

Presented By:
RYAN MCMANUS

Opportunities, Risks, and the Future of AI in Financial Services

—
September 2024



CALIFORNIA
BANKERS
ASSOCIATION

ryan-mcmanus.com

Digital transformation, emerging tech, strategy and business model expert

Advisor, entrepreneur, investor, board director, author

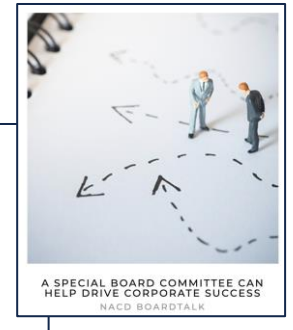
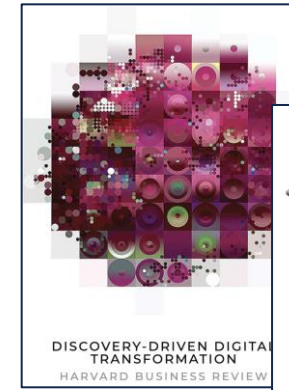
University of Chicago MBA

Worked on-the-ground in 50 countries

10000+ executives @ US\$3trn+ market cap

Named to the National Association of Corporate Directors' Top 100 Most Influential Directors 2023

2024 NACD Blue Ribbon Commissioner for Technology and Governance



Tectonic

Basinghall. Columbia Business School BROWN

Duke CORPORATE EDUCATION NACD Empowering Directors. Transforming Boards.

PCBS The National Graduate School of Banking™

AMERICAN EXPRESS DEPARTMENT OF DEFENSE UNITED STATES OF AMERICA citi amcor CATERPILLAR YPO

NASA AMGEN Standard Chartered CVS Health Nike

Scotiabank SIDE WALK LABS THE HOME DEPOT

abbvie RSM Pfizer Innovative Health

Topics

- Evolution of the AI-Powered Economy
- Foundational → Generative AI
- Banking Examples
- AI Superpowers
- Emerging Risks
- Future of AI



Web 1.0

Information
Economy



Web 2.0

Platform Economy



Web 3.0

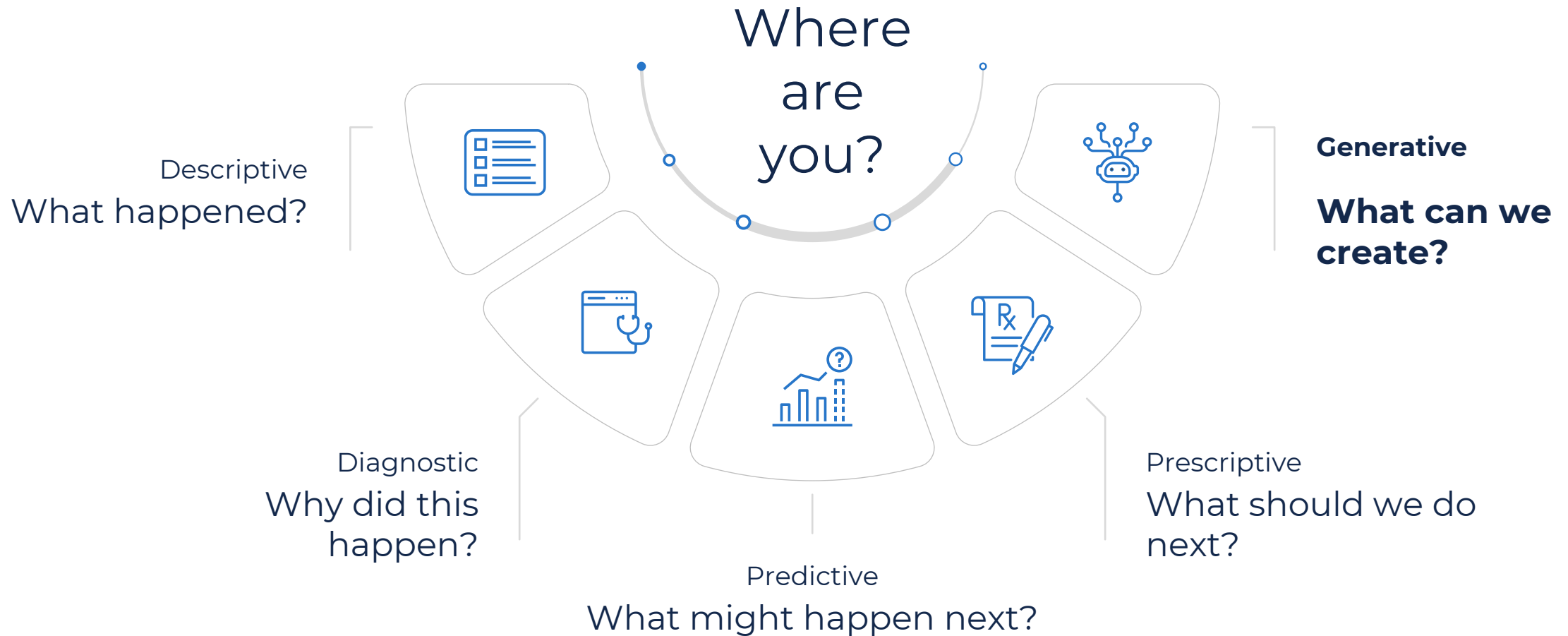
Ownership
Economy



Web 4.0

Augmented
Economy

Four Five Levels of Data Capability

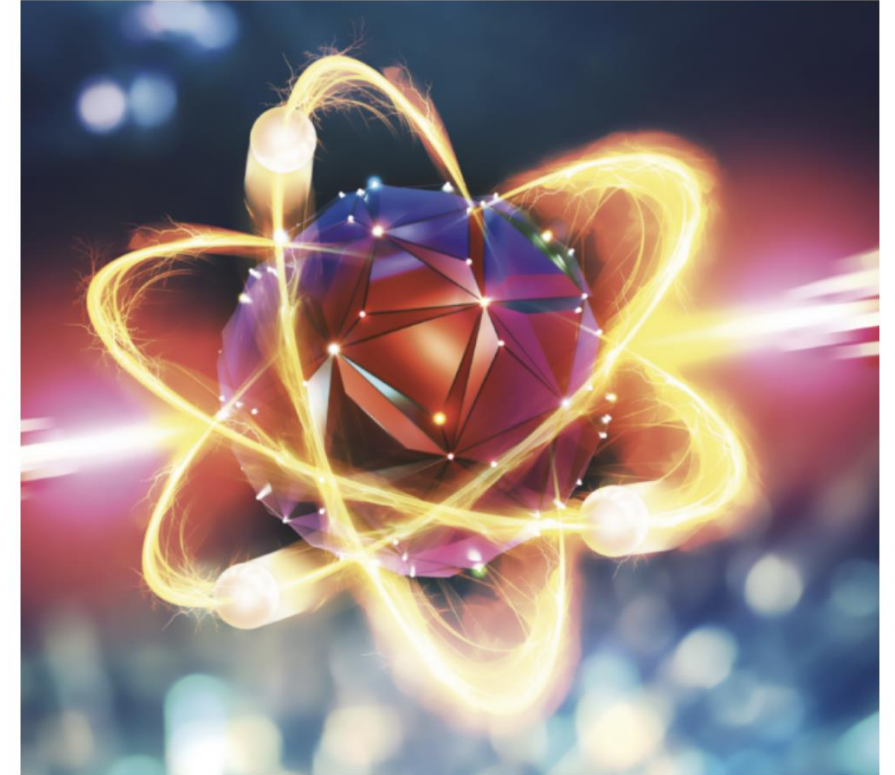


Whiplash?

“If we used ... even six-month-old machine learning systems we would be so far behind the curve it would be embarrassing.

If you are using technology from several years ago, you are exposing your company to a ton of risk,”

David Bach, Founder and CEO @ Optios

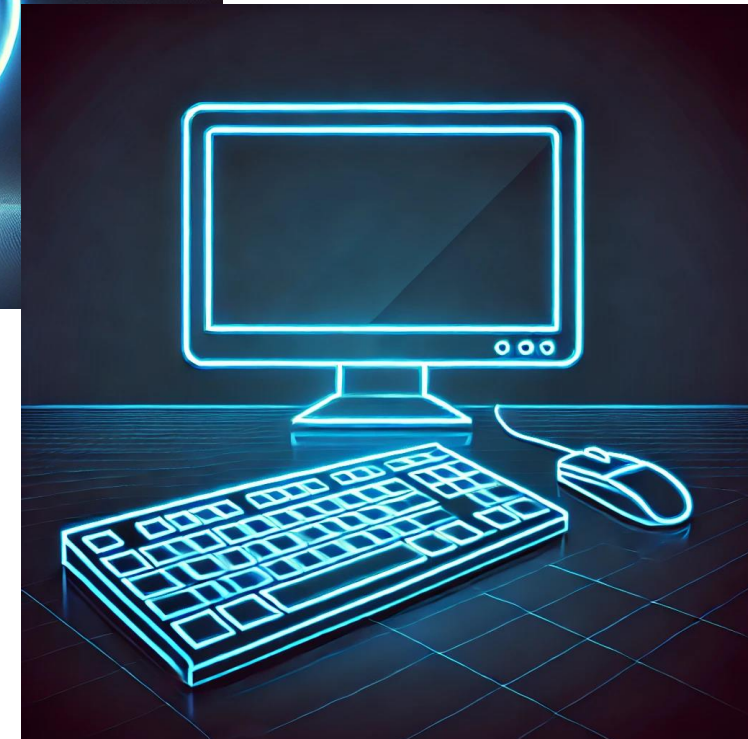
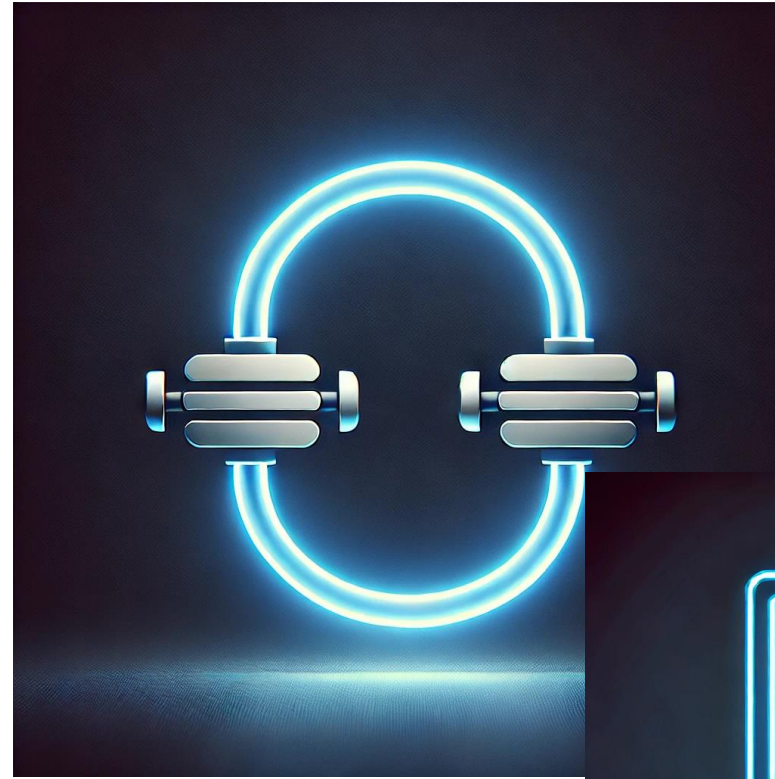


The atomic unit of strategy

Source: Duke CE Dialogue, “The atomic unit of strategy”, McManus, May 2023

AI Investment Trends

- \$200bn (2023) → \$2trn (2030)
- US Banking: \$20bn → \$32bn
- 2-4% of US GDP
- Cathie Wood, Ark Investment: market cap opportunity in enterprise software of \$80trn over 10 years.



Generative AI in Banking: the basics

Customer Service

- AI-powered customer service chatbots provide 24/7 availability
- Chatbots understand conversational language for more natural interactions.
- **Immediate resolution of basic inquiries like account balances and transaction histories.**
- Seamless escalation to human agents for complex needs.

Fraud Detection

- Generative AI analyzes massive volumes of transactions to identify unusual patterns associated with fraud.
- Detects fraudulent activity in real-time, allowing for timely intervention.
- **Adapts to ever-evolving fraud tactics, providing continuous protection.**

Document Generation

- **Generates complex financial documents automatically**
- Ensures accuracy and reduces errors associated with manual processes
- Increases operational efficiency and time-savings
- Improves compliance with standard wording and formatting

Marketing

- Generative AI analyzes customer data for highly targeted insights.
- Customized product recommendations based on individual needs and preferences
- **Anticipates financial needs before customers are aware of them**
- Increased conversion rates and stronger customer relationships.

Risk Management

- Analyzes large data sets to assess borrower creditworthiness
- **Forecasts market trends for proactive investment guidance.**
- Provides early warning signs of potential financial problems

Financial Advisory

- Provides personalized investment advice considering risk tolerance and goals
- Generates diverse portfolios in line with specific investment objectives
- **Auto-optimization across products**
- Continuously monitors portfolios and rebalances for optimal performance.
- Debt management strategies
- Financial literacy training
- Automated budget and expense tracking

Generative AI in Banking

BANK OF AMERICA  Erica[®]: virtual financial assistant



Co-pilot for code writing and testing



IndexGPT for financial investment advisory

BRIDGEWATER

Artificial Investment Associate Lab: mission is to transition Bridgewater's entire investment methodology to machine-learning techniques.



Decision Intelligence Pro can help financial institutions improve their fraud detection rates by as much as 300% in some cases.

Generative AI in Banking: Startups



Accessible credit: 10m customers, \$56bn funded



Helps banks improve the financial well-being of their customers through personalization and insights. Target: 1000x efficiency through agentic banking.



Personal loans: near instant approval, next day funds, 38% lower rates than incumbents, 3m customers

Generative AI in Financial Services

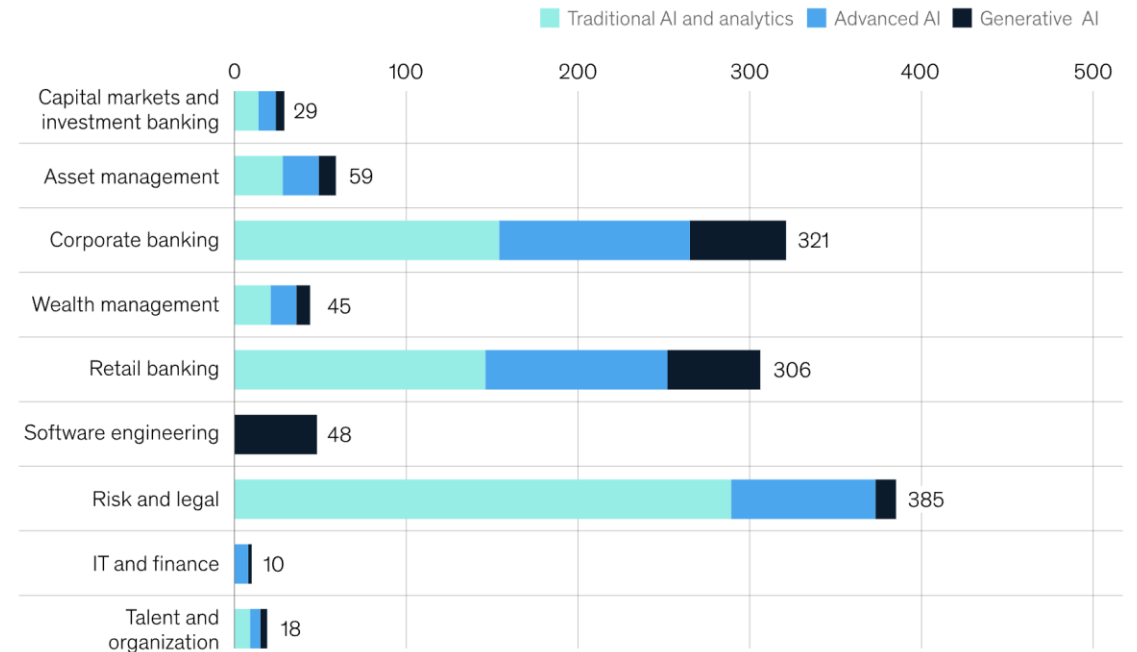
SHRM re. Highest risk jobs:

- crunching numbers, analyzing market trends and creating predictive models: financial analysts, actuaries and accountants
- personal financial advisors, credit professionals, underwriters
- regulatory compliance
- software dev
- admin roles

High impact: Morgan Stanley, BofA and Northwestern Mutual

Generative AI has the potential to deliver significant new value to banks—between \$200 billion and \$340 billion.

Value created by AI at stake by segment and function,¹ \$ billion



¹Assumes 0% overlap of traditional AI and generative AI (generative AI assumes the lower end of value at stake), top-down estimation based on projected growth and value pools.
Source: *The economic potential of generative AI: The next productivity frontier*, McKinsey Global Institute, June 2023; QuantumBlack, AI by McKinsey traditional advanced analytics and AI analysis

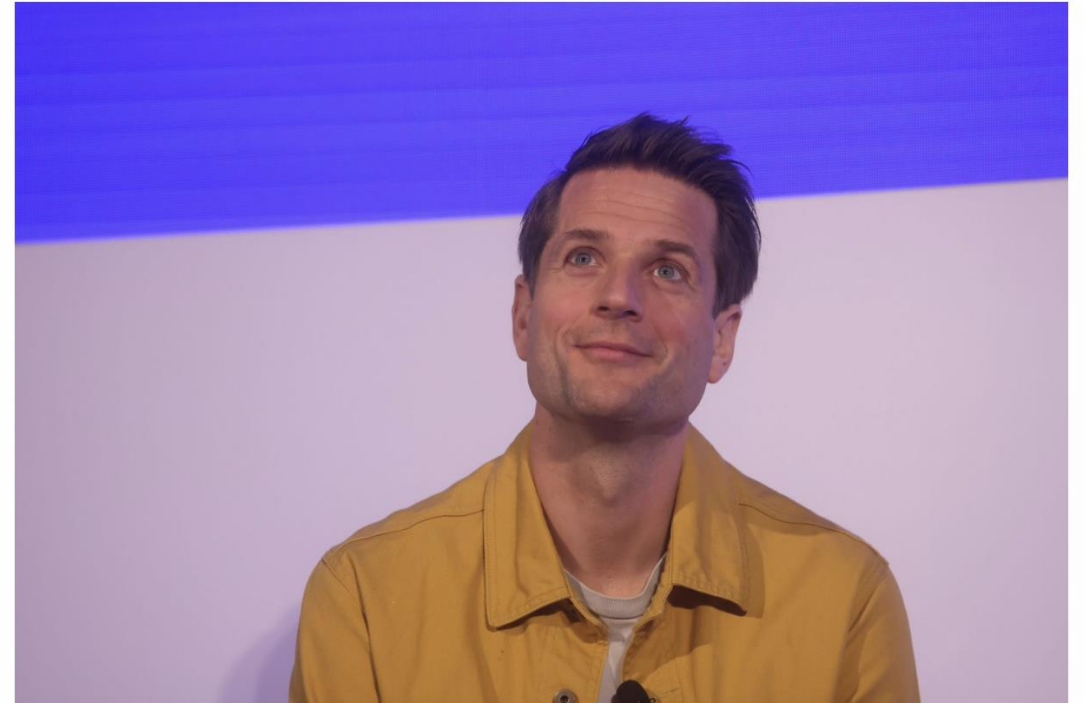
McKinsey & Company

TECH · A.I.

Klarna has 1,800 employees it hopes AI will render obsolete

BY **RYAN HOGG**

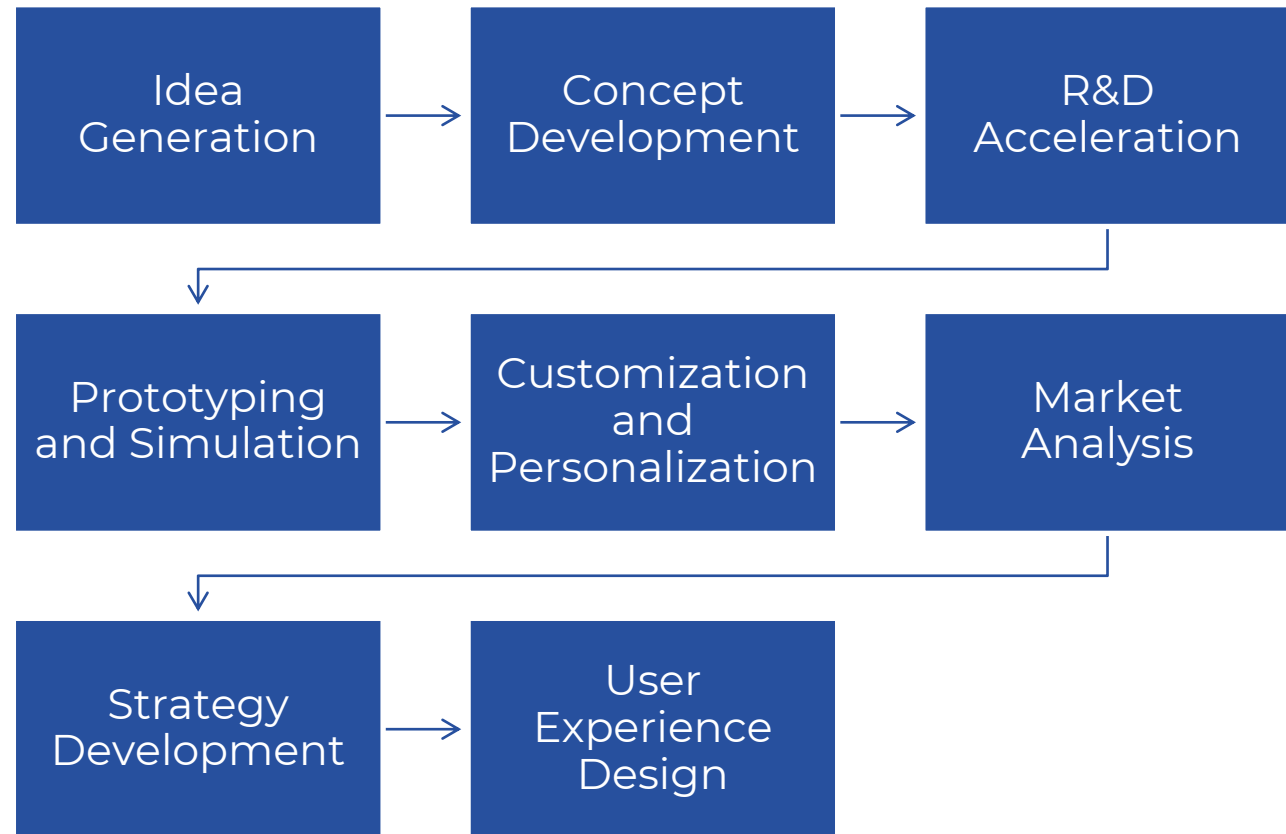
August 28, 2024 at 6:06 AM EDT



Klarna CEO Sebastian Siemiatkowski is keen to hollow out his workforce with AI.

CHRIS RATCLIFFE/BLOOMBERG VIA GETTY IMAGES

Generative AI: Building What's Next



AI Superpowers

- Problem Solving
- Productivity
- Discovery
- Complex Solution Engineering



Emerging Risks



Models

- Static Training Data
- Model Drift
- Problems Memorialized in Code
- Monolithic LLM Architectures
- Model Collapse

Security

- High Risk of Data Leakage
- Reverse Engineering
- Prompt Injection Attacks
- Universal and Transferable Adversarial Attacks
- Poisoned Training Data
- Sleeper Cell Backdoors
- Willful Deception
- Supply Chain Attacks
- Complete enterprise information systems compromise

Strategic

- Sector dynamics
- Company valuations
- Increasing risk of Silicon Valley Bank-type black swan events
- Underestimating the value of enterprise data
- Thinking too small

Responsible AI Governance



In a recent survey of financial sector, almost 70% of respondents could not explain how specific AI model decisions or predictions are made, and only 35% said their organization made an effort to use AI in a way that was transparent and accountable.



Just 22% told the survey their organization had an AI ethics board that could make decisions about the fairness of the technology they used, and the other 78% said they were "poorly equipped to ensure the ethical implications of using new AI systems."

2023 Evident AI Index

<input checked="" type="radio"/> Rank <input type="radio"/> Score		 TALENT Capability & Development	 INNOVATION Research, patents, ventures, ecosystem	 LEADERSHIP in public communications and strategy	 TRANSPARENCY of responsible AI activities
COMPANY	SCORE ▼				
JPMorgan Chase	1	2	1	2	1
Capital One	2	1	2	8	5
Royal Bank of Canada	3	7	3	5	2
Wells Fargo	4	4	5	32	10
UBS	5	3	19	17	22
CommBank	6	16	20	3	4
Goldman Sachs	7	8	4	15	49
ING	8	6	10	19	15
Citigroup	9	5	8	26	31
TD Bank	10	15	6	31	16
DBS	11	22	34	1	12
BNP Paribas	12	18	13	4	13
HSBC	13	17	12	24	6
BNY Mellon	14	23	15	12	8
Bank of America	15	14	11	7	35
Bank of Montreal	16	25	9	22	14
Morgan Stanley	17	20	7	14	46

Source: evident

Talent Impacts

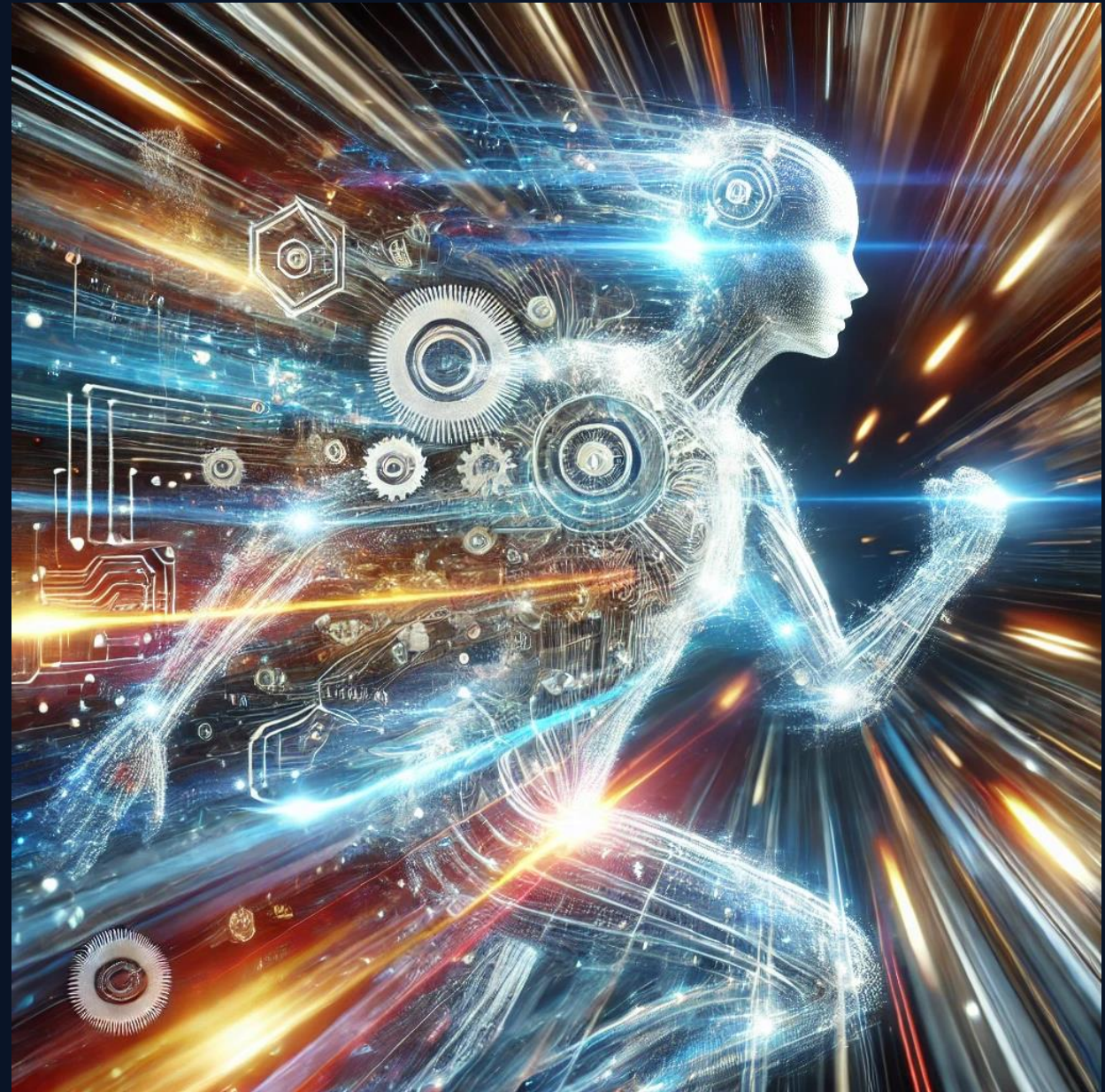
- +30-300%
- Training the next generation
- Job displacement
- Smart KPIs: descriptive, predictive, and prescriptive
- Top talent expectations
- JPM Chase: 400+ use cases
- Moderna: 750 in-house GPTs

- 6 months → 2 days = ship everything
- *How much [_____] can one person do in a year with 1000 autonomous agents?*



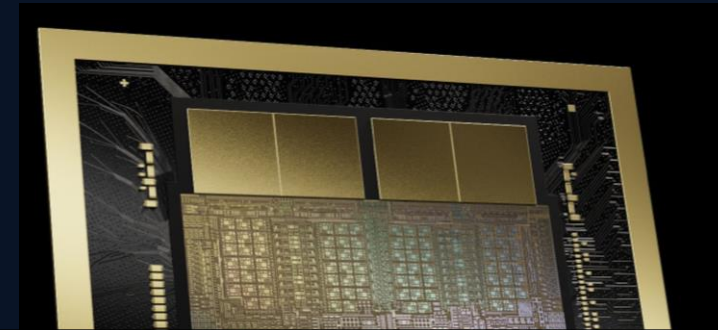
AI @ 2024: Acceleration

- 90% of CFOs expect AI budgets to increase in 2024. 0% expect them to fall.
- Economy-wide enablement
- AI @ the edge + hardware
- Personalized to you and on your data
- GPT 4 = 155 IQ → GPT 5=10x parameters, increasing reliability
- More open-source AI models
- Multimodal



Massive Acceleration

- DeepMind: 5bn times more computation than 10 years ago → 10x/year/every year for a decade



The image shows a screenshot of a CNBC news article. The article is titled "Nvidia announces new AI chips months after latest launch as market competition heats up" and is categorized under "TECH". It was published on Sunday, June 2, 2024, at 2:11 PM EDT. The author is Rebecca Picciotto (@BECCPICC). The article includes a "KEY POINTS" section with three bullet points: 1) Nvidia unveiled its next generation of AI chips, just months after announcing its previous model. 2) The quick turnaround highlights the competitive frenzy of the AI chip market and Nvidia's sprint to keep its top spot. 3) CEO Jensen Huang has pledged to release new AI chip technology on a one-year basis, faster than the company's previous two-year timeline. The article also features a "WATCH LIVE" button and a "Closing Bell: Overtime" banner for the "Fast Money" program at 05:00 pm ET.

TECH

Nvidia announces new AI chips months after latest launch as market competition heats up

PUBLISHED SUN, JUN 2 2024 2:11 PM EDT

Rebecca Picciotto @BECCPICC

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KEY POINTS

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CNBC TV
Closing Bell: Overtime [WATCH LIVE](#)
UP NEXT | **Fast Money** 05:00 pm ET [Listen](#)

5 E's for AI Execution

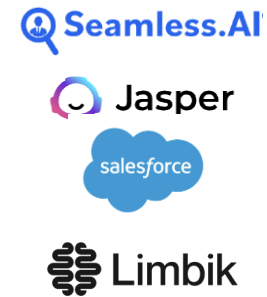
Enable



Experiment



Execute



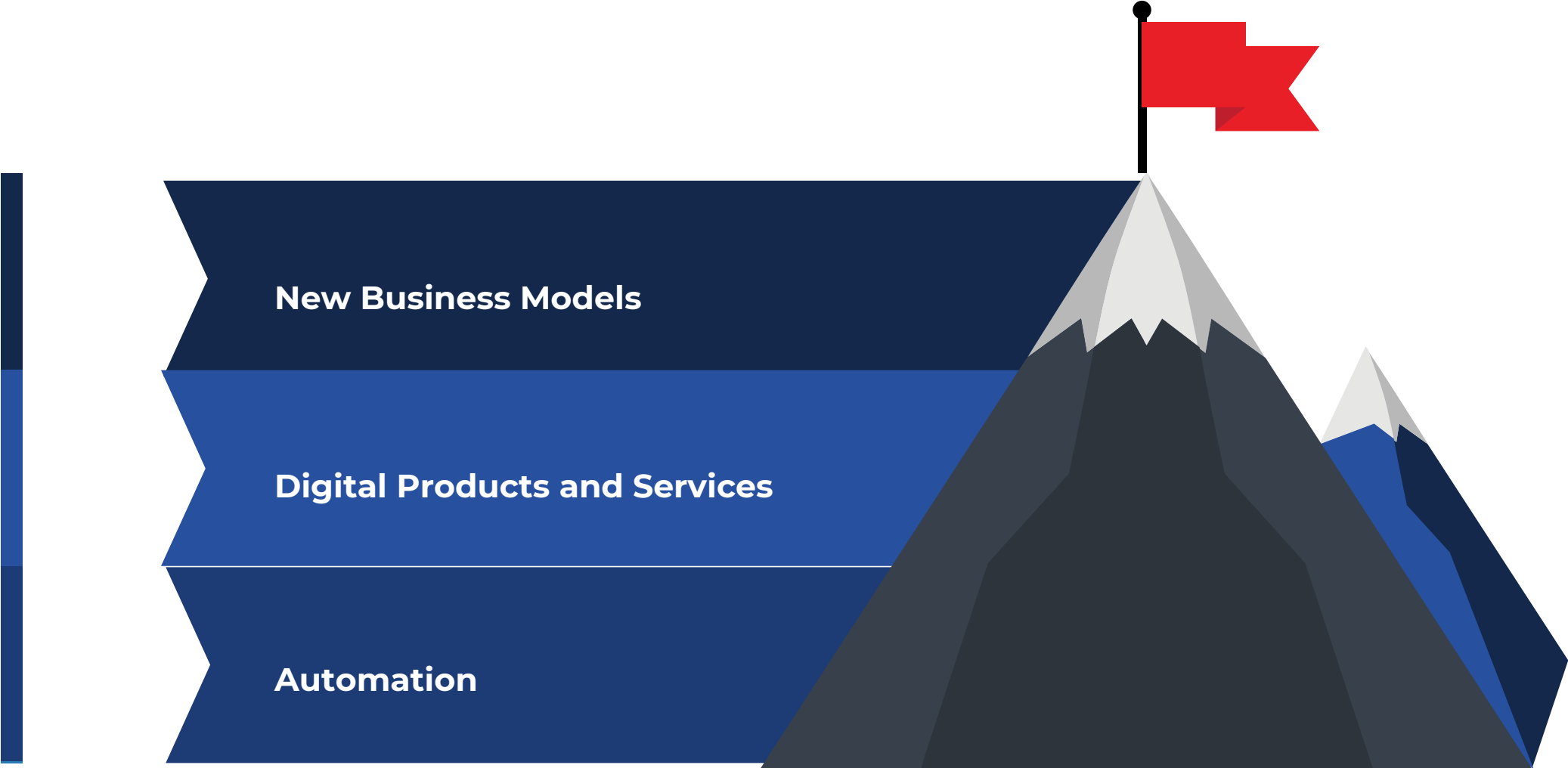
Expand

PRYON

Ethics

How bold is your vision?

GET TO WORK



Source: Harvard Business Review, "Discovery Driven Digital Transformation" McGrath and McManus, May-June 2020



“This is a very fertile moment for technology, for rethinking how all this stuff works, this might be the biggest change that any of us have ever seen.”

Marc Andreessen

Goldman Sachs’ CEO says AI is driving more companies to reinvent themselves: ‘We’re talking about a level of scale that is candidly unprecedented’

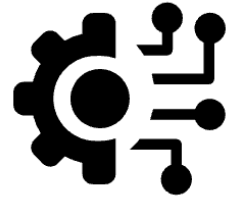
by Will Daniel / Apr 15, 2024 / 5:04 PM



Keys to Strategy in the AI-Powered Economy



Digital business models win



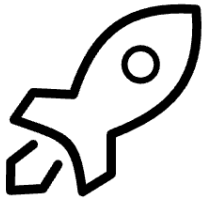
Automation is not the same as Transformation



Digital delivers what was previously impossible



Experiment with what's next or be left behind



Organize for Speed + Scale

What is our strategy?

Thank you

ryan-mcmanus.com

New articles coming soon:

- NACD Blue Ribbon Commission Report on Technology & Governance
- Gen AI Strategy and Emerging Risks
- Leadership for Gen AI