



# ABELIAN

The Expertise Company

**Presentation to the SFSA**  
September 2025

## Meet two of our leaders



**Fred Addy** is the CEO of the Abelian Group of Silicon Valley, a US-based Holding company focused on maximizing the value of human expertise in an AI-driven world. Prior to joining Abelian, Fred was a Stanford AI researcher, a US Army Green Beret, a data science engineer, and a management consultant at Booz & Co in Washington, DC. Fred holds an MBA from Stanford University and a degree in Astrophysics from Princeton University. At Abelian, Fred focuses on building and investing in businesses that ensure humans derive value from AI, and not the other way around.



**Colin George** is a General Partner in the Abelian Group and the General Manager of the Abelian Security Council (ASC), which connects U.S. investors and consultants focused on the defense market with experts, decision-makers, and end-users. Before Abelian, Colin worked as a consultant serving defense contractors. Prior to his work as a consultant, Colin founded and served as the CEO of a geospatial intelligence startup that was acquired by Vista Equity. Colin began his career in private equity, working at Summit Partners and Accel-KKR. Colin holds dual degrees from the University of Southern California, where he graduated with Honors.

# The Green Berets' "SOF Truths" inspire Abelian's principles

## 1 Humans are more important than hardware



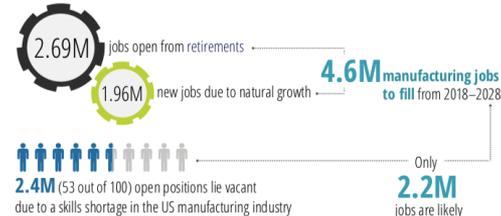
### Question for Audience:

You can't fire an AI. It doesn't live, breathe, or have a family. **Would you entrust it with the future of the steel foundry industry in America?**

## 2 Experts cannot be mass produced

FIGURE 1

The skills gap may leave an estimated 2.4 million positions unfilled between 2018 and 2028



\*Calculated on the basis of 52.7% of the skilled manufacturing positions that are unfilled (per the 2018 survey)  
\*\*Retirement age of 66

Source: BLS Data, OEM (Oxford Economics Model), Deloitte and Manufacturing Institute skills research initiative.

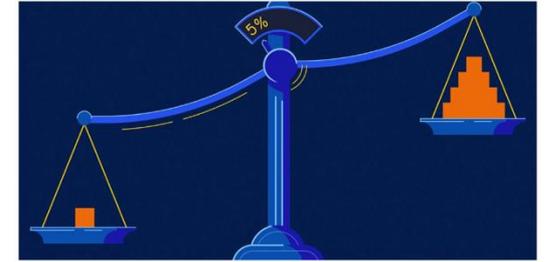
### Questions for Audience:

Abelian clients span investors, software companies, and manufacturers. All feel the pressure to automate. **Do you think your industry should automate? Can it automate?**

## 3 The top 5% will always be human

### Focus on the five percent

Recruitment is one of the most difficult things a company does, but doing it well can pay off.



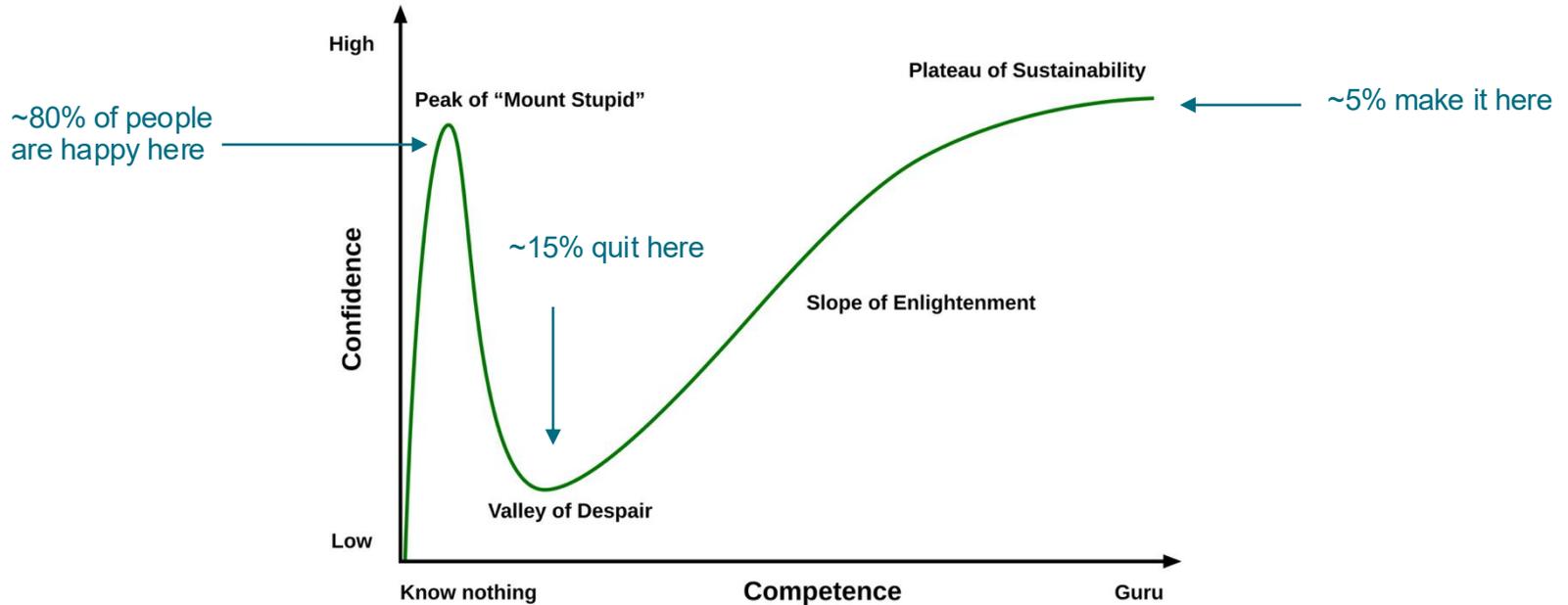
### Questions for Audience:

In most organizations, the top 5% of performers drive 80% of the value. If we automate away the bottom 95%, **where do we get the future 5% from?**

The Abelian Group's mission is to ensure our world prioritizes the development, maintenance, and veneration of **exceptional human expertise** in an increasingly automated world.

# Why are experts so rare?

## Dunning-Kruger Effect

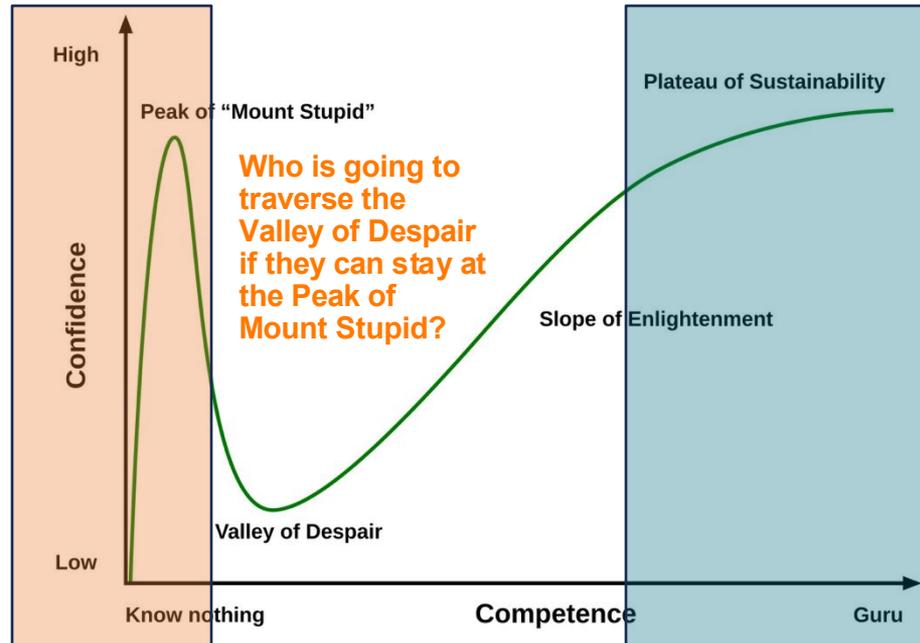


# Why will AI make experts even more rare?

## Dunning–Kruger Effect

### AI replaces humans here

- Repetitive tasks
- Routine analysis
- Simple research



### AI augments (but doesn't replace) humans here

- Creative problem solving
- Power of Networks
- Accurate real-time decision making

All industries face this problem to some degree. In manufacturing, it's even more pronounced due to talent shortages

Abelian companies ensure top 5% expertise is rewarded to inspire more humans to traverse the competency gap



Abelian Consulting  
Group

We design solutions to ensure the top 5% of employees enjoy greater performance, while maintaining training and apprenticeship pipelines for the future top 5%



Abelian Security Council

We provide investors and executives with access to subject matter experts who are shaping the future of defense, enabling them to make faster, smarter decisions.

# Intro to the Abelian Consulting Group



Abelian Consulting  
Group

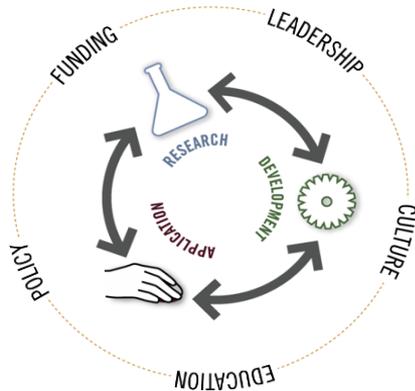
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# The ACG ensures companies set up human systems of checks and balances before building practical AI solutions

## Company Readiness

1

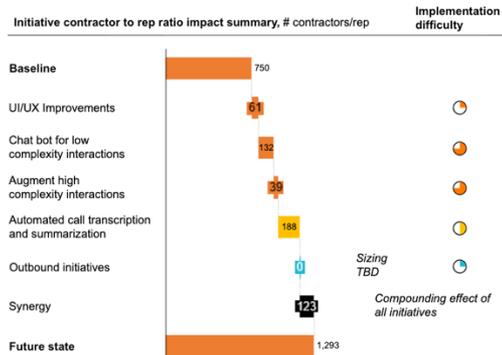
Executives who have led technological transformations help enterprises understand if AI is worth pursuing



## Strategic Analysis

2

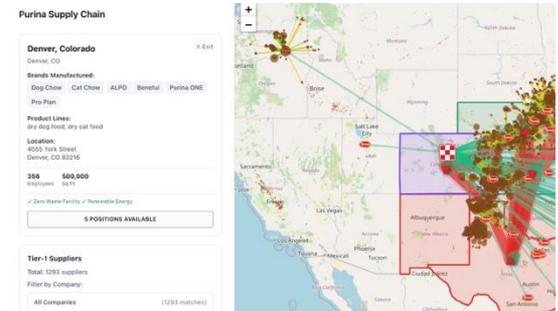
Experienced operators validate ROI and design solutions that solve adoption pain points



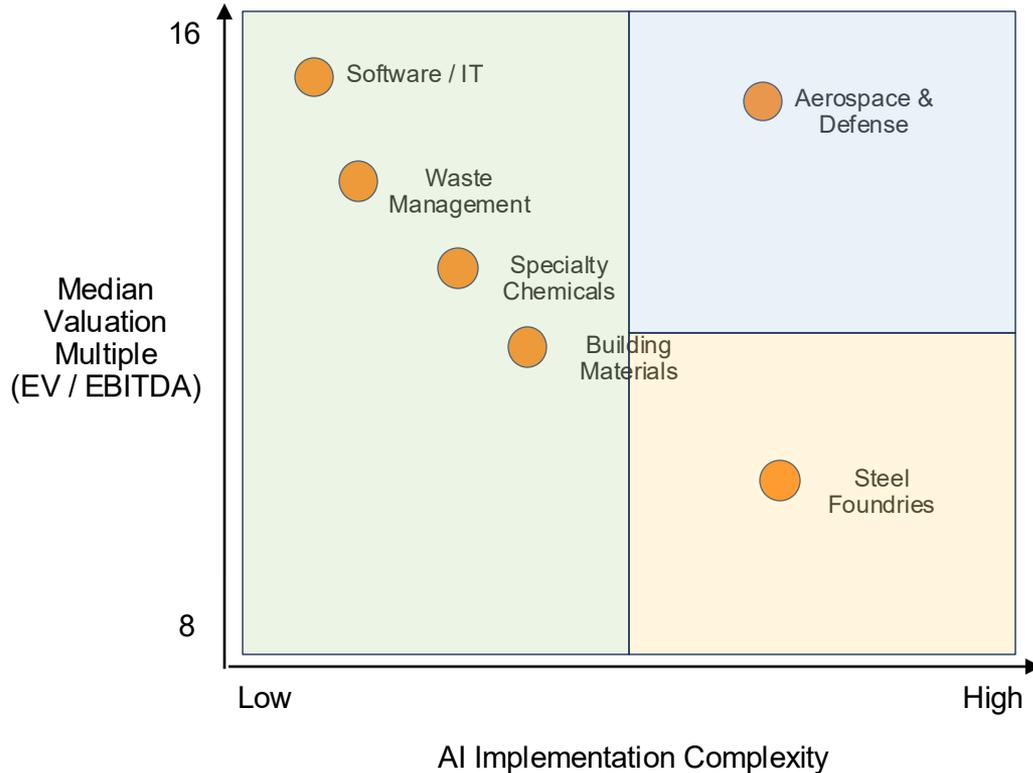
## Build / Buy / Partner

3

Top engineers build simple, usable solutions to augment high performers



Steel foundries aren't obvious targets for AI experiments, but talent deficits make it necessary. Still, take it slow and start with proven solutions.



# Free advice for the AI age: Build cohesion, not complexity

## Your best ideas are already on the table

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- Leadership already knows 8/10 top AI wins
- Executive-led AI projects have 10x higher returns than IT-led AI projects

## Custom AI solutions aren't cheap

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- Never build when you can buy
- Beware of shops offering to build low-cost solutions
  - Expect to invest a **minimum** of \$250k and \$15k/mo in OPEX for custom solutions that work

## ROI from AI is never obvious

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- AI failures come from chasing overhyped returns without understanding the risks
- Hidden costs abound
  - Cybersecurity
  - Implementation
  - Cloud compute
  - Maintenance
  - Leadership development risk
  - Adoption risk
  - Redundancy risk

# Intro to the Abelian Security Council



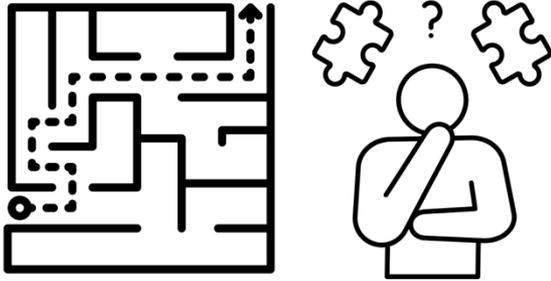
## Abelian Security Council

We provide investors and executives with access to subject matter experts who are shaping the future of defense, enabling them to make faster, smarter decisions.

# The ASC Delivers Trusted Expert Insights for the Defense Market

## CHALLENGE

- 1 Defense is a notoriously opaque and highly complex end-market



### Question for Audience:

Steel forging and casting is fundamental to nearly every aspect of the modern defense industrial base. **What percentage of you currently serve the defense market? For those who do not, what challenges have prevented you from pursuing customers in this sector?**

## OPPORTUNITY

- 2 This trillion-dollar market is growing faster than ever



### Questions for Audience:

The increasing global threat environment has accelerated defense spending in the US, EU and Asia, creating myriad new opportunities for those equipped to capitalize. **How many of you view defense as a growth opportunity for your business? Are you equipped to capitalize on this opportunity?**

## SOLUTION

- 3 ASC can help SFSA clients identify and win new business in defense



### Questions for Audience:

Our subject matter experts in defense can support client in everything from the identification of relevant programs, evaluation of new technologies or crafting of winning proposals. **How many of you have dedicated A&D employees? How many have employees with experience writing winning defense proposals?**

ASC equips stakeholders to navigate the most intricate, technical, and esoteric challenges in defense

# Example Customer Project – Shipbuilding Technology

**Question:** What are the best opportunities for composite manufactured structures for naval platforms?

## Special Assistant to Office of the Secretary of Defense

Special Advisor to the OSD for the Joint Production Acceleration Cell, the DoD's effort to rapidly increase industrial base capacity to accelerate production of weapons systems and platforms.



*"The single fastest growing sub-market amongst naval platform is in autonomous maritime systems."*

## Senior Fellow at Northrop Grumman

Senior Fellow of Advanced Manufacturing at Northrop Grumman with 40+ years of experience in aerospace and defense manufacturing, materials, processes, and structures.



*"Composite structures aren't suited for large platforms—which should be steel—because they combust at higher temperatures. Composites are best for unmanned maritime systems"*

## Navy Rear Admiral (Ret.) & Surface Warfare Leader

Served as Director of Navy Integrated Warfare, where he served as the primary advisor in defined the requirements and resourcing for the Navy's \$206B annual budget.



*"The Navy experimented with composite hulls and superstructures. However, there were several large casualty events, where composites or aluminum sub-structures burned upon taking enemy fire."*

**Answer:** The best opportunity in shipbuilding for composites is in Unmanned Underwater Systems.

# Defense Trends, Customers & Opportunities Relevant to SFSA

The steel industry represents a critical vulnerability in the U.S. defense industrial base, with significant government investment flowing toward workforce development, capacity expansion, and supply chain.

## Trends

**Finishing Gap:** U.S. defense programs do not lack steel or aluminum; they lack finishing capacity in specialized mills that certify the exact forms required for strong ships, aircraft, and armored vehicles.

**Workforce:** Between now and 2028, the defense industrial base will need at least 122,000 additional shipbuilders, engineers, and other key DoD support roles. Failure to meet the demand for metallurgical engineers and related trade professionals in the base metals industry creates vulnerability in U.S. national defense.

## Customers

**Defense Logistics Agency:** Tasked with marshalling forging and casting for the DoD :

- **Integrated Casting Order Network** - Provides innovative procurement solutions for defense and military related metal castings
- **American Metal Casting Consortium** - provides direct support to the DLA through new technology, improved processes, and technical expertise in the procurement of metal castings.
- **Forging Defense Manufacturing Consortium** - Create innovative solutions to reduce the number of unfilled orders issued by the DLA caused by issues in forging supply chains.

## Opportunities

**Office of Strategic Capital:** Provides debt for equipment financing to eligible borrowers in critical technology areas that drive national and economic security.

- **Low-Cost Debt** - Interest rates comparable to U.S. Treasury rate.
- **Flexible repayment schedules** - Match borrowers' anticipated revenues and expenses for the life of the loan.
- **Long repayment period** - allowing for capitalization of equipment cost and associated expenses over the useful life of the financed assets.
- **Deferred payment** - Payments may be deferred several years during a grace period

# How ASC Works With Clients

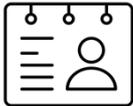
The Abelian Security Council is well positioned to create substantial value for SFSA members who are interested in establishing or expanding business in the defense sector.



We are a fully variable cost. Our expert network service doesn't have any minimum spend, subscriptions or upfront fees. Clients only pay for the calls that they complete with experts, which range from \$1k - \$2.5k / hour.



We tailor the delivery of our services for every project. Clients provide a project prompt, pre-screening questions for experts, and key questions---and then we do the rest.



Our existing rolodex of experts spans military leaders, technologists, contracting officials, commercial executives and program managers. For every project, we also source numerous targeted, net-new experts.



Experts typically do not know the identity of the firm or individual on the client side. This ensures that your commercial activity remains confidential and enables better conversations with experts.