

AI, Big Data, Cybersecurity Why Tech? Why Now?

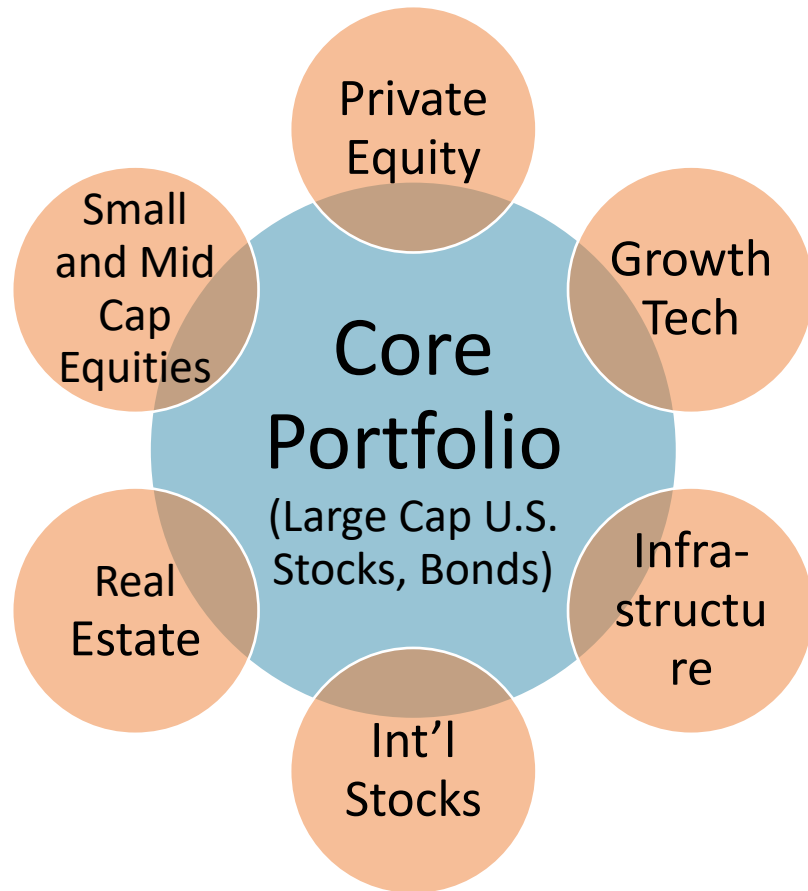
Dave Harrison Smith, CFA
EVP, Equity Research

Ben Lathrop
SVP, Client Relations

Bailard



Why Tech: Core + Satellite Approach

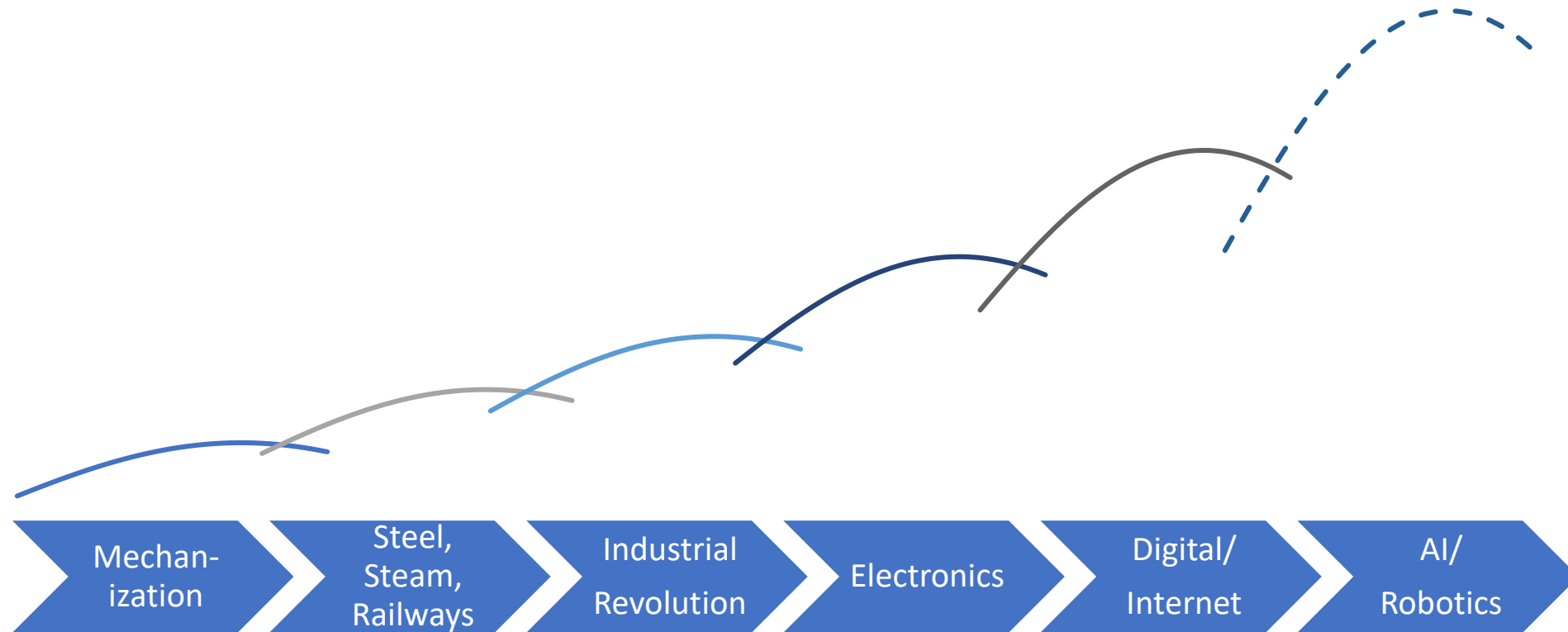


Satellites can...

- Augment risk-adjusted returns
- Diversify risk
- Capture global trends
- Capitalize on opportunities

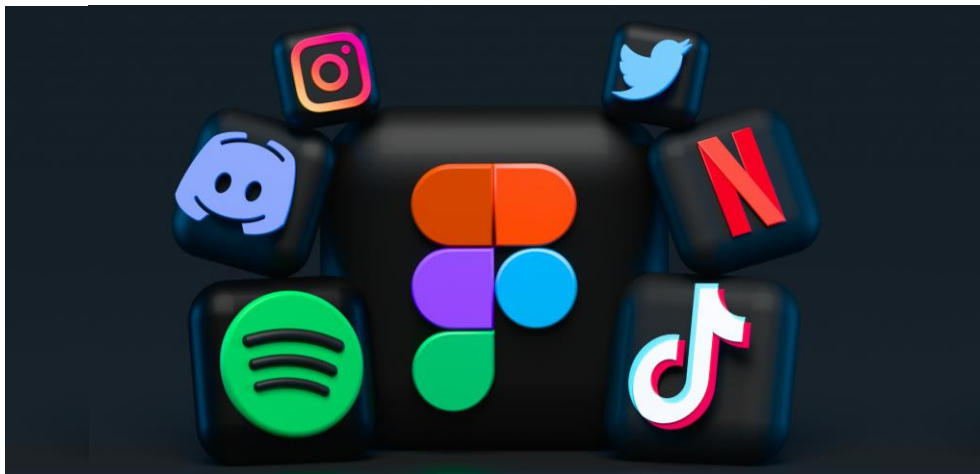
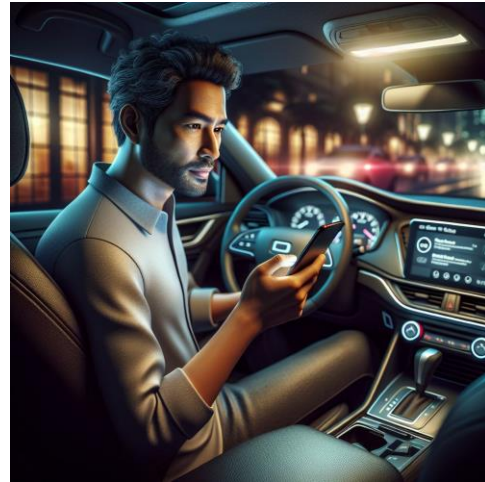
Information and example asset classes on this slide are provided for illustrative purposes only and should not be interpreted as investment advice. There is no guarantee that a particular strategy will achieve its investment or return objectives or targets.

Technology Shifts Come In Waves



Sources: *The MIT Press Reader*, *Bailard Research*.

Exploring Technology Waves

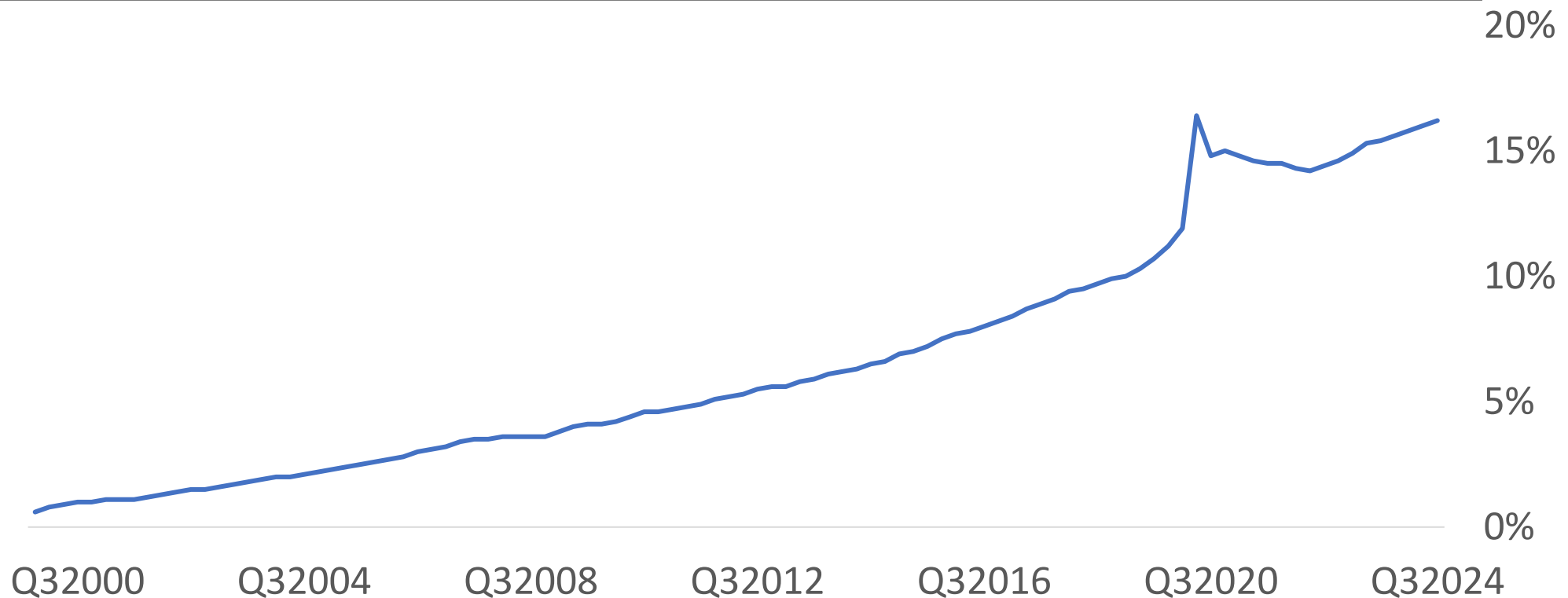


Platform Shifts

- Internet
- E-commerce
- Mobile Phones
- Cloud Computing
- Social Media

Shifts Can Last Decades...

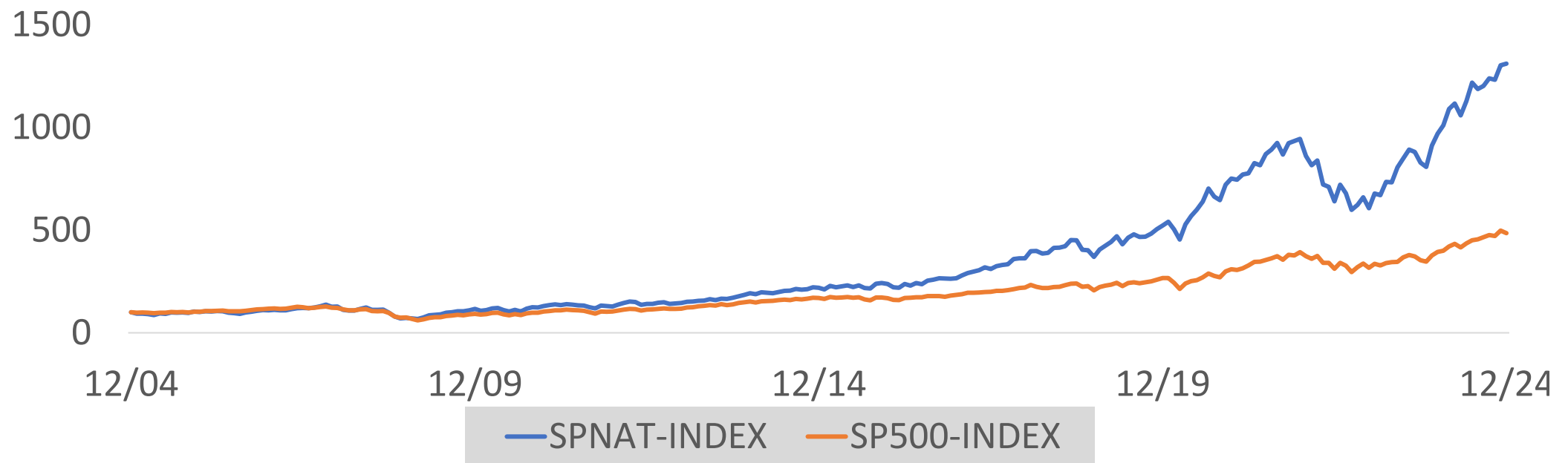
US E-Commerce as a Percent of Retail Sales



There is no guarantee that a particular strategy will achieve its investment or return objectives or targets.

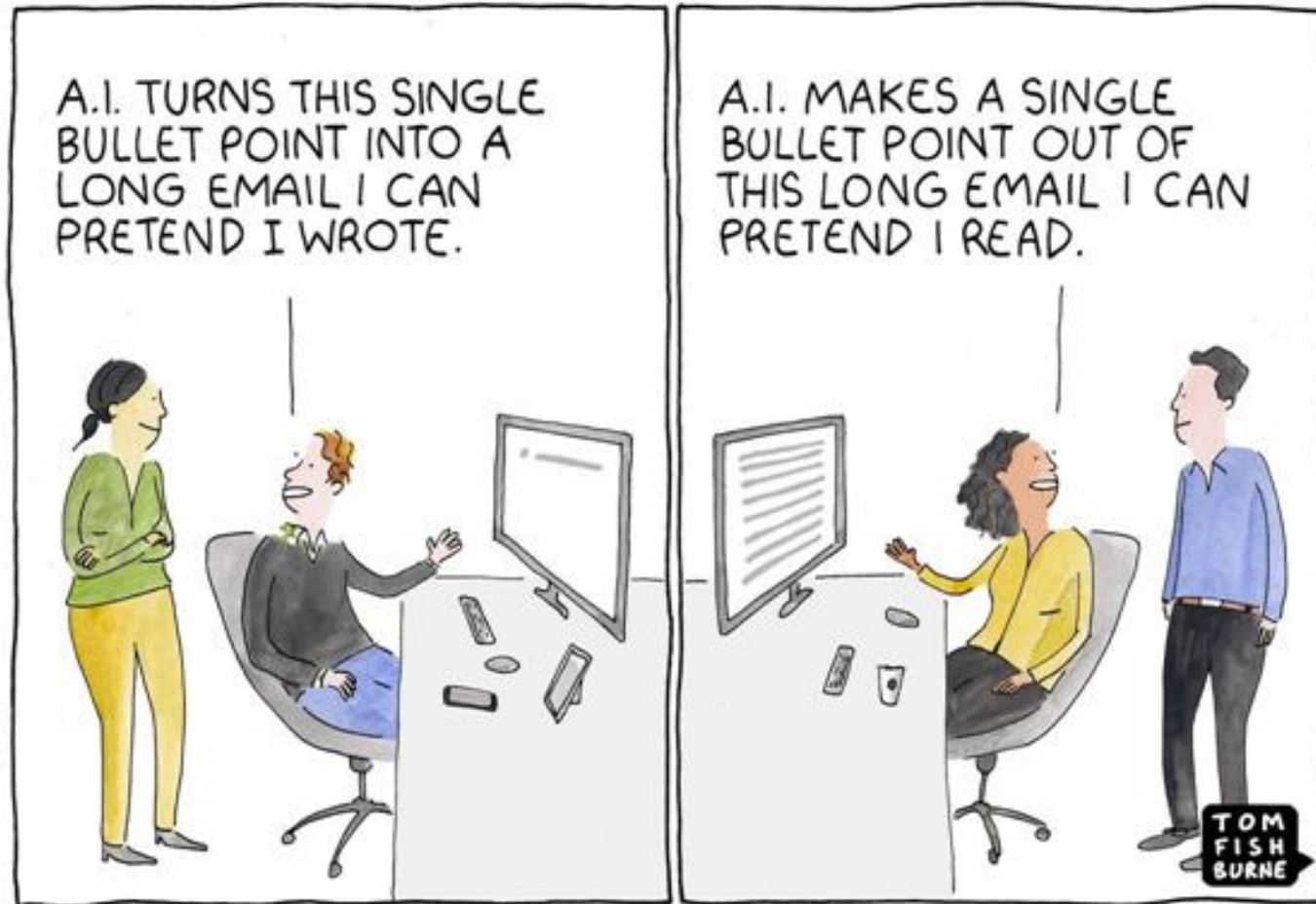
...And Define Investment Eras

Technology Index Performance vs S&P 500




Sources: Bailard, FactSet. Data as of 12/31/2024. 20-Year total return of multiple asset classes. SPNAT is the S&P North American Technology Index. **Past performance is no indication of future results. All investments have the risk of loss.**

What is Artificial Intelligence?



What is GenAI?

- Simulation of human intelligence processes
- ‘Generative’ is the capacity to synthesize entirely new content from a defined dataset



write a function that given a list, create a frequency table for that list

Accept

Reject

Follow-up instructions... K

```
create_frequency_table(input_list):  
    frequency_table = {}  
    for item in input_list:  
        frequency_table[item] = frequency_table.get(item, 0) + 1  
    return frequency_table
```

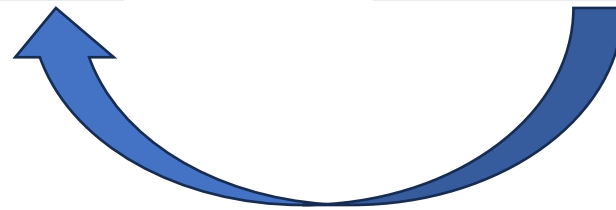
Create a budget proposal for
a research project|

What is GenAI?

The animal didn't cross the street because it was too tired.



The animal didn't cross the street because it was too wide.

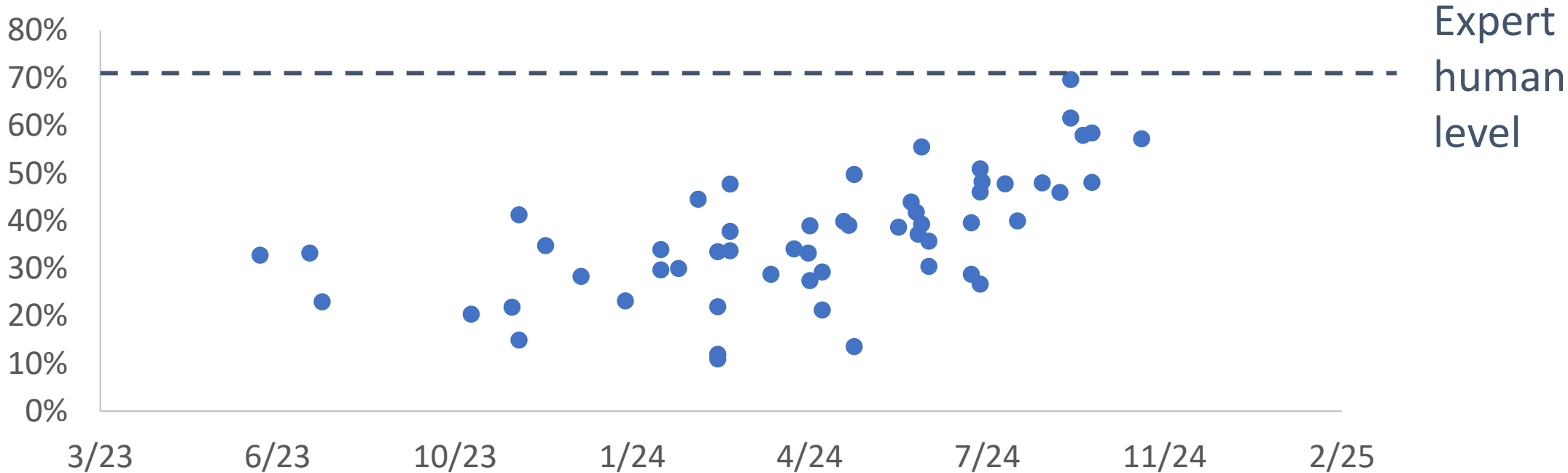


What is GenAI?

“...it was like
looking into the face
of God.”

Models Continue To Improve

Performance on PhD-Level Questions by AI



GenAI Is Breaking Through



```
write a function that given a list, create a frequency table
```

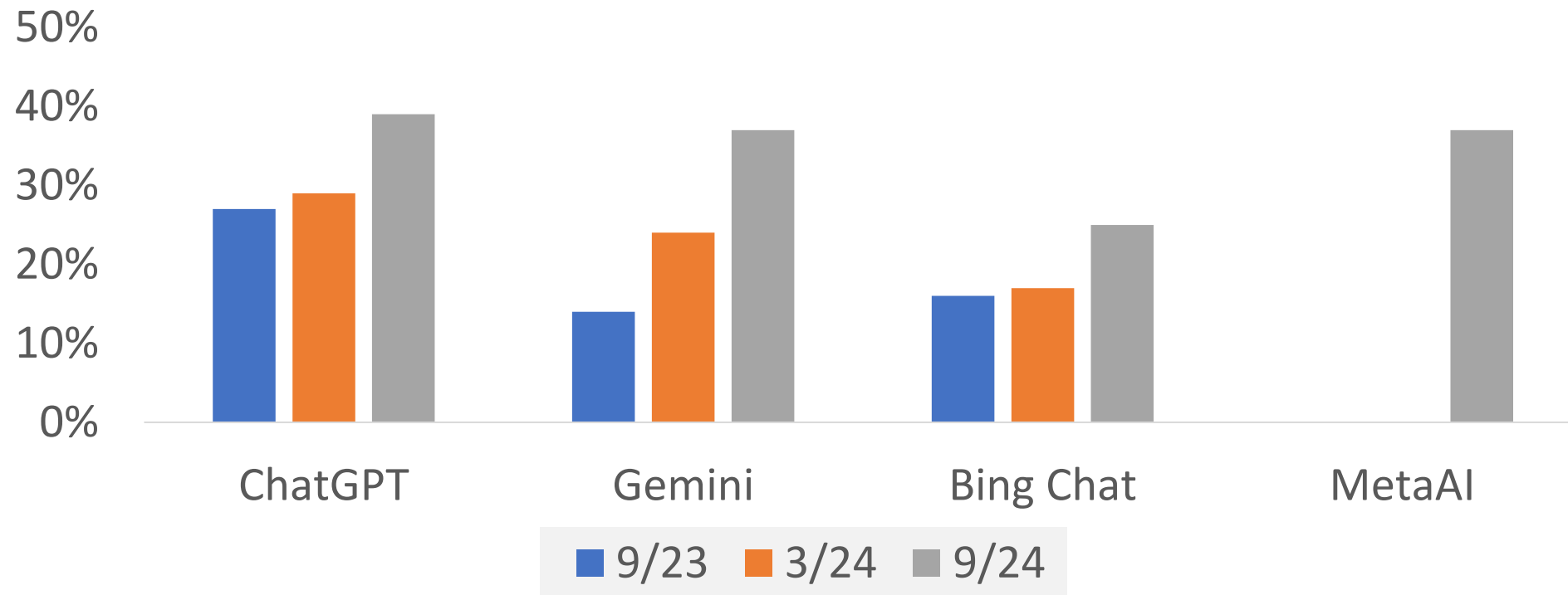
```
def create_frequency_table(input_list):  
    frequency_table = {}  
    for item in input_list:  
        frequency_table[item] = frequency_table.get(item, 0) + 1  
    return frequency_table
```

Emerging Use Cases

- Code generation
- Image/graphic art
- Video and movie
- Biotechnology
- Customer service
- Autonomous driving
- Robotics

Usage is Growing Rapidly...

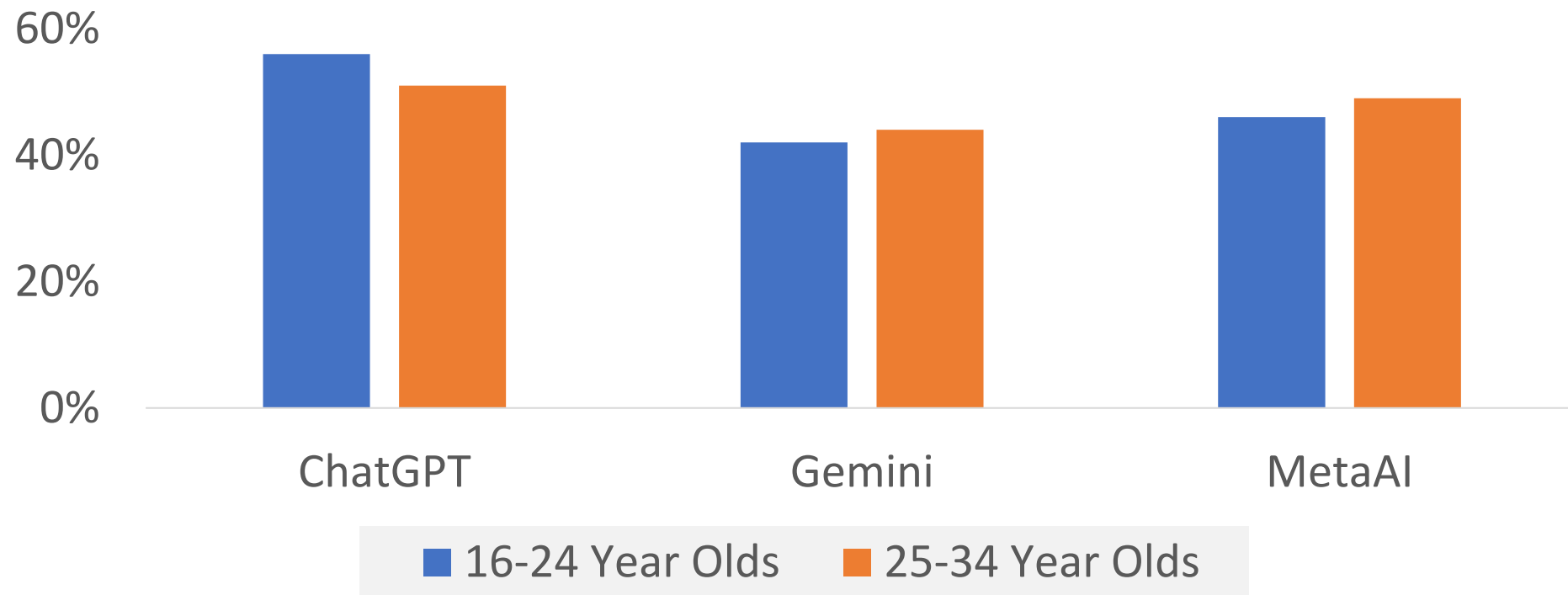
Percent of Respondents With > Monthly Usage



Source: Alphawise, Morgan Stanley, Bailard Research.

...Especially In Younger Cohorts

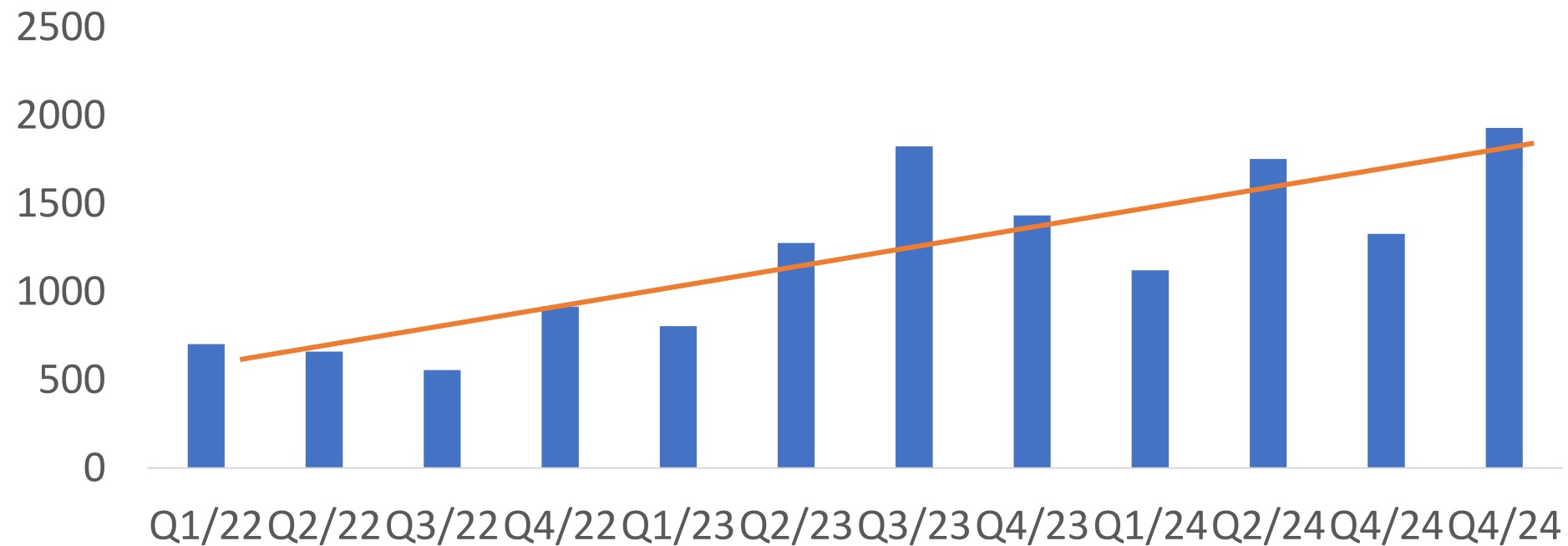
Percent of Respondents With > Monthly Usage



Source: Alphawise, Morgan Stanley, Bailard Research. Cohort results within 9/2024 survey.

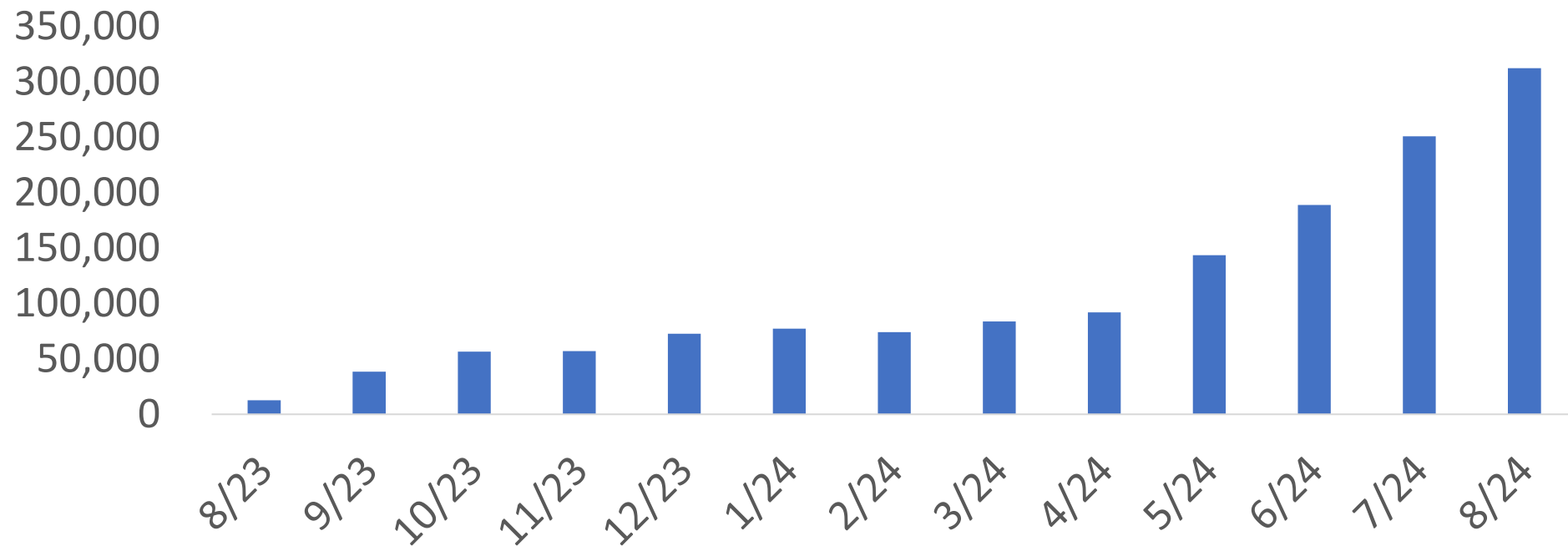
Case Study: AI in Cybersecurity

Ransomware Victims Over Time



Case Study: Autonomous Driving

Reported Autonomous Trips in California



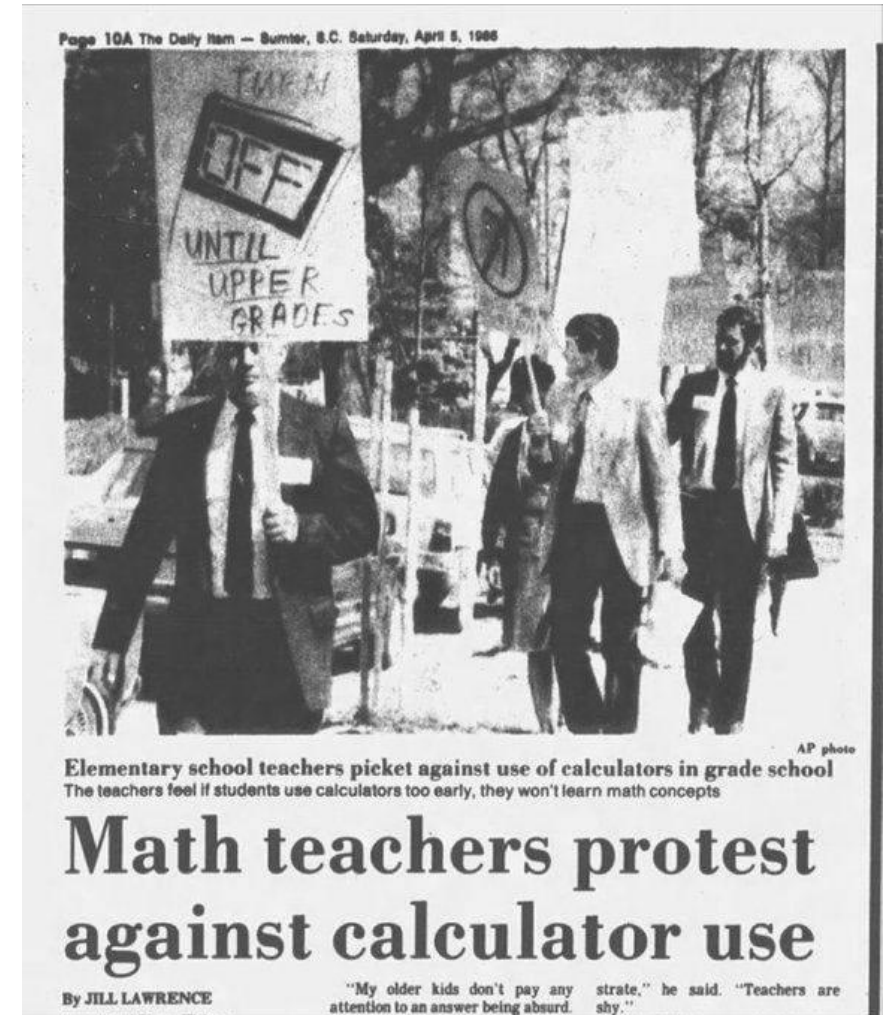
Source: California Public Utilities Commission, as of 1/20/25

Watch For Negative Impacts

“At issue is a fundamental question for the high-tech age: Are there times when easier is not necessarily better?”

“[It] doesn't think for you, it doesn't have a brain.”

Sources: Science News, March 15, 1975. Christian Science Monitor, May 9, 1986



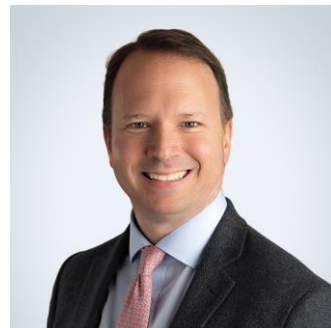
Key Takeaways

- Investing in tech is akin to investing in growth and innovation; consider Core + Satellite
- Be aware of big cycle themes that drive multi-year returns, both within and outside of traditional 'tech'
- High dispersion between winners and losers creates opportunities for active investment managers



Dave Harrison Smith,
CFA
EVP, Equity Research

- 15 yrs experience, 15 with firm
- BA/BS, Business/Economics, University of California, Berkeley
- MBA, Haas School of Business, University of California, Berkeley
- Featured on broadcast & in publications including *Pensions & Investments*, *Cheddar*, *Nasdaq*, *Yahoo! Finance*



Ben Lathrop
SVP, Director, Business
Development & Client
Services

- 26 yrs experience, 5 with firm
- Former Managing Director, NewOak Capital; Prior roles at Franklin Templeton Investments, Apollo Global Management, Citi Property Investors, Bear Stearns Asset Management, U.S. Trust, State Street Research
- BA, History, Hamilton College

Disclosures

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Disclosures

Market Indices: The S&P 500 Index is a commonly used U.S. stock index of 500 large capitalization stocks. The S&P North American Technology Sector Index (“NA Tech Index”) provides investors with a benchmark that represents U.S. equity securities classified under the GICS[®] technology sector and internet retail sub-industry categories. These U.S. stock and bond indices show the performance of different asset classes and should not be used to evaluate the performance of real estate investments. All of these indices are uninvestable, unmanaged, and presented gross of fee.