

A Novel AI-Enabled Platform for Risk Assessment & Mitigation Decisions for any New Technology Innovation Need

- Assess a Specific Technology, Investment or an emerging IARPA Need
- Accelerate Development
- Increase Rate of Success
- Reduce Risks & Costs

Patent Pending

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Business & Government

Achieve greater Innovation & Development Success
Burn down technology & business **risks**, reduce **costs**, accelerate **growth**

Patent-pending platform brings together Expert Human Collaboration and five (5) Expert GPT-Enabled AI Agents in a highly guided process.

9-HI uses quantitative, evidenced-based scoring to provide **Decision Guidance** when it's most needed to keep critical programs healthy.

Multi-user Enterprise Platform with holistic Al-based guidance for:

1. Selection Choose the right technologies that can succeed for you

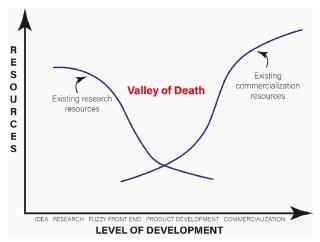
2. Investment Improve success rates and ROI three-fold.

3. Development Manage technical projects from Concept to Launch with the Team and Al Guidance that can meet your objectives addressing the right risks at the lowest cost.

9 Core Metrics govern all Risks and Improvement Opportunities for:

Product Technology / Team & Stakeholders / Market Application

9-HI Bridges the Valley of Death



Video Demos



Selection Projects (Investments, RFI, RWP, RFP, Pitch Events)

https://vimeo.com/792004211

Supply Chain Risk Assessment & Mitigation

https://vimeo.com/868941308?share=copy

 Al Agents Capabilities and Growth Training from Bulletins & Innovation Exploration Projects

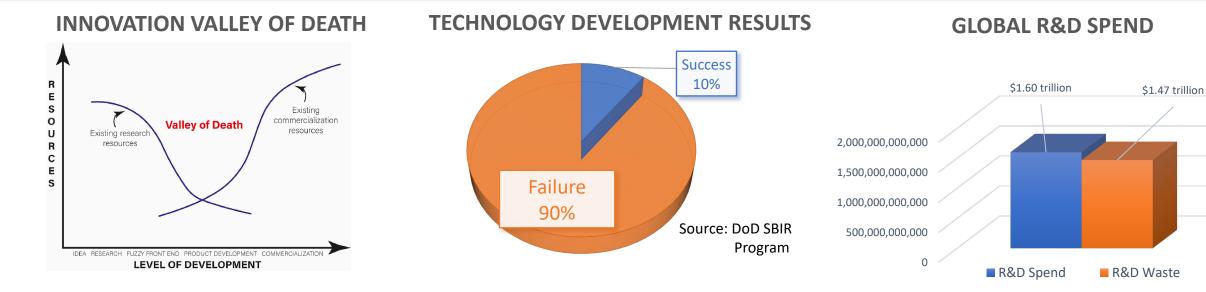
https://vimeo.com/788474465

 Development Projects Guidance for TRL-to-TRL Decisions https://vimeo.com/840080336

The Government & Enterprise Need

Seemingly Awesome Tech & Innovation Often Fails.

But the need to innovate has never been higher!



It's not any easier for Investors...

Many <u>key decisions</u> need to be made correctly by many different stakeholders who often lack the necessary information, priorities and processes to be consistently successful.

Problems We Encounter in Technology Investment & Development



Critical Investment & Acquisition Challenges:

- Multiple Solicitations & Pitch Day cohorts per year
- Hundreds of white papers & proposals with unclear/scattered information
- Poor Proposal Response Alignment to actual Market Application needs
- Qualified human evaluators are not available or overused (fatigue)
- Investments into the wrong products or wrong suppliers or wrong applications
- No historical record of decision criteria available when selection/investment is scrutinized
- Poor feedback for proposer improvement

Critical Risk Mitigation and Development Challenges:

- Highest priorities & critical needs are lost or never Identified
- Programmatic Objectives, Risks & Actions not well thought out or tracked
- · Cooperation & intelligence (Smart Collaboration) is limited
- *Subjective & Inconsistent* decision criteria used for important decisions
- Historical record and decision guidance is lost: Over and Over again
- Decision criteria can be wildly different by technology & organization
- Programs derailed with loss of confidence in the technology, the team or the provider

Reasons For Failure

Investment & Development Decisions lack context, actionable intelligence and knowledge of prior/similar experiences.

Choosing the wrong innovation or risk mitigation effort.

No/limited knowledge share across the organization.

Failure to identify red flags early on.

Making choices based on subjectivity/biases.

Missing or deprioritizing critical risks.

BAIN & COMPANY (4)

Business performance is 95% correlated with decision effectiveness.

Gartner

Decision Intelligence is a top strategic trend for 2023.

What metrics determine success?

Product Technology

Things you want to invest in and develop

Team and Stakeholders

Strategic alignment and improvement of your organization

Market application

Maximize growth of market opportunities

Appeal

What does the user want from the technology /want to accomplish?

Value

What reason/features/capabilities does it provide to the user or buyer?

Reliability

How do users feel after their experience with it?

Personnel

How well can people execute the other eight categories?

Size and Scope

Planning and Process

How do you handle information, support autonomy, and deploy processes?

Finances

What is the ROI? How do you maximize opportunities for the cost?

What is the existing applications or market? Will that grow/change?

Demand

What are your user profiles, and how do you cultivate Demand?

Access and Delivery

How do people learn about your technology, and how do they get it?

9-HITM provides smarter Decision Guidance because it leverages these 9 Metrics in a novel 2-Layer Power Set to provide Higher Order Logic (HOL).

To Al Agents

Let machines do what machines do best: Perform rapid calculations, and access data

To People

Let humans do what humans do best: Bring context, and make final decisions

The 9-HI™ Process & Metrics

SME Team Collaboration
Requirements
Knowledge
Evidence Information





5 Al Agents:

SME Team Selection

Risk Identification

Solution Options

Success Factors

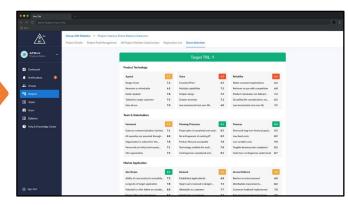
Success Evidence

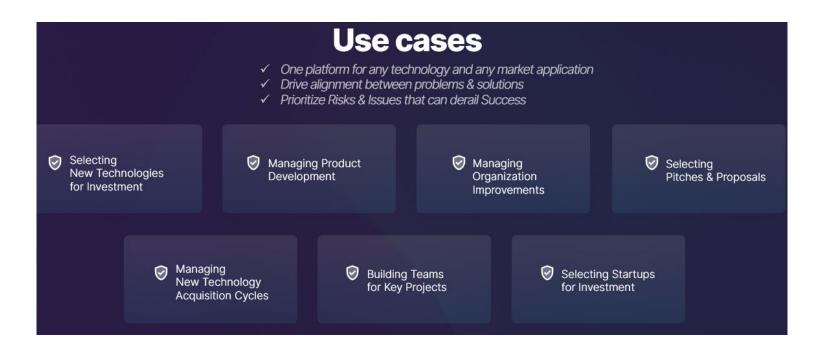
The 9-HI[™] Engine



AI Guidance for Human Decisions

9 Standard Scores





9-HITM Data Sources



4 Sources of Data:

- 1.) Organized project centric data teased from Assigned SME Team. (Manual- Vetted)
- 2.) Internal database of previously attributed data for Risks, Success Factors, Evidence and Solutions (NLP AI/ML Vetted)
- 3.) GPT 3.5 Curated query feed from <u>public internet</u> for minimized request flaws (LLM MS/Open AI- Initially unvetted with manual selective Vetting)
- 4.) GPT 3.5 Curated query feed from <u>Gov/Enterprise secure databases</u> for use of relevant data history (LLM used in 3 above w/ trusted & vetted with additional manual selective Vetting)



9-HI™ Results



9-HI[™] Calculates scores for procurement & development options compared to the "Art of the Possible" to improve Investment & Development decisions:

- > Human SMEs collaborate with each other & AI for Decision Guidance
- Compare technologies or proposals to identify best candidates for investments and improvements
- > Enable collaboration across DoD verticals, Industry and Academia
- Standardize gov selection and development processes and Capture Institutional & Adversarial Intelligence
- ➤ Integrate AI and ML into the technology and product Selection & development process
- ➤ Al-guided development decisions throughout the TRL-to-TRL development process including deployment
- Accelerate technology and product development with lower overall risks- BE MORE SUCCESSFUL

		Target TRL: 9			
Product Technology					
Appeal	7.2	Value	6.9	Reliability	6.9
Range of use	7.2	Function/Price	6.5	Meets customer expectations	6.4
Newness or refreshable	6.5	Multiple capabilities	7.5	Performs on par with competition	6.8
Easily repaired	7.8	Simpler design	7.5	Product robustness not defined	7.4
Tailored to target customer	7.5	Greater precision	7.2	Durability/life considerations are	6.5
Ease of use	7.0	Low incremental cost over life	6.0	Low incremental cost over life	7.5
Gates to commercialization charted	7.1	•	8.5		9.2
Personnel	7.5	Planning/Processes	8.3	Finances	8.8
Gates to commercialization charted	7.1	Project plan is completed and used	8.5	Short and long term financial goals	9.2
All expertise are provided through	8.0	No infringement of existing IP	8.9	Low fixed costs	8.9
Organization is tailored for this	7.8	Product lifecycle acceptable	7.8	Low variable costs	9.0
Personnel are fully/continuously	7.1	Technology available for each	7.8	Tangible business plan completed	8.2
Flat organization	7.5	Contingencies considered and	8.5	Cash burn contingencies understood	8.7
Market Application					
Size/Scope	8.0	Demand	7.2	Access/Delivery	7.3
Ability of new product to consolida	7.3	Established application(s)	6.8	Barriers to entry removed	6.8
Longevity of target application	7.8	Target users involved in design/	7.5	Distribution requirements	8.2
Potential to offer follow on variatio	8.0	Affordable to customers	7.7	Customer feedback implemented	7.0
Product life cycle advantages	8.5	Satisfaction guaranteed	7.5	Fast response to demand change	75

9-HI: All Paths should Start with an IE Project



Innovation Exploration Project

- Company, government or common interest Group of SMES considers Technology Topics to brainstorm and determine Risks and Success Factors
- Export to Selection Project or
- Export directly to a Development Project <u>or</u>
- Formulate project prior to seeking funding or
- Just for community benefit and for SMEs to gain research experience

(Must create individual profile and Group before starting any project)

"Traditional projects manage resources and timelines, while 9-HITM Manages Risks and Success"

Selection Project

- Request for Information
- Request for Whitepaper
- Request for Proposal
- Group can conduct one project or string together as an acquisition cycle
- Awarded Proposal is transferred to a Development Project

Responder Solution Project

- Allows Suppliers, Contractors or internal Dev Teams to create Responses measured using 9-HI SFs that were determined by the Host Selection Project
- Responder submits proposal back to Host Selection Project

Development Project

- Import Topic information from IE Projects or Selection Projects
- Create Evidence to drive SF Scores higher and bring to Production/Deployment

- ✓ Multiple Project flows and starting options are possible
- ✓ Every Project Can utilize AI Agents with or without GPT
- ✓ Every Project can invite Volunteers or Paid Consultants using the convenient 9-HI payment system
- ✓ Simple imports are available from one project to another

Traction Achieved Thru February 2023

SBIR Phases I & II

> \$1.5 Million Phase 2 SBIR Funding- AFWERX/OUSD

(Joint Enhanced Munition Technology Program/Joint Fuse Technology Program)

DPA, Title III, SBIR Phase III

- > \$4.1 Million Funding-OUSD: Defense Production Act, Title III (Completed 03/2023)
- > Working Platform available for Demo
- > Seeking additional Gov Programs for sponsorship through ATO and database access for enhanced AI Agent training

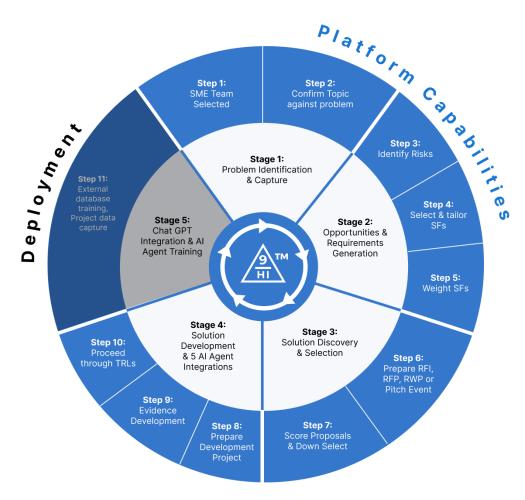
Commercial Traction



- > Accepted into Microsoft "Fast Track" program by CTO Anu Gupta to team for Security, AI integration & BD. (includes >\$180k in credits)
- > Invitation and Proposal from Capital Factory & Multiple DoD services for new integrated deployment project
- > Pilot partners: MxD, National Armament Consortium, Multiple accelerators, Connex Marketplace, Marcantonio Global, et al.

9-HITM Platform Features

9-HI Platform Build Completion



Gov Organizations, Enterprises & Universities can:

- 1.) Build it's own group with privacy and usage controls & privileges
- 2.) Deploy multiple teams with SMEs they find on 9-HI™ on multiple Projects and Topics
- 3.) Use the 9-HI™ AI Agents to identify Risks, Success Factors, and Success Evidence for their Topics
- 4.) Deploy actual RFIs, RWPs, RFPs, or Pitch Events AND Import them into Development Projects
- 5.) Send out announcements to potential solution providers
- 6.) Screen, register and select Responders based on their abstracts or Unsolicited White Papers
- 7.) Provide Responders ability to evaluate their <u>own</u> ideas based on 9-HI™ scores BEFORE they respond
- 3.) Responders provide their proposal to the Host in a 9-HI™ Format on the 9-HI™ Platform
- 9.) Allow Host to right size the number and variety of experts to judge all responses
- 10.) Down select proposals to move from RFI to RWP to RFP within an acquisition cycle
- 11.) Select finalists for awards and import data from project to project
- 12.) Document reasons why Host judges made their decisions with feedback to Responders
- 13.) Explore New Innovation Opportunities with self-directed groups within in organization
- 14.) Request Recommendations of Risk, SFs, & Evidence from all AI Agents and SME members on 9-HI™
- 15.) Transfer the winning proposal into an R&D Project where it will be constantly measured and it can progress from TRL to TRL using 9-HI™ objective measures and deploy when it reaches TRL 9
- 16.) Payment from Enterprises to consulting SMEs at any stage of a project

All of this is guided by SMEs and the 5 Al Agents using the 9-HI™ process



Meet the Team & Advisors*



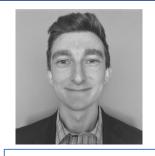
Dave Mroczka Founder, 9-HI

Dave led five private and public company business units, 24 yrs. in P&L leadership roles with companies up to \$5 billion in revenue. Top executive at the largest private DoD product development lab in the US. Set records sales and profit for ClipFix, Luitpold Pharmaceuticals, UBE Industries, API Industries and Dayton T. Brown Corp. Bachelor of Science in Mechanical Engineering at the University of Hartford, MS and MBA from Rensselaer Polytechnic Institute



Frank Zinghini*
Founder, AVI
Principal subcontractor

Frank founded Applied Visions, Inc. to create software solutions and products for business across many industries. AVI has developed critical cyber security tools for the federal government, through funded R&D programs for DoD, DHS, and the Intelligence Community. AVI transformed the results of a DHS-funded research program into Code Dx, a cyber security spinout closed in 2022.



Ryan Hart
Project management

Ryan worked as an Energy Engineer/Project Manager for an energy services company and an IT Auditor within the Risk Advisory Program at EY. Ryan received his BS in Industrial & Systems Engineering from Binghamton University and his MS in Industrial/Organizational Psychology from Touro University of New York.



Brianne O'Brien*
Program Manager, AVI
Principal Subcontractor

Brianne defines, manages, matures, and successfully transitions R&D projects for DoD, DHS and the Intel Community. As a senior embedded systems engineer, she developed avionics cockpit and fuel management aircraft systems software.. Brianne holds a BS in Computer Science from SUNY Stony Brook and an MBA from Adelphi University.



Dr. Simon Hong
Lead Al Engineering

Simon is an expert in AI and Neuroscience, applying knowledge gained from biological experiments to build AI models and its applications. Simon also brings in leadership and communication skills having experience in leading teams at MIT, NIH, and was a CEO of a startup company, Robilis. Simon received his PhD from Boston University and did his post-doctoral training at NIH



Julian Weisbord*

Machine Learning Developer

Principal Subcontractor

Julian has led the build out of their artificial intelligence infrastructure and the production of the 5 9-HI AI Agents. He worked at several large technology companies including Tesla, Intel, and Polaris after earning his Bachelors at Oregon State University (OSU) where he joined the OSU Personal Robotics Lab and developed object recognition and perception software for intelligent robots