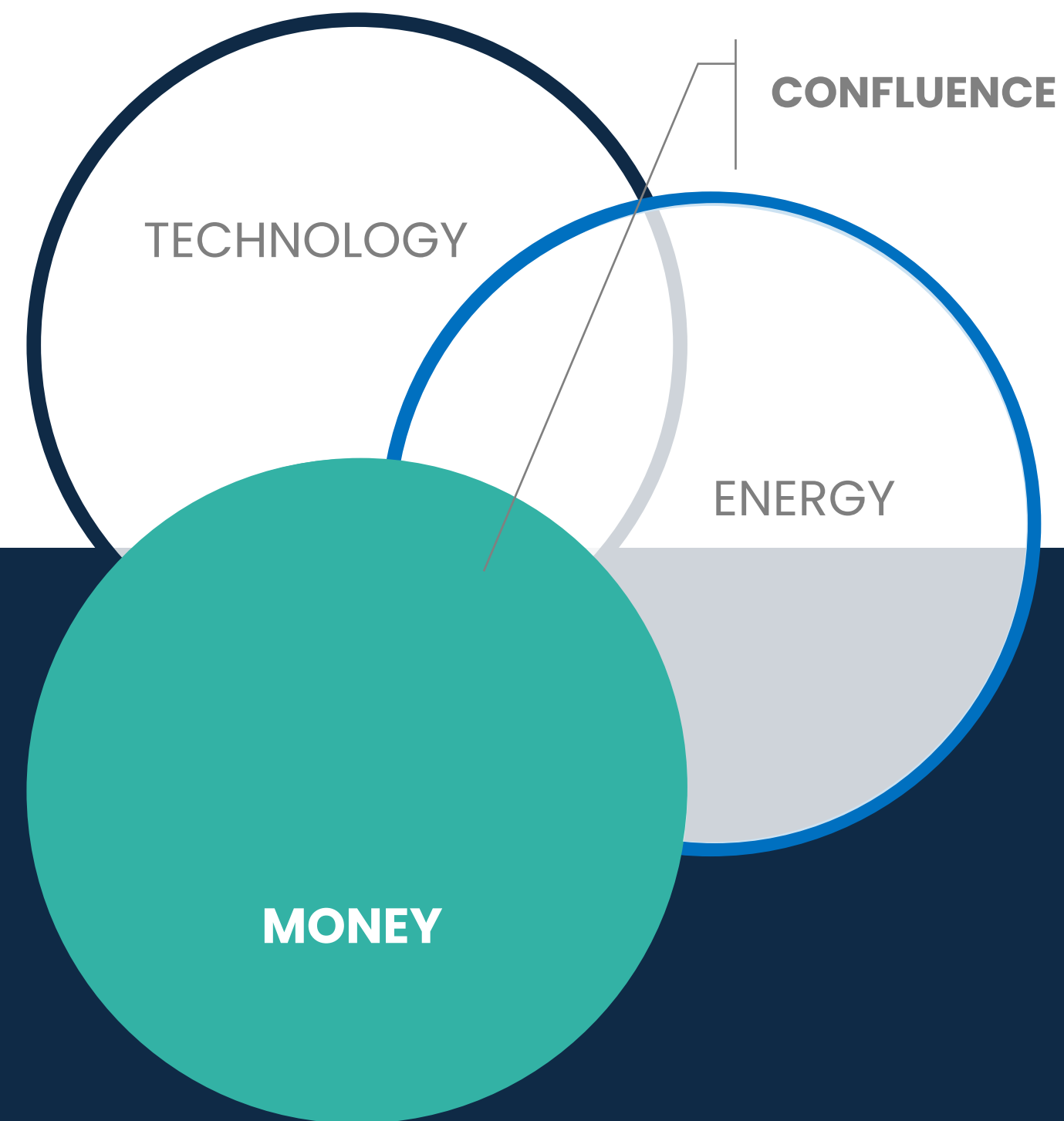
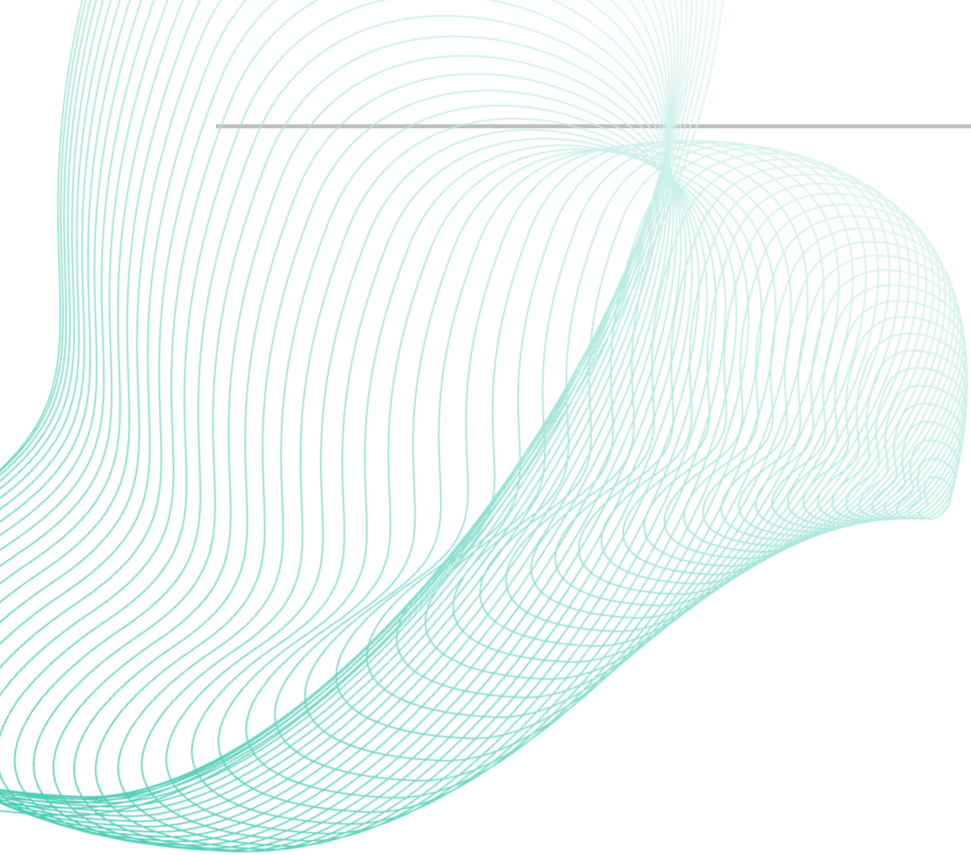
Right TD Cowen – Data Centers, Generative AI & Power Constraints: The Path Forward <https://tdcowen.bluematrix.com/docs/pdf/65190358-9d85-473b-86e5-27a588556e33.pdf>

Demand Acceleration

- **Transformation Drivers:** AI expansion, reshoring, and grid modernisation demand robust, reliable energy solutions
- **Nuclear Power:** A zero-carbon, consistent energy source meeting AI's demands (e.g., Amazon, Microsoft partnerships)
- **Natural Gas:** Essential for grid stability, bridging fossil fuels and renewables while supporting industrial growth
- **Future Energy Sources:** The above and other fossil fuels will help bridge us to future sources – **Solar, Nuclear Fusion, Space-Based Solar, etc.**



Supply in Focus



MONEY

Money: An Overlooked Pillar of Power

Money is an often-overlooked **pillar of Power** – few ever assess the water in which they are swimming

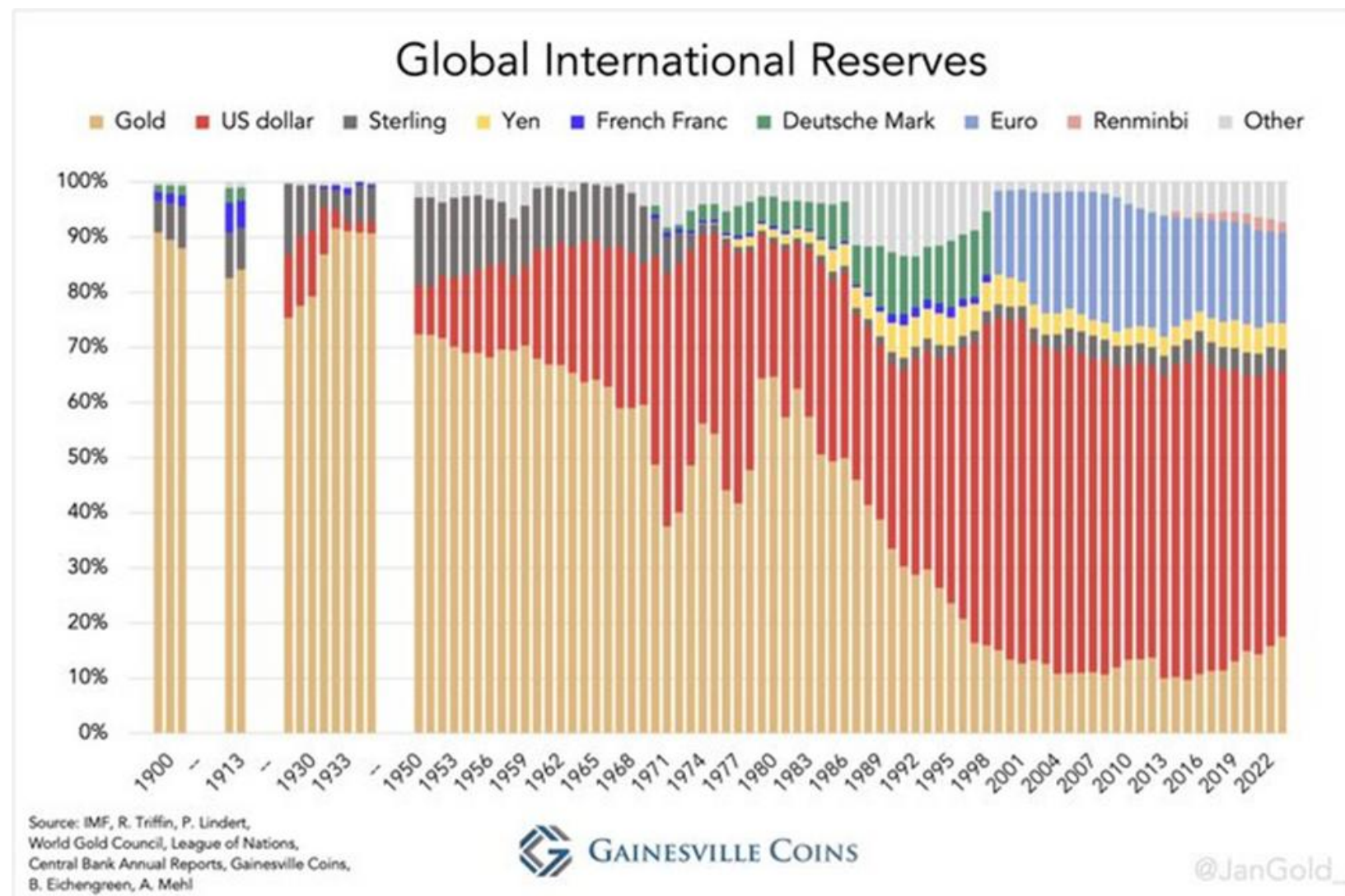
The US is in a uniquely **powerful position** with the **US Dollar** as the **global reserve currency** – the foundation of the current interconnected global system

But the **hegemony** is currently being **challenged by the East**

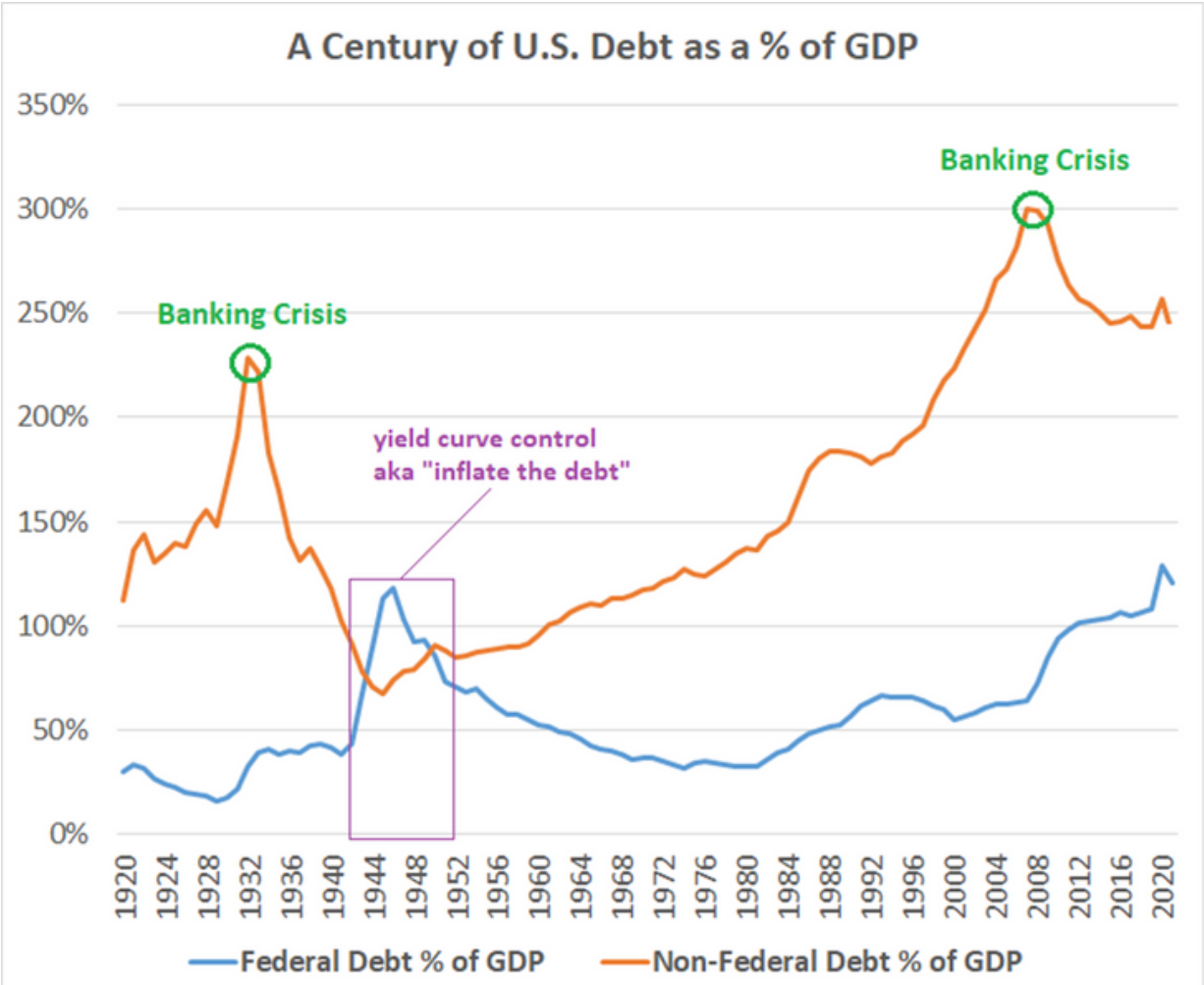
To defend the challenge, large sums of **Money** must be spent

Given the current fiscal situation of most major sovereign governments worldwide (i.e., high debt to GDP), and the required **Money** to be spent on the spheres (namely **Technology** and **Energy**), **monetary debasement** appears **inevitable**

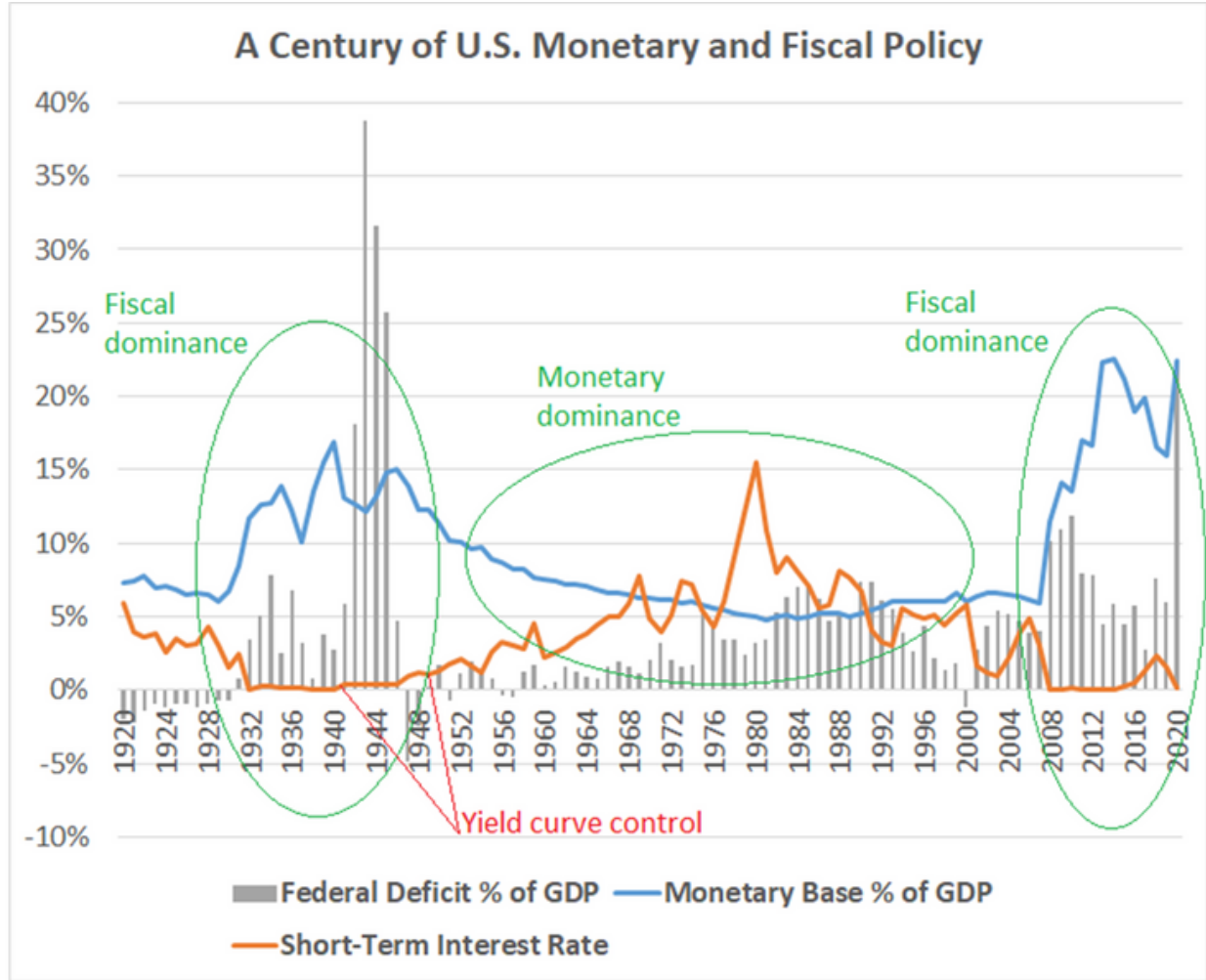
This likely persists until we get a Productivity miracle driven by **Technology or Energy**, or some form of resolution on the new global order...



US Debt to GDP is now over 100%...



...will DOGE fix and reconstitute the deficit?



Left & Right <https://www.lynnalden.com/does-the-national-debt-matter/>; <https://www.lynnalden.com/fiscal-and-monetary-policy/>

Money: the “Store” of Value



US Sovereign Wealth Fund...

- **Bi-Partisan Interest:** Both Trump and Harris highlighted the potential for a Sovereign Wealth Fund in the US
- **Growth & Security Goals:** To accelerate investment in critical areas for the Country's future – notably around resilience and adaptability in an evolving geopolitical landscape
- **Focus Areas:** Technology (AI, Quantum Compute, Semiconductors, etc.), Energy (Nuclear Fusion, Space-based Solar, etc.), Money (Blockchain, etc.)



Money: the Energy of Innovation

Pillars of Power – a Natural Balance

Money, Energy, and Technology are all **intricately interconnected**

The combination of the three is a naturally 'balanced' portfolio

We are in a period of relative **disruption** and **disorder**; with **change** comes **massive opportunity**

Just as **Winter** inevitably turns to **Spring**, **order** consistently follows **disorder** in the waves of time

The **greatest opportunities tend to present themselves during these turning points** and system shifts

Those who have **studied history** and are **prepared** are **best positioned to capitalise**

Growth mindset helps drive **non-zero-sum outcomes**

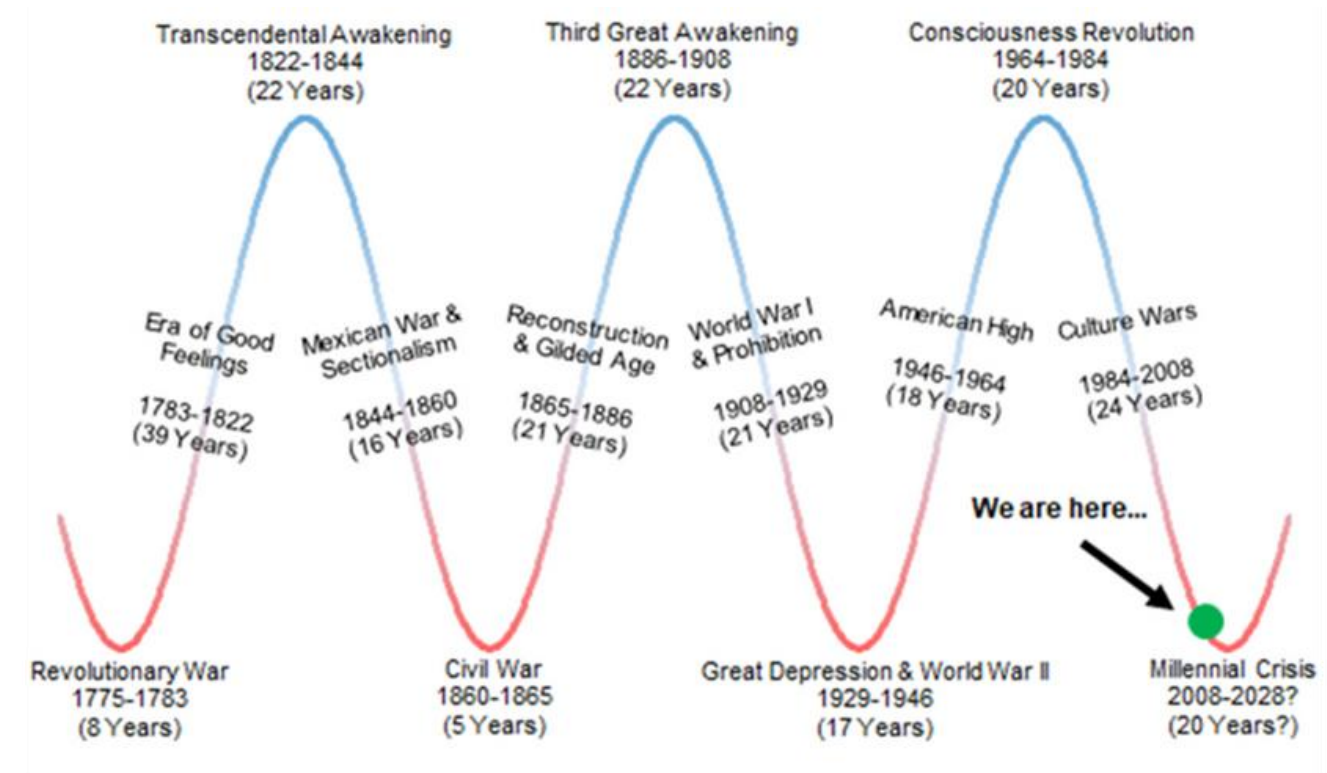


Why Now

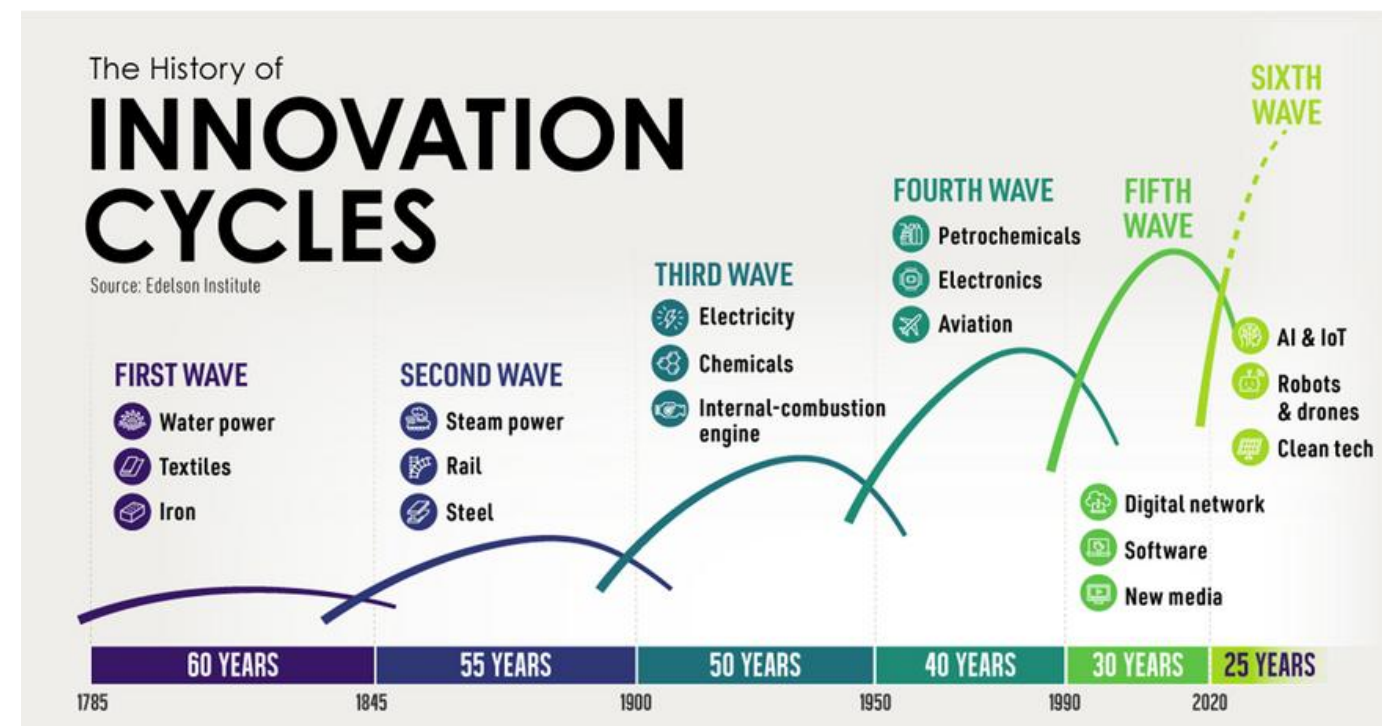
We are at an Inflection Point in History

- Confluence of Cycles
- Challenges to current Order
- Accelerated target Investments
- Product Built to Capitalise

Demographic & Geopolitical Waves...



...tied into Technological & Innovation Waves



Why Now

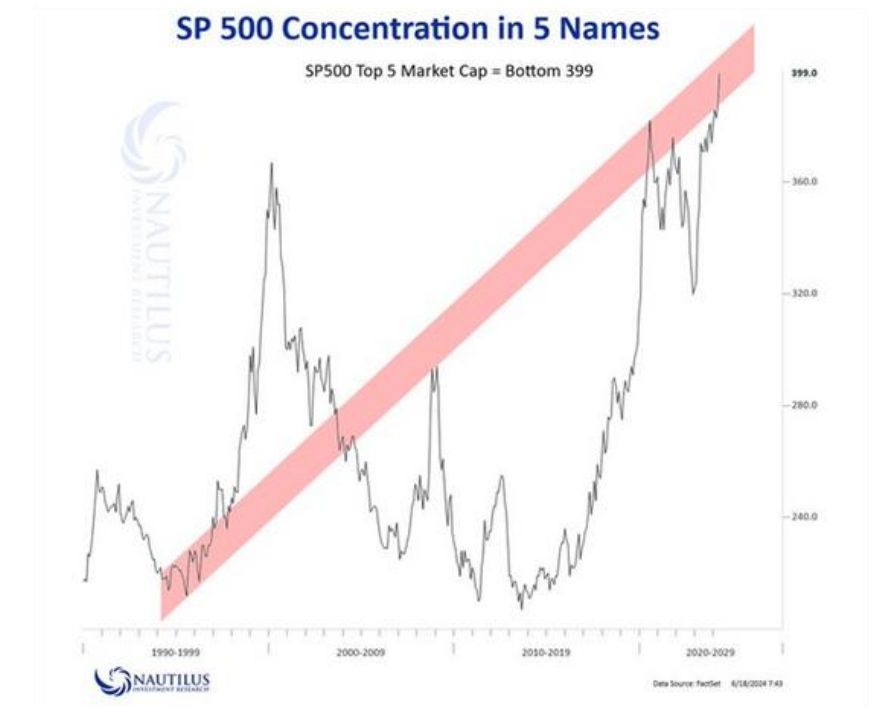
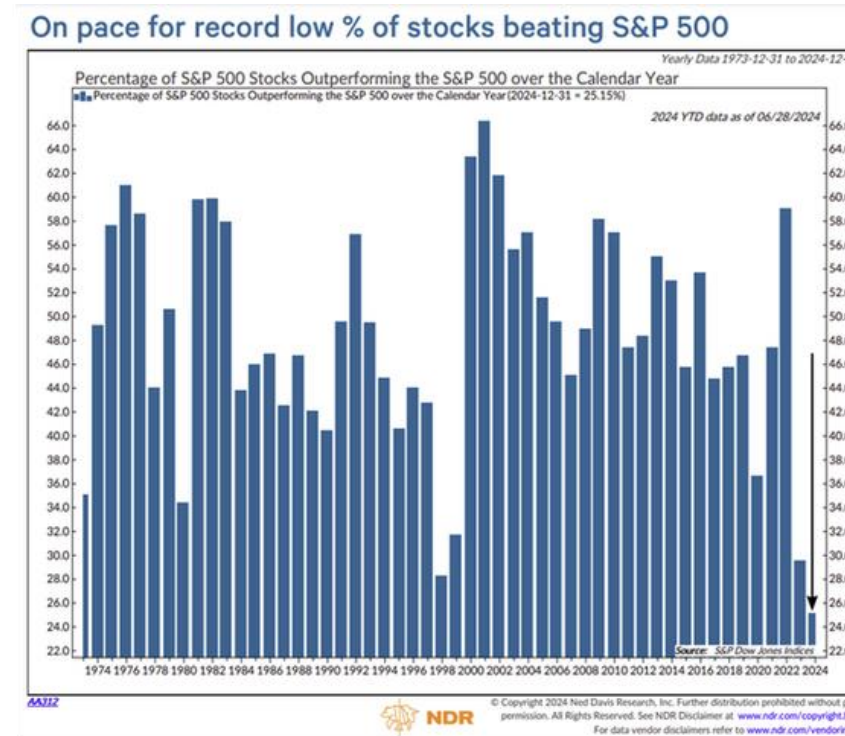
We are at an Inflection Point in Markets

- Significant EW Underperformance
- Extreme Concentration
- Low Correlations
- Opportunities in SMID Cap



% of Stocks Outperforming near all-time low...

...while concentration in top near all-time high

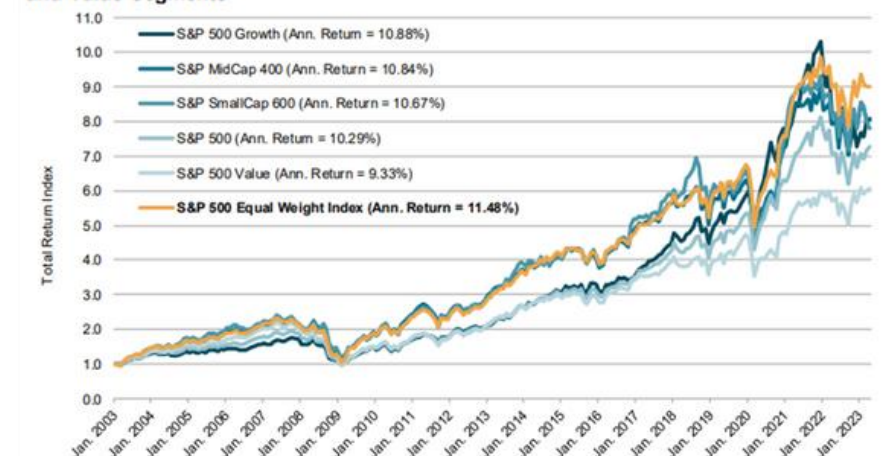


Market-cap vs. equal-weight correlation near all-time low...

...equal-weight tends to outperform over time



Exhibit 2: S&P 500 Equal Weight Index Outperformed U.S. Large, Mid, Small, Growth and Value Segments



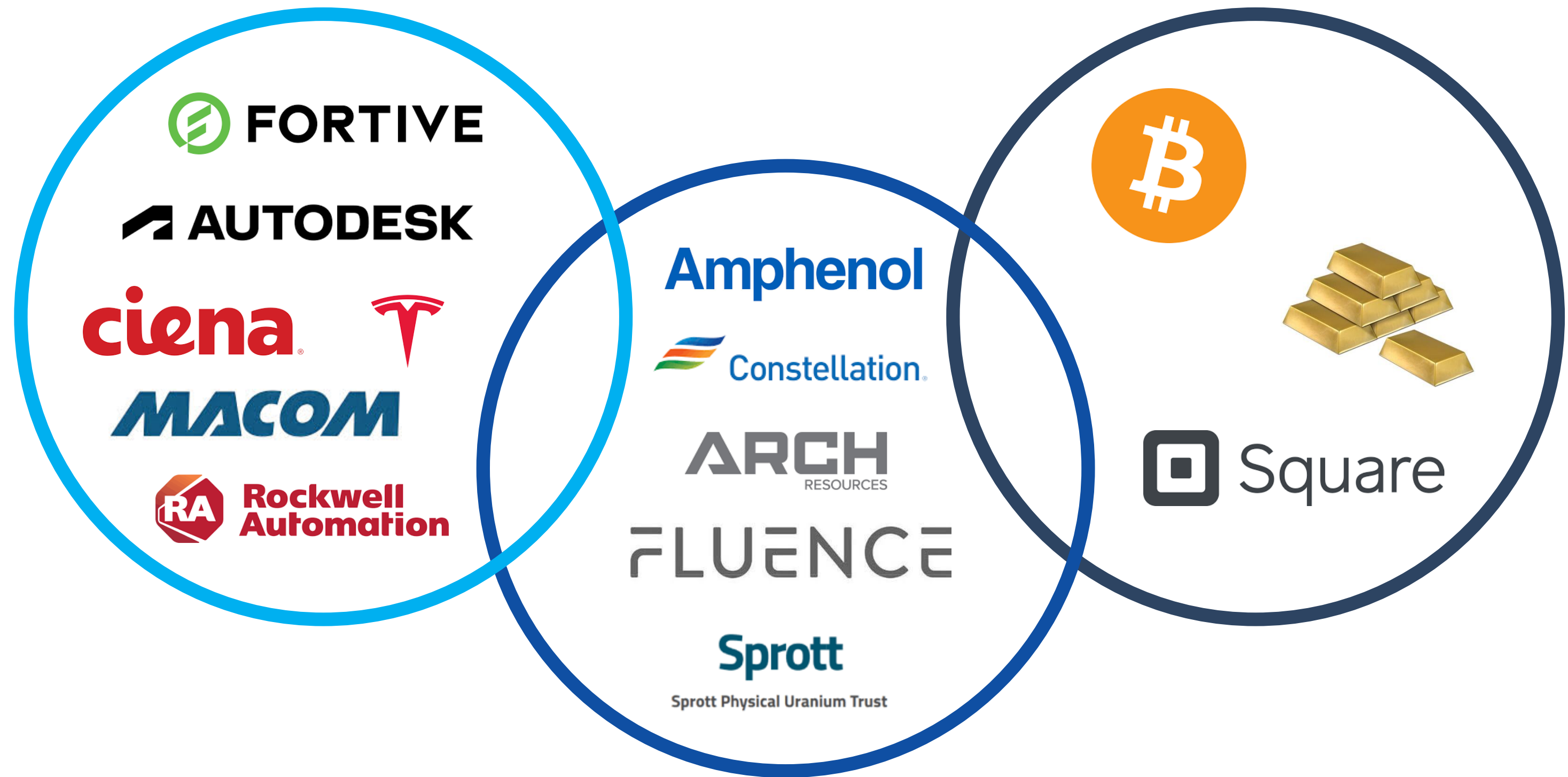
Sources: S&P Dow Jones Indices LLC. Data as of April 30, 2023. Index performance based on total return indices in USD. Legend provides annualized returns over the full period. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Top left NDR; https://x.com/williedelwiche/status/1807941090076774612?s=46&t=Ay_vpS-Cy_QDCvezUUZaSQ

Top Right Nautilus; <https://x.com/nautiluscap/status/1803017874719584579?s=46>

Bottom Left Tier1 Alpha; <https://x.com/t1alpha/status/1800601950930813171>

Bottom Right S&P; <https://www.spglobal.com/spdji/en/documents/research/research-more-equal-than-others-20-years-of-the-sp-500-equal-weight-index.pdf>

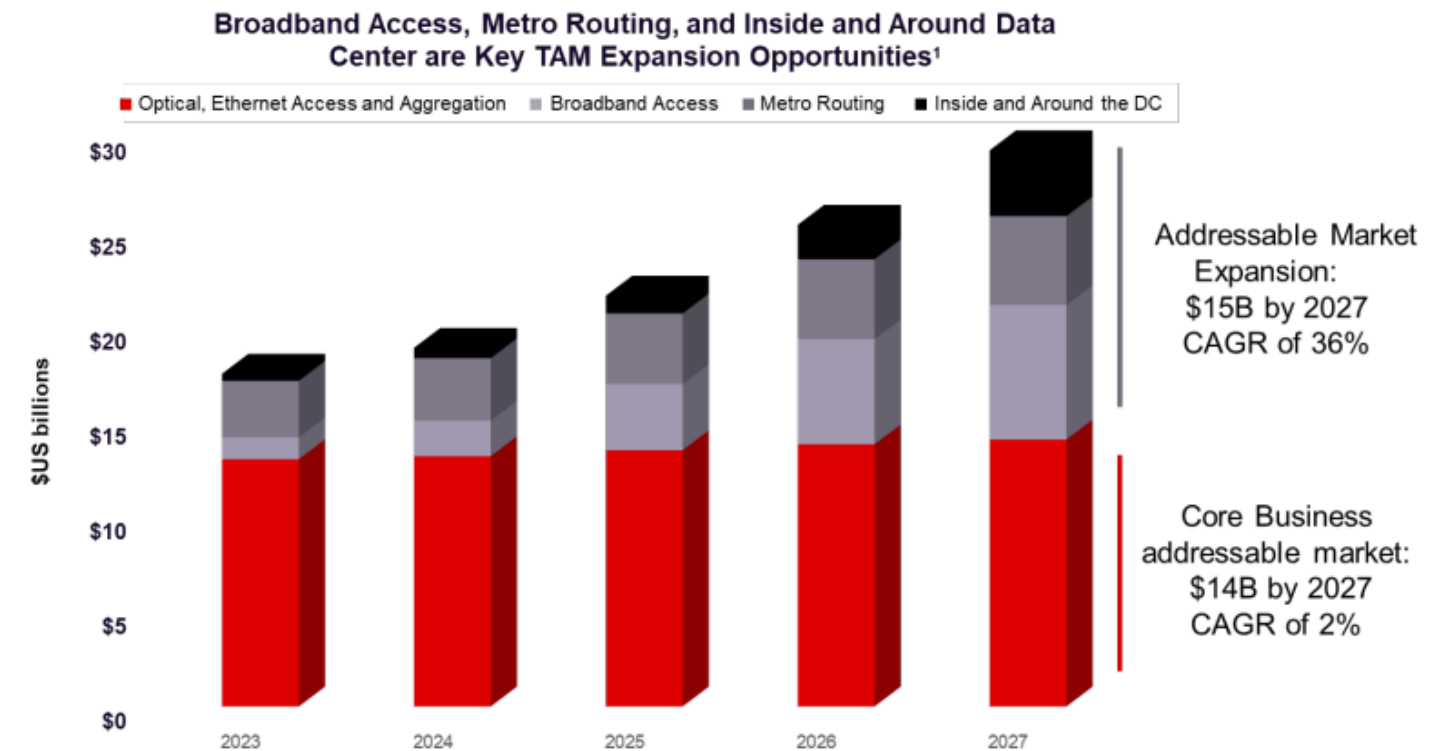
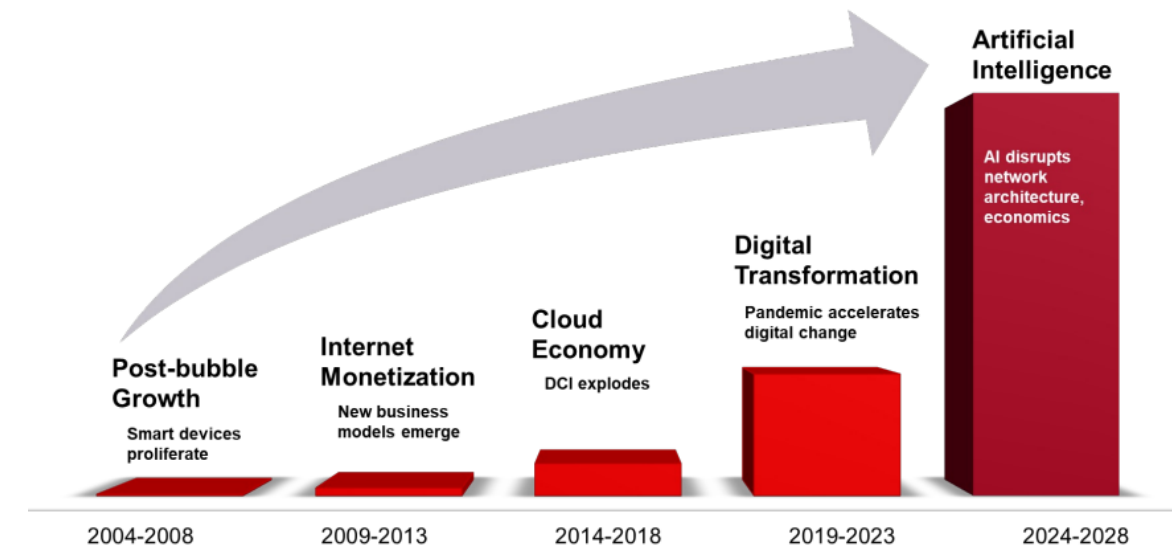


Top Picks For 2025+

Ciena Corporation

Company Snapshot:

- Market Cap: ~\$10B (11/21/2024)
- Networking systems and software company, primarily US-focused
- Near a cyclical optical trough, with a secular opportunity
- Significant market expansion around AI/ML, notably DC to DC
- Opportunity to grow cloud business, displace Huawei, grow government



MACOM, Inc.

Company Snapshot:

- Market Cap: ~\$10B (11/21/2024)
- Analog Semiconductor company
- Critical domestic US vertically integrated manufacturer
- Significant growth opportunities around networking/optical, military/space, AI/automation
- Significant share gain in Nvidia's Blackwell platform

MACOM

TAMIM



Industrial & Defense
SAM \$2 Billion*

- Diodes
- MMIC
- HPC
- RF Power
- Lightwave
- Linear
- Modules & Subsystems

RF and Microwave components and sub-assemblies for industrial, civil and defense infrastructure buildouts



Data Center
SAM \$1 Billion*

- Lightwave
- HPC
- MLH

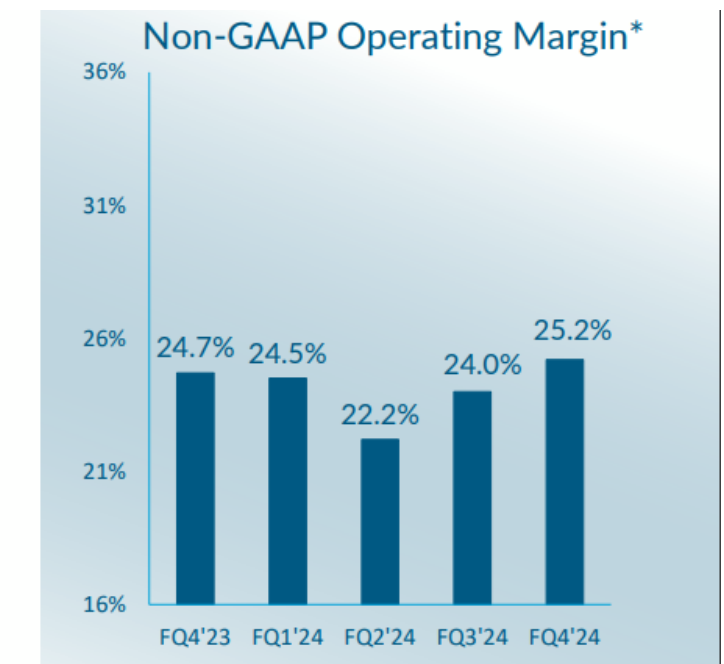
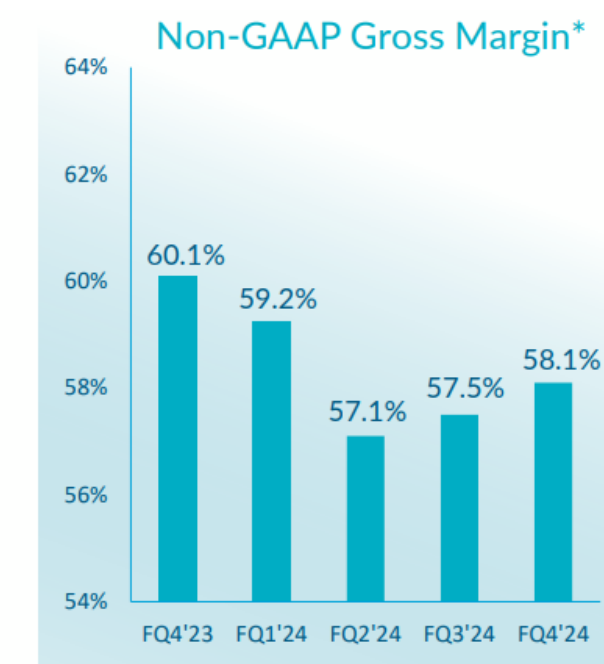
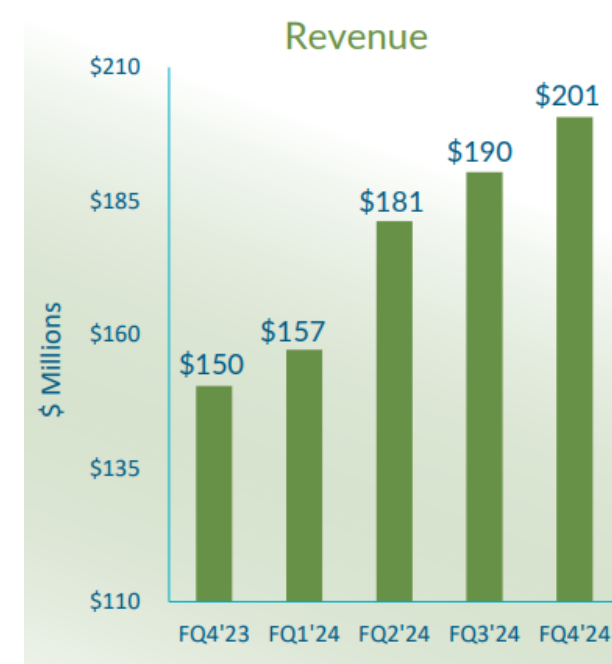
Optical connectivity in Data Centers enabling new cloud-based applications



Telecom
SAM \$2 Billion*

- Diodes
- MMIC
- HPC
- RF Power
- Lightwave

Optical and wireless networks for FTTx, Metro, 4G LTE and 5G applications and services



Opportunity to Capitalise

Growth of a \$1 million invested into the NASDAQ Index



TAMIM GLOBAL TECH & INNOVATION – KEY FACTS



Investment Structure:	Unlisted unit trust
Minimum investment:	A\$100,000
Applications:	Monthly
Redemptions:	Monthly, with 30 days notice
Unit pricing frequency:	Monthly
Distribution frequency:	Annual
Management fee:	1.50% p.a.
Performance fee:	20% of performance in excess of hurdle
Hurdle:	Greater of (RBA Cash Rate + 2.5%) or 4%
Lock up period:	None
Buy/Sell Spread:	+0.25%/-0.25%
Exit fee:	Yes, before first year anniversary of initial investment
Administration & expense recovery fee:	Up to 0.35%



TAMIM

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