



Do More with Less Using AI for Business Success





KNOWLEDGE

Learning Objectives

Identify how to set a data foundation and automate workflows to grow and scale.

Recognize the importance of defining SaaS metrics such as CAC and customer retention.

Evaluate how AI can automate transaction processing, as well as how companies are now viewing their systems data strategies to support it.

CPE INFORMATION

Program Level: BASIC Recommended CPE: 1 Field of Study: Information Technology



WELCOME

Today's Presenters



Scott Schimberg

Partner

Armanino Advisory LLC



Justin Mitkus

Director

Armanino Advisory LLC



Chuck Bunting
Financial Industry Advisor,
Tech & Media
Workday



WHAT WE'LL DISCUSS

Today's Agenda

- The Fundamentals of Al
- Al Use Cases
- Choosing the Right Technology
- Emerging Workforce Skillsets
- Closing and Q&A





ARMANINO

Firm Overview

Count on Armanino to think strategically and provide sound insights that lead to positive action. We address not only your compliance issues, but your underlying business challenges.

Purpose

To be the most innovative and entrepreneurial firm that makes a positive impact on the lives of our clients, people and our communities.

Snapshot

2500+ Employees

Team Members in 23 States

18th Largest CPA & Consulting

Largest Niche: Technology

CALIFORNIA Locations

- San Ramon
- San Jose
- San Francisco
- Los Angeles (2)
- Irvine
- El Segundo
- Woodland Hills
- San Luis Obispo
- Torrance

WASHINGTON

Bellevue

COLORADO Denver

IDAHO

 Boise TENNESSEE

Nashville

TEXAS

- Austin (2)
- Dallas
 - ILLINOIS
 - Chicago Naperville

 - MISSOURI
- St. Louis
- St. Charles

PENNSYLVANIA

- Philadelphia
- Scranton

NEW YORK

New York City

CANADA

Vancouver

AFFILIATE COMPANY



RECOGNITION & AWARDS







LOCATIONS

Employee (by State/Coun

Office













TRUSTED EXPERTISE

Workday Services Partner



Deploy leading accounting, finance and analytics systems to enable your organization's growth and digital transformation.

As a Workday Services partner, we bring extensive industry and finance leadership expertise to help you strategize and build a plan for success. We can act as your full transformation guide – taking your plans through from inception to deployment to continuous optimization.

PRODUCTS

Workday Adaptive Planning Workday Financial Management Workday Human Capital Management

Workday Prism Analytics

Workday Accounting Center



When was AI Invented?



When was Al invented



The concept of artificial intelligence (AI) has been around for centuries, but the term "artificial intelligence" was coined by John McCarthy in 1955. McCarthy, along with Marvin Minsky, Nathaniel Rochester, and Claude Shannon, is considered one of the founders of AI.

Al as a field of study and research really began to take off in the mid-20th century with the advent of digital computers. Early Al research focused on tasks such as game playing and problem-solving. The development of neural networks in the 1950s and 1960s also contributed to the growth of Al as a field.

In the years since its inception, AI has gone through several waves of advancement, with periods of intense research and development followed by periods of reduced funding and interest, known as "AI winters." Currently, we are in a period of rapid progress in AI, with advancements in machine learning, deep learning, and other techniques leading to the development of AI applications in various fields.



Machine Learning vs Deep Learning



Compare and contract machine learning vs deep learning for AI in a table



Certainly! Here's a comparison table highlighting the differences between machine learning and deep learning in the context of artificial intelligence:

ubset of Al where algorithms earn patterns from data to make redictions or decisions.	Subset of machine learning using neural networks with multiple layers (deep neural networks).
	earn patterns from data to make



Neural Networks & Humans

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compare and contrast Neural networks to humans in a table



Aspect	Neural Networks	Human Brain
Architecture	Composed of interconnected artificial neurons in layers.	Comprises approximately 86 billion neurons connected in a vast network.
Learning Process	Learns from data through mathematical optimization algorithms.	Learns from experience, sensory input, and interaction with the environment.
Learning Abilities	Capable of learning complex patterns from vast amounts of data.	Can learn from various sensory inputs, adapt, generalize, and exhibit creativity and reasoning.
Processing Speed	Can process vast amounts of data quickly, especially with GPUs.	Human brain processes information more slowly but excels at parallel processing and complex tasks.
Energy Efficiency	Requires significant computational power and energy resources.	Remarkably energy-efficient, consuming a fraction of the power of artificial neural networks.
Flexibility	Flexible in adapting to different types of data and tasks.	Highly adaptable, capable of learning new tasks without requiring extensive reprogramming.
Fault Tolerance	Can degrade gracefully and continue functioning with damaged units.	Exhibits remarkable fault tolerance, allowing for continued functioning even with damaged neurons.

Creativity and Emotion	Lacks creativity and emotional intelligence.	Displays creativity, emotional intelligence, empathy, and complex emotional responses.	
Self-awareness	Lacks self-awareness and consciousness.	Humans possess self-awareness, consciousness, and the ability to introspect.	
Hardware	Implemented on digital computer hardware, such as CPUs and GPUs.	Biological and complex, made up of interconnected neurons and synapses.	
Parallel Processing	Highly parallel, allowing for the simultaneous processing of data.	Human brain excels at parallel processing, enabling multitasking and rapid decision- making.	
Learning Efficiency	Requires substantial amounts of labeled data for effective learning.	Humans can learn from sparse and unlabeled data, often requiring fewer examples to grasp concepts.	
Adaptability	Requires manual adjustments in architecture and hyperparameters.	Human brain adapts and learns without manual adjustments, continuously improving its performance.	
Limitations	Limited by available computational resources and data quality.	Limited understanding of consciousness and the human mind, and susceptible to various cognitive biases.	

It's important to note that while artificial neural networks have made significant advancements, they are far from matching the complexity, efficiency, and adaptability of the human brain in various cognitive tasks. The comparison highlights the current state of technology in neural networks relative to the capabilities of the human brain.



Neural Networks & Humans

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Tell me what is better Neural networks for Al or the human brain and why in a table.



Aspect	Neural Networks for Al	Human Brain
Processing Speed	Can process vast data quickly, especially with specialized hardware like GPUs.	Slower processing speed compared to artificial neural networks, but excels at parallel processing and complex tasks.
Learning Abilities	Capable of learning complex patterns from large datasets.	Highly adaptable, capable of learning from diverse sensory inputs, exhibiting creativity, reasoning, and emotional intelligence.
Energy Efficiency	Requires substantial computational power, making them energy-intensive.	Remarkably energy-efficient, consuming significantly less power for similar tasks.
Flexibility	Flexible in adapting to different types of data and tasks with appropriate architectures.	Highly adaptable, capable of learning new tasks without extensive reprogramming.
Creativity	Lacks intrinsic creativity; generates patterns based on existing data.	Demonstrates genuine creativity, innovation, and the ability to create entirely new concepts and ideas.
Problem Solving	Excellent at pattern recognition and solving specific, well-defined tasks based on training data.	Exceptional problem-solving abilities, especially in complex, ambiguous, and real-world scenarios.

Emotional Intelligence	Lacks emotional intelligence and empathy.	Exhibits complex emotional intelligence, empathy, and the ability to understand and respond to human emotions.
Adaptability	Requires manual adjustments in architecture and hyperparameters.	Adapts and learns without manual adjustments, continuously improving its performance.
Understanding	Lacks true understanding; processes data based on statistical patterns.	Possesses genuine understanding, consciousness, and the ability to reason and introspect.
Reliability	Reliability depends on data quality, quantity, and the model's complexity.	Highly reliable, capable of making accurate judgments even in uncertain and novel situations.
Contextual Learning	Limited in contextual understanding; lacks true contextual awareness.	Exhibits profound contextual understanding, connecting disparate pieces of information to form a comprehensive understanding of the world.

In summary, while artificial neural networks are powerful tools for specific tasks and have made significant advancements, they still fall short in many aspects compared to the complexity, adaptability, and intelligence of the human brain. The human brain's ability to understand, reason, learn from sparse data, exhibit creativity, and demonstrate emotional intelligence gives it a unique advantage over artificial neural networks. However, it's important to note that artificial neural networks have their own strengths, particularly in handling vast amounts of data quickly and performing specific tasks based on patterns in the data. The choice between the two depends on the specific task and the goals of the Al application.



Key Takeaways



Al concepts have been around for a long time.



Waves of improvements have occurred over time; we are in an improvement wave now.



Matching the use cases to the right type of AI is important.

- Goals and outcomes expected
- Large amounts of data vs small data sets
- Consistency of data quality



Safe Harbor Statement

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webpage: www.workday.com/company/investor_relations.php

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Office of the CFO Al Use Case







Challenge	Al Use Case	Impact
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Automated & Scalable Financial Operations

- · Manual anomaly detection
- Limited automation
- Manually matching invoices to payments
- Journal Insights
- Supplier Invoice Automation
- · Customer Payment Matching

- Improve Finance efficiency and scale
- Improve compliance and risk mitigation
- Decrease time-to-close

Continuous and Company-Wide Planning

- Extended planning cycle due to anomalies
- Accurate and predictive plans are increasingly difficult

- Planning Anomaly Detection
- Outlier Reporting
- Machine Learning Forecaster

- Increase forecast accuracy
- Increase planning efficiency
- Reduce time to plan

Proactive Spend Management

- · High volume of active contracts
- Spend category challenges
- · High volume of documents to scan
- · Manual audits of expense reports

- Contracts Semantic Search
- Spend Category Recommendations
- Invoice Scanning with OCR
- Expense Protect

- Improve Finance efficiency and scale
- · Proactive controls and compliance
- Improve vendor negotiation and visibility benefits

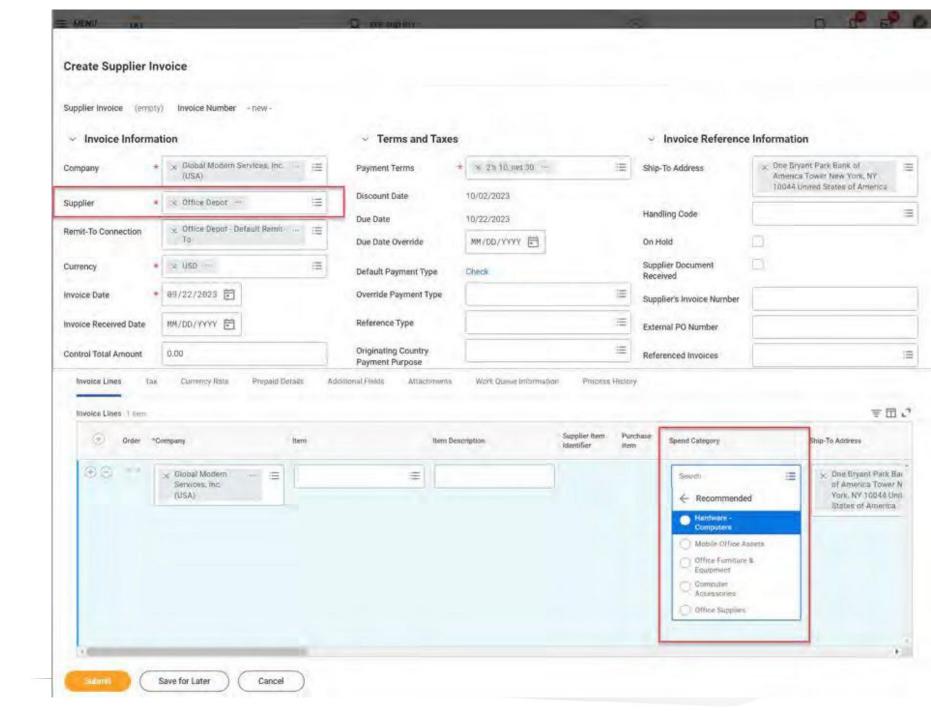


~		Where	Procure to Pay - Supplier invoice automation
(C)	Touchless Transactions	What	Upload and scan invoice, automatically route
			Eliminates manual data entry, saving time and reducing cost
		Where	Record to Report - Journal Insights
* *	Streamline Close	What	Proactively surface journal anomalies as they occur
		Why	Al becomes the detective, giving you time back
		Where	Contract to Cash - Customer payment application
	Predicative Processes	What	Machine learning recommends the invoices to match
		Why	Eliminates manual matching

Focus on strategic review of data and analytics, not on manual processes



Supplier Invoices





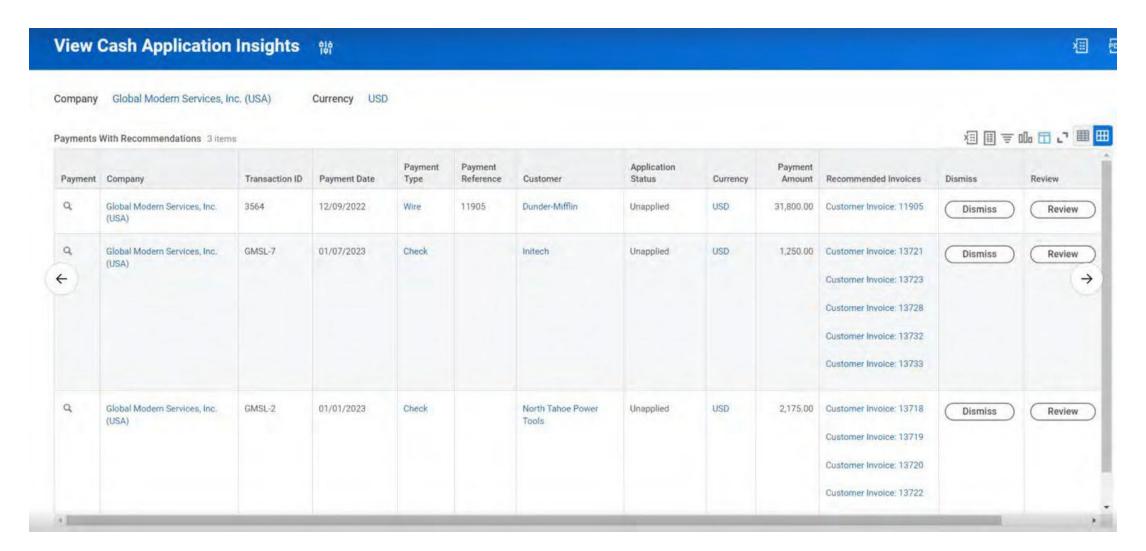
Supplier Invoice OCR Scanning

OCR Supplier Invoice	Q	Override Company	Global Modern Services, Inc. (USA)
Scanned Attachment	ProTech-Invoice_P0-4288 GMS.pdf	OCR Suggested Company	(empty)
Supplier Invoice	Supplier Invoice: 22897	OCR Supplier	(empty)
Created by Worker	Teresa Serrano	OCR Supplier Invoice Number	421010623
Assigned to Worker	(empty)	OCR Invoice Date	01/06/2023
Scan Status	Success	OCR Due Date	(empty)
OCR Has Failed		OCR Invoice Total Amount	500.00
OCR Start Time	01/10/2023 09:26:39.208 PM	OCR Header Tax Amount	0
OCR End Time	01/10/2023 09:26:53.578 PM	OCR Freight Amount	0
OCR Duration (sec)	14	OCR Payment Terms Text	Net 30
OCR Possible Duplicate Invoice	(empty)	OCR Purchase Order Text	PO-4288
		OCR Purchase Order	PO-4288
		OCR Suggested Purchase Orders	PO-4288
		OCR ML Suggested Purchase Order	(empty)
		Currency	USD
		OCR Currency	USD

Workday Confidential

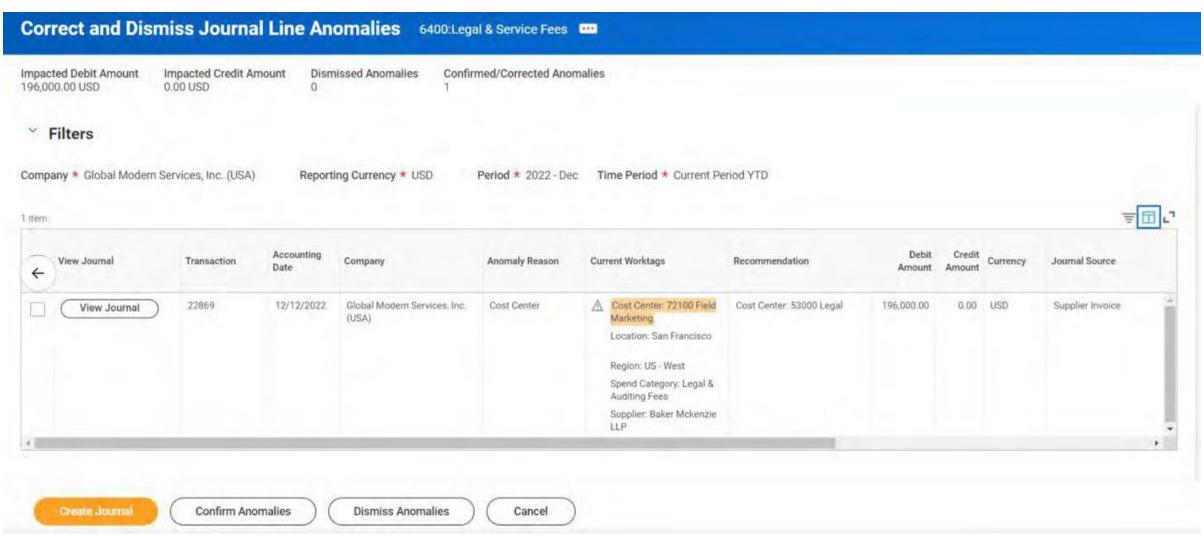


Cash Applications





Journal Anomaly Detection



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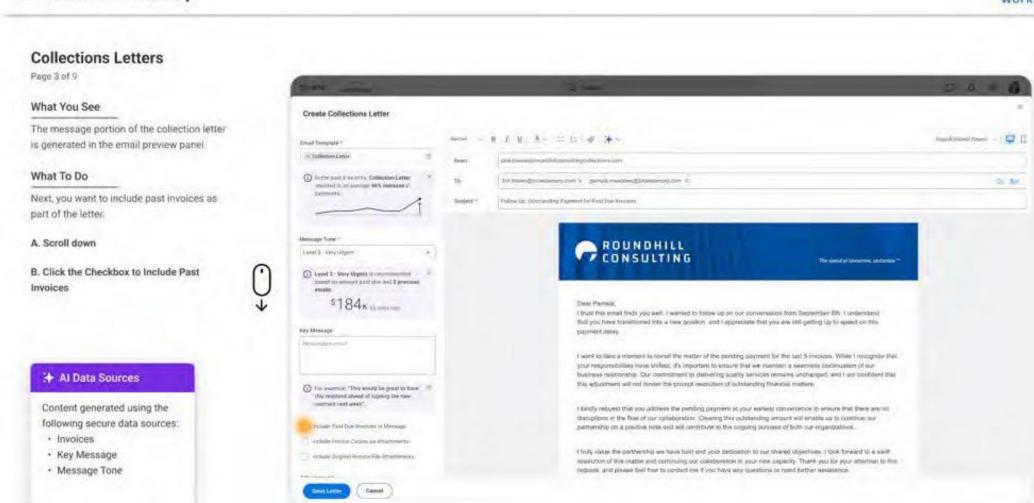


The Future



Collection Letters







Contract Analysis

Page 3 of 10

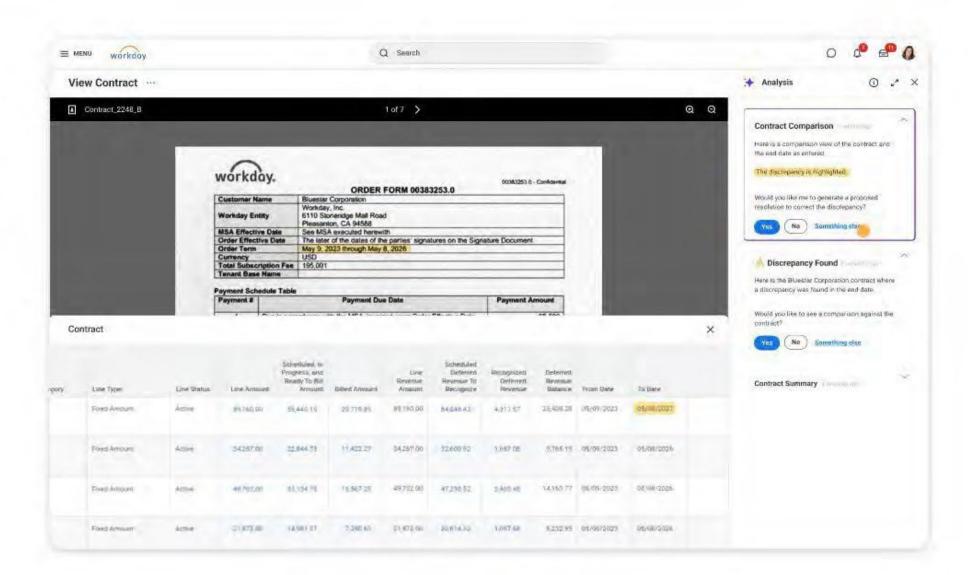
What You See

A split screen view where you can see the highlighted discrepancy on the scanned contract and the system contract data.

What To Do

Rather than generate a proposed resolution, you click Something Else to enter a query.

Click Something Else

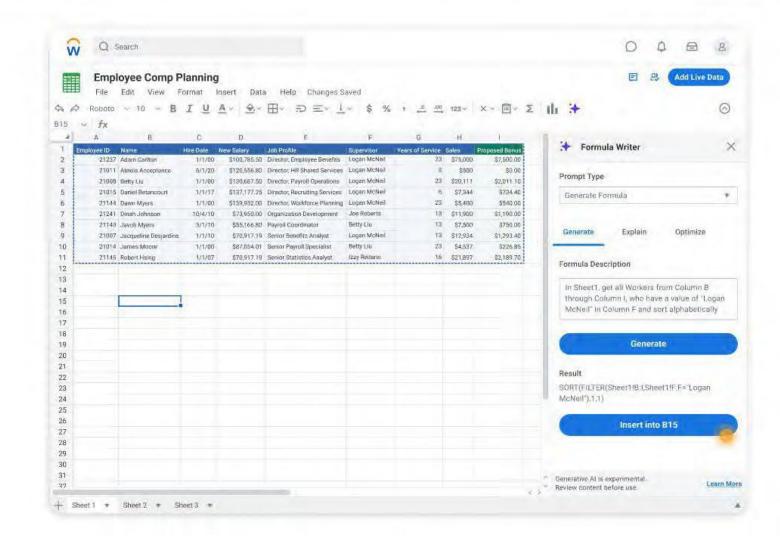




Worksheets





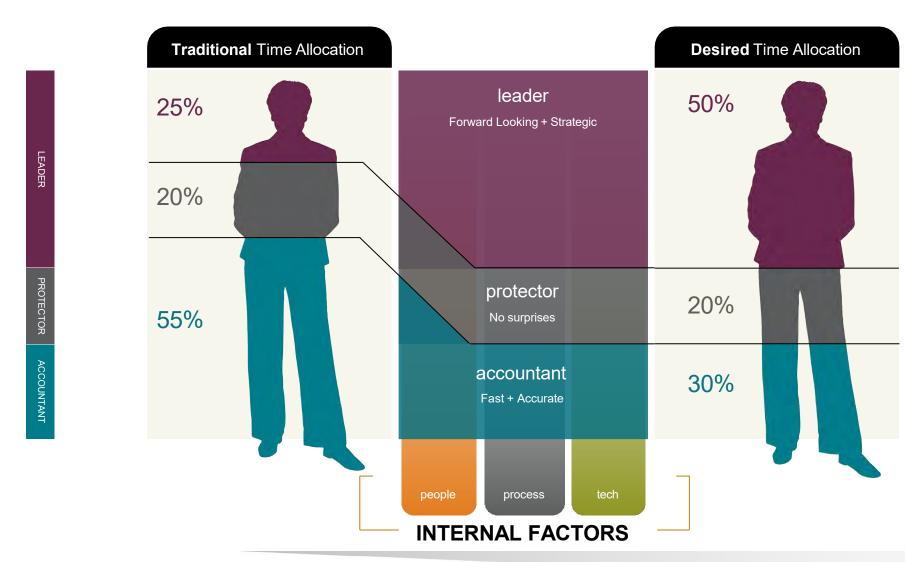


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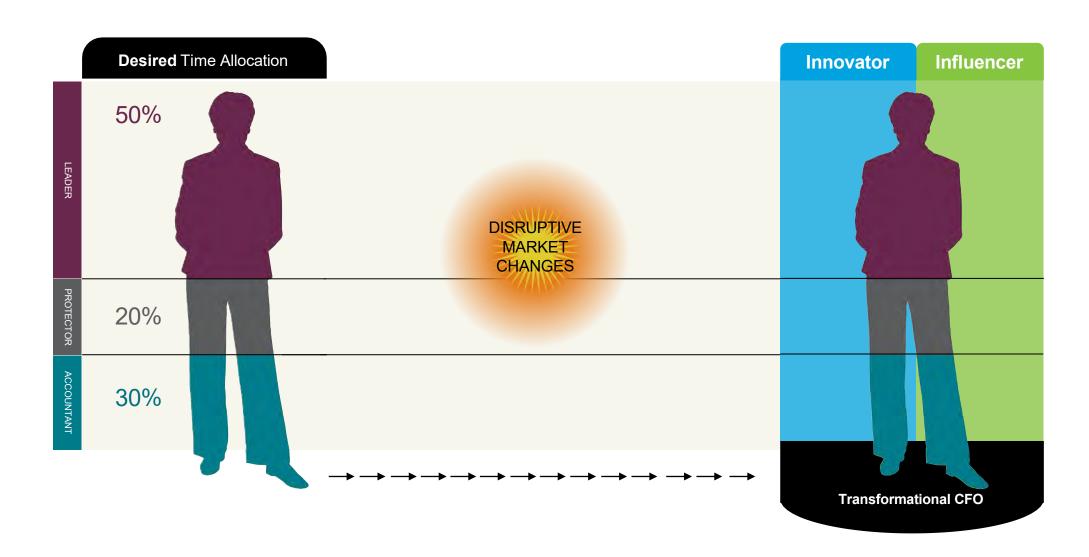


CFO Evolution 2.0





CFO Evolution 2.0





Emerging Workforce Skillsets

- New set of skills in the workforce
- Analyze large datasets and provide meaningful insight into the business
- Building strategic relationships with the business partners and manage stakeholders
- -> Ability to think critically and communicate
 - Moving away from manual, mundane work manual data validation, updating management reports
- Ability to identify opportunities and create value using technology



Q&A

Thank you for attending!

Additional Questions?

Reach out to one of our presenters or

email us at: Experts@armanino.com



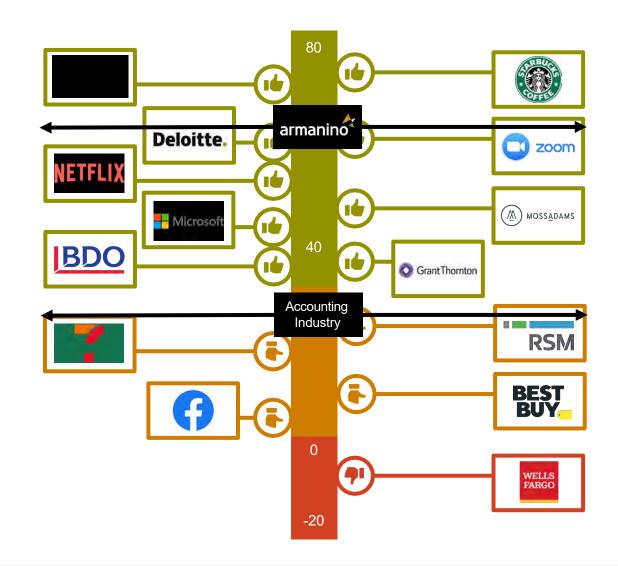


OUR CLIENTS' VIEW

We're Just What You Need

A Net Promoter® Score (NPS) is used by more than two-thirds of Fortune 1000 companies. **Armanino's NPS (68) is almost two times higher** than the accounting industry average (38), and it places the firm scores closest to household name brands such as Starbucks, Peloton and Zoom.







A New and Better Way for Today and Tomorrow

Equipping you with the insights and tools needed to redefine what's possible



COMPLIANCE & REGULATORY

- Tax Planning
- Trust & Estate
- · SOX
- Contract



ASSURANCE & ADVISORY

- Cybersecurity
- SOC
- Restructuring
- Revenue Recognition



STRATEGY & PLANNING

- Corporate Strategy
- Strategic Advisory
- Benchmarking
- Business Transformation



STAFFING & DEVELOPMENT

- Payroll
- Health Benefits
- Executive Search
- Interim Placement



TECHNOLOGY SYSTEMS

- ERP
- CRM
- Business Intelligence
- Managed Services



ACCOUNTING & BACKOFFICE

- Bookkeeping
- Budgeting/Forecasting
- Account Receivable
- Accounts Payable

ADDITIONAL INFORMATION

About Armanino & Our Values



ARMANINO

Additional Information on Our Values

Please explore the links below to learn more about our firm values and community outreach. From championing diversity and women leadership within the firm to committing to social and environmental change at the global level, our PVAs guide us every step of the way.



Armanino Foundation https://armaninofoundation.org/



Diversity & Inclusion https://www.armanino.com/company/who-we-are/ideal/



Women's Advancement https://www.armanino.com/company/ who-we-are/womens-initiatives/



Certified B Corporation
https://www.bcorporation.net/en-us/find-a-b-corp/company/armanino-llp



LIVING UP TO THE IDEAL

Diversity & Inclusion

Our differences make us stronger, smarter and more innovative to truly bring the best to the table for our clients and organization.

Nationally ranked as best Accounting firm to work for:



CEO Matt Armanino signed the CEO Action for Diversity & Inclusion Pledge on behalf of the firm with a commitment to develop programs and initiatives that identify and foster opportunities for underrepresented groups led by the IDEAL committee.

Women account for 56% of our recruiting efforts in gender and POC account for almost 70% in ethnicity.

Asian 17% Middle Eastern 17% Black 13% White 31%





OUR COMMITMENT

Women's Advancement



INTERNATIONAL WOMEN'S DAY



A Bridge is a structure that actually carries a road or a path. As women move through their career journey, The Bridge provides support, connectors and a built infrastructure to help advance our women.

50%

of Armanino's newly elected partners for 2023 are women, underscoring the success of the firm's women's initiative to help women advance into leadership roles

EXECUTIVE ACCESS PROGRAM

Launched in 2018, this program connects high-potential female managers directly with firm executives to promote and drive career advancement.



PARTICIPATING IN MOVE

In partnership with the Accounting & Financial Women's Alliance, the MOVE Project challenges and equips firms and women to identify and address barriers to women's advancement.



OUR COMMITMENT

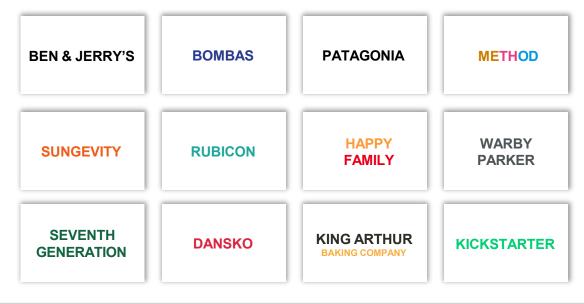
Certified B Corporation



ARMANINO HAS JOINED THE B CORP COMMUNITY

Armanino is using its business as a force for good. By becoming a certified B Corporation, we are accelerating a global culture shift to redefine success in business and build a more inclusive and sustainable economy.

Certified B Corporations are a new kind of business that balance purpose and profit. They are businesses that meet the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose. We are now among other great B Corporations pledged to making a positive impact.





GIVING BACK



Mission

To assist charitable organizations that create a positive impact on the lives of people in our community.



The Armanino Foundation empowers our employees to give back to the community via:

- The Great Give
- Dollars for Doers
- Volunteer Vacations
- Grants

















Armanino Operates in an Alternative Practice Structure:

"Armanino" is the brand name under which Armanino LLP, Armanino CPA LLP, and Armanino Advisory LLC, independently owned entities, provide professional services in an alternative practice structure in accordance with law, regulations, and professional standards. Armanino LLP and Armanino CPA LLP are licensed independent CPA firms that provide attest services, and Armanino Advisory LLC and its subsidiary entities provide tax, advisory, and business consulting services. Armanino Advisory LLC and its subsidiary entities are not licensed CPA firms.