

20
YEARS

AVIATION WEEK
PROGRAM EXCELLENCE
AWARDS

INTELLECTUAL PROPERTY

(This section must be signed)

Individuals **outside your company**, including the companies listed above and other third parties, potentially including your competitors and others in your industry, may receive and/or review award submissions. All information submitted should address the program's management, leadership, and processes in a manner that you are comfortable sharing with third parties freely and without restriction, and may not include any classified or proprietary information or materials. Do not include any materials marked Confidential or Proprietary or bearing any similar legend. All responses and other submissions, whether in whole or in part ("Submissions"), shall be deemed not to be confidential, proprietary, and/or nonpublic information of any sort for any purpose.

Without limiting the foregoing, you hereby grant to Aviation Week Network, an Informa business, a perpetual, irrevocable, royalty-free, full paid-up, worldwide license to copy, reproduce, distribute, display, publicly perform, publish, republish, post, transmit, disseminate, edit, modify, and create compilations and/or derivative works of the Submissions (or any portion or excerpt thereof) in connection with its or any of its affiliates' business(es). Aviation Week Network agrees not to edit the Submissions in any way that materially alters their overall substantive meaning. Aviation Week Network may freely assign, license, transfer, and/or otherwise convey any or all of the rights and licenses granted hereunder.

Thank you for participating,



Gregory Hamilton
President
Aviation Week Network

Acknowledged, agreed, and submitted by

Nominee's Signature

Date

Nominee's Name (please print):

Title (please print):

Company (please print):

MATT CHRISTENSEN

EVP - AEROSPACE DIVISION

VITA INCLINATA

7/11/2024

Company (please print): _____

NOMINATION FORM

Name of Program: Air Rescue Systems Helicopter SAR and VRS Training _____

Name of Program Leader: Matt Christensen _____

Phone Number: 303-667-3858 _____

Email: mchristensen@vitatech.co _____

Postal Address: _____

295 Interlocken Blvd Suite 100, Broomfield, CO 80021 _____

Customer Approved

- Date: July 15, 2024 _____
- Customer Contact (name/title/organization/phone): Jerry Bastian, Chief Pilot Rotor Wing, Intermountain Life Flight _____

Supplier Approved (if named in this nomination form)

- Date: _____
- Supplier Contact (name/title/organization/phone): _____

**PLEASE REFER TO PROGRAM EXCELLENCE DIRECTIONS
AS YOU COMPLETE THIS FORM.**

SECTION 1: EXECUTIVE SUMMARY

Make the Case for Excellence

Value: 10 points

Use 12 pt. Times Roman typeface.

What is the vision for this program/project? What unique characteristics and properties qualify this program for consideration? For consideration of the System Design and Development Supplier category.

Air Rescue Systems (ARS), a Vita Inclinata Technologies company under Vita Aerospace, envisions a global standard in helicopter search and rescue (HSAR) operations where "everyone comes home." Our mission is to provide "Total Team Solutions" that meet or exceed mission-specific requirements for diverse clients, including military branches and emergency response organizations. We

Our program offers a comprehensive ecosystem providing highly advanced-level training, equipment, and cutting-edge technology for HSAR teams. We bring industry-leading expertise with extensive experience and Vita Inclinata's pioneering SAR advanced technology, the Vita Rescue System™ (VRS). Our customized curriculum covers everything from basic safety to advanced human external cargo (HEC) helicopter rescue techniques tailored to each client's unique needs. Integrating the VRS sets us apart with revolutionary technology that enhances safety and efficiency in hoist operations. We also create customized handbooks tailored to agency-specific Standard Operating Procedures. Our client list includes agencies like Cal Fire, the San Antonio Police Department, and US Air National Guard units, attesting to the quality and effectiveness of our program.

Our training curriculum covers: Advanced level Fluid Dynamic Hoist™ Training, Helicopter Rescue Safety and Initial Ground Training, Aviation Life Saving Equipment (ALSE), OP/SOG Evaluation, Best Practices in Helicopter Rescue Operations, Ground Support for SAR and HEC Operations, Advanced Concepts in HEC Operations, Risk Management and GAR Models, and Advanced technology, including Vita Rescue System (VRS).

This comprehensive approach to advanced level HEC training represents a paradigm shift in helicopter SAR training and technology integration, creating an encompassing ecosystem of safety solutions from training to field-proven equipment to advanced technology. Our commitment to excellence has redefined helicopter SAR operations, setting a new standard for system design and development in the aviation industry.

At Air Rescue Systems (ARS), our team of subject matter experts brings together more than 125 years of experience and unparalleled expertise from diverse backgrounds in the US Navy, US Army, Special Operations, high-altitude mountain rescue, and other elite units. Our collective knowledge and hands-on experience in high-risk and complex helicopter rescue environments enable us to deliver exceptional solutions and training.

Known for our highly customized, client-specific training programs tailored to each agency's specific mission and environment, we are committed to excellence, safety, and innovation, ensuring that agency teams are equipped with the best tools and strategies for their critical missions. With a focus on the physics of load control under a helicopter, we eliminate unwanted movement in human external cargo (HEC) rescue operations through the application of specialized flight profiles and cutting-edge technology. ARS stands at the forefront of the air rescue industry, ready to meet the demands of any challenge.

DIRECTIONS

- Do not exceed 10 pages in responding to the following four descriptions.
 - Allocate these 10 pages as you deem appropriate, but it is important that you respond to all four sections.
- DO NOT REMOVE THE GUIDANCE PROVIDED FOR EACH SECTION.
- Use 12 pt. Times Roman typeface throughout.
- Include graphics and photos if appropriate; do not change margins.

SECTION 2: VALUE CREATION

Value: 15 points

Please respond to the following prompt:

- **Clearly define the value of this program/project for the corporation; quantify appropriately**

ARS and Vita Inclinata Technologies continue to solidify our position as the premier provider of Advanced Helicopter Operations training while also innovating in rescue equipment. This dual focus on training and product development significantly enhances the brands' value proposition and market position.

Crucially, ARS integrates its innovative products into these training programs, creating a synergistic effect that boosts both training effectiveness and product sales. Key examples include:



The Vita Rescue System (VRS)

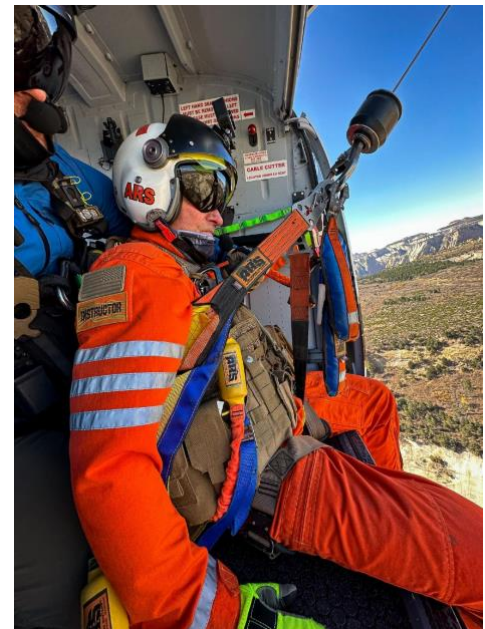
1. Vita Rescue System (VRS): The VRS revolutionizes helicopter hoist operations by autonomously stabilizing rescue litters during hoist and short-haul operations, eliminating preventable accidents and enhancing rescue capabilities. It enables 4x faster rescues with precision control from 1,000 feet away, measuring 1,000 data points per second for stability. This quick-attach, helicopter-agnostic system dramatically improves speed, safety, and control, setting a new standard in rescue efficiency and lifesaving potential.



2. **Winter Gauntlet Hoist Operator Gloves:** These gloves, featuring wind-blocking technology, minimal thermal loss, breathable design, and 100 grams of Thinsulate insulation, are integrated into winter hoist operation training. This integration allows our trainees to experience the gloves' benefits firsthand, while working in cold environments where manual dexterity is essential. .

3. **PELICAN Rapid Extraction Device (R.E.D.),** pictured to the right: This revolutionary water, land, and vertical extraction device is featured in rescue training programs. Its unique design ensures rapid full victim capture and eliminates the "double lift" process, increasing the speed and safety of extrication of rescue victims.

By integrating these products into the training programs, ARS not only enhances the quality and realism of the training but also creates opportunities for product demonstrations and sales. This strategy drives revenue growth through both service and product lines while reinforcing ARS's reputation for innovation and comprehensive solutions.



Furthermore, the integration of cutting-edge technologies like the Vita Rescue System (VRS) into training programs showcases ARS's commitment to pushing the boundaries of rescue technology. This approach not only sets new standards in helicopter search and rescue operations globally but also positions ARS as a one-stop solution for training, equipment, and technology in the rescue industry.

This comprehensive ecosystem of training, equipment, and technology reinforces ARS's industry leadership, opens doors for strategic partnerships, and solidifies its position as an indispensable resource in the search and rescue field. The synergy between ARS's training expertise and product innovation creates a unique value proposition that distinguishes the company in the market and drives its continued growth and success.

➤ **Clearly define the value of this program/project to your customer**

ARS and Vita Inclinata's tailored training approach provides invaluable safety enhancements to our customers. Before beginning any training with a customer, ARS performs an extensive program assessment to develop a comprehensive course. The value of ARS's training programs to customers is multifaceted and significant:



Enhanced Operational Capabilities: This year, ARS ensured the San Antonio Police Department gained specialized skills in aerial firefighting, expanding their ability to provide initial fire attack capabilities across city, county, and state levels. This breadth of capability significantly improved emergency response effectiveness. This training is built upon previous collaborations in Initial Hoist Operations, Advanced Hoist, Flood Water Rescue, and S.W.A.T. FAST Rope Insertion.

Comprehensive Skill Development: For our customers, training spans from beginner to expert levels, encompassing helicopter rescue safety, aviation life-saving equipment (ALSE), SOP/SOG evaluation, best practices in helicopter rescue, ground support for SAR and HEC operations, advanced HEC concepts, risk management, and the use of advanced technology like the Vita Rescue System (VRS). Integrating advanced technology like the VRS enhances safety and efficiency in hoist operations.



Intermountain Life Flight during training

Unparalleled Quality: Intermountain Life Flight's feedback highlights the exceptional quality of training, providing expertise that surpasses in-house capabilities. "All nine folks said this is the best

training that we've had since they've been here. They're providing a level of training that we just can't do in-house. The level of training they're providing is invaluable to the hoist program."

Precision and High-Volume Practice: The California Highway Patrol training, featuring over 400 live-load hoists, demonstrated ARS's commitment to intensive, advanced skill development. This high-volume practice enhances precision and control in real-world situations.

Specialized Techniques: Training in Fluid Dynamic Hoisting for CAL FIRE and Indirect Vertical Reference (IVR) Short-Haul for OKC Police and Fire Departments demonstrates ARS's ability to deliver highly specialized, advanced techniques crucial for complex rescue operations.

Continuous Improvement: Returning clients like CAL FIRE and the San Antonio Police Department indicate the ongoing value of ARS training, allowing teams to continually refine their skills and tackle new challenges.

Inter-Agency Collaboration: By training multiple agencies (e.g., police and fire departments, military units, and SAR organizations), ARS facilitates improved coordination and standardized practices across different emergency response units.

Safety Enhancement: Focusing on precision and control in all aspects of training significantly improves operational safety for rescuers and those being rescued.

Professional Growth: The challenging nature of ARS trainings provide growth opportunities for team members, enhancing rescuer skills, confidence, and overall professional development. Additionally, providing customized handbooks aligned with agency-specific Standard Operating Procedures offers ongoing professional development and support, further boosting the value proposition for these first responder teams.

This comprehensive value proposition positions ARS as an essential partner in elevating the capabilities, safety, and effectiveness of helicopter rescue emergency response teams across various agencies and specialties.

➤ **Clearly define the value of this program/project to members of your team; quantify, if possible**

For the internal team at ARS, the training programs and technology development offer unique and deeply fulfilling professional opportunities. The staff's passion for helicopter rescue is channeled into meaningful work that directly impacts lives and pushes the field's boundaries.

Drawing from diverse backgrounds, including search and rescue, military service, and aviation, team members find their expertise valued and applied in developing cutting-edge techniques and technologies. This variety of experience fosters a rich, collaborative environment where innovation thrives.

The process of designing and delivering high-stakes training programs for elite clients like Intermountain Life Flight and various police, fire, and military departments challenges the ARS team to refine their own skills and knowledge continuously. Each new training scenario or technological

advancement, such as perfecting the Vita Rescue System (VRS), provides opportunities for professional growth and the satisfaction of solving complex problems.

Employees gain a sense of purpose from knowing that their work developing safe techniques and efficient retrieval methods makes a tangible difference in the most challenging rescue situations. Clients' positive feedback is a powerful validation of the team's efforts.

Moreover, the company's vision of setting a global standard in helicopter search and rescue operations where "everyone comes home" aligns with the personal values of ARS team members, creating a strong sense of mission and camaraderie. This shared purpose, combined with the dynamic and challenging nature of their work, contributes to high job satisfaction and a deeply engaged workforce.

The continuous interaction with diverse clients and evolving rescue scenarios ensures that ARS team members remain at the forefront of their field, constantly learning and adapting. This environment of perpetual growth and innovation enhances their professional capabilities and provides a sense of pride in pioneering advancements that shape the future of search and rescue operations globally.

➤ **Clearly define the contribution of this program/project to the greater good (society, security, etc.)**

ARS's training programs and innovations make a substantial contribution to the greater good by enhancing the capabilities of first responders across multiple agencies and jurisdictions. By elevating the skills of diverse teams - from police aviation units to fire departments – ARS helps create a more robust and effective emergency response network. Integrating advanced technologies and best practices in areas such as floodwater rescue and S.W.A.T. operations further contributes to public safety. Moreover, the companies' vision of setting a global standard in helicopter search and rescue operations, where "everyone comes home," underscores its commitment to improving individual agencies and advancing the entire field of emergency response for the benefit of society as a whole.

SECTION 3: ORGANIZATIONAL BEST PRACTICES AND TEAM LEADERSHIP

Value: 35 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

- **15 points:** Describe the innovative tools and systems used by your team, how they contributed to performance and why

ARS utilizes innovative tools like the Vita Rescue System (VRS), Winter Gauntlet Hoist Operator Gloves, Air Reach Seat™, and PELICAN Rapid Extraction Device (R.E.D.) to enhance performance in rescue operations. The VRS, with its ability to speed up rescues fourfold and offer precision control from up to 1,000 feet away, significantly improves the speed, safety, and control during hoisting. The Winter Gauntlet Hoist Operator Gloves reduce wind chill and thermal loss, maintaining agility and enhancing operator comfort and efficiency in cold conditions. The Air Reach Seat™ provides a stable platform for power line maintenance, allowing linemen to work safely and efficiently. The PELICAN R.E.D. improves extraction operations by ensuring full victim capture and eliminating the "double lift" process, enhancing efficiency and safety. Together, these tools contribute to faster operations, increased safety, and precise control in challenging environments.

- **10 points:** Define the **unique** practices and process you used to develop, lead and manage people?

Developing, leading, and managing teams effectively requires a focus on clear communication, defined goals, and consistent practices. First and foremost, establishing clear communication channels is essential. This means setting up defined goals and expectations, using collaborative learning tools, and ensuring that every team member understands their role and responsibilities. Consistency in communication helps prevent misunderstandings and keeps everyone on the same page, which is critical for successfully executing tasks and projects. By maintaining regular and open lines of communication, ARS team members and customers can express their ideas, provide feedback, and stay informed about the training progress and challenges.

ARS is not only involved with our customers setting long-term goals but also breaking them down into manageable milestones and regularly reviewing progress. A consistent approach to goal-setting and progress assessment helps keep the team focused and motivated, as they can see the direct impact of their efforts and adjust strategies as needed.

- **10 points:** How did you leverage skills and technologies of your suppliers?

ARS leverages the skills and technologies of Vita Inclinata Technologies, collaborating on product development, partnering for training equipment, and incorporating technologies. Integration of Vita Inclinata's innovations, such as the Vita Rescue System, enhances rescue operations and training effectiveness. Collaborative development of specialized equipment, like the Winter Gauntlet Hoist Operator Gloves, incorporates advanced materials and designs. Partnerships with helicopter and hoist manufacturers ensure compatibility across various equipment in training programs.

SECTION 4: DEALING WITH PROGRAM COMPLEXITY

(VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY, or VUCA)

Value: 25 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

- **10 points:** Describe UNIQUE areas of VUCA faced by your program and why. (Please avoid the issues surrounding Covid-19 pandemic, which was faced by all programs.)

In the world of search and rescue, ARS faces unique challenges daily. Just like real-world search and rescue operations, our training sessions and technologies face varying elements, from weather to different unique rescue scenarios. As they prepare teams for the uncertainties that pervade each mission, they must adjust to each day and training exercise on the fly.

ARS trainers must be top experts in the field to teach the most comprehensive search and rescue techniques supported by cutting-edge innovation. They must have the knowledge and skills to share what to do on the edge of a wildfire, where a sudden wind shift transforms the landscape of danger, how to perform water rescue in a helicopter hovering over churning seas where currents surge unpredictably or navigating mountain rescues with thin air, treacherous terrain, and the constant threat of avalanches or rockslides.

Ambiguity is ever-present. In thick smoke, darkness or torrential downpours, rescuers make life-or-death decisions with limited visibility, balancing urgency against their own safety. Training is held in such scenarios to teach the safest, most efficient methods.

- **15 points:** Explain how your team responded to these challenges. What changes did you make, what were the results?

For ARS, these VUCA challenges drive innovation. Our technologies must perform flawlessly across all scenarios. Training programs constantly evolve, preparing rescuers for the highest uncertainty and complexity.

Every product developed must address the complexities of diverse rescue environments. It's a delicate balance—pushing technological boundaries while ensuring reliable performance in unpredictable, high-stakes situations. The innovation supports training exercises to ensure rescue teams are successful:

To address the volatility and complexity of rough terrain and water rescues, ARS and Vita Inclinata integrated the Vita Rescue System (VRS) into the training curriculum. The VRS's advanced technology enables fourfold faster rescues, precision control from up to 1,000 feet away, and measures 1,000 data points per second for enhanced stability. This system improves operational speed, safety, and control, setting a new standard in efficiency and lifesaving capabilities. As a quick-attach,

helicopter-agnostic system, the VRS offers versatile deployment across various rescue scenarios, dramatically improving performance and reducing accident risks.

In response to the challenges posed by cold weather and mountain conditions, ARS incorporated **Winter Gauntlet Hoist Operator Gloves** into winter hoist operation training. These gloves, designed with wind-blocking technology and 100 grams of Thinsulate insulation, minimize thermal loss and maintain dexterity. By allowing trainees to experience the benefits firsthand, ARS ensures that operators are well-equipped to handle cold conditions, enhancing comfort and efficiency during hoist operations in volatile winter environments.

To improve efficiency and safety in water, land, and vertical extraction operations, ARS featured the PELICAN Rapid Extraction Device (R.E.D.) in our rescue training programs. The PELICAN's unique design ensures full victim capture and eliminates the "double lift" process, making extraction operations more efficient and safer. By integrating this device into training, ARS enhances the capability of teams to perform extractions effectively, addressing ambiguities in complex rescue environments.

Implementing these innovative tools and systems significantly improved operational performance and safety. The VRS has revolutionized hoisting operations by reducing rescue times and enhancing control, leading to quicker and safer rescues in volatile environments. The Winter Gauntlet Hoist Operator Gloves improved operator comfort and dexterity in cold conditions, ensuring better performance during winter rescues. The PELICAN R.E.D. improved the speed and safety of extractions, demonstrating its effectiveness during training and operational deployments. Overall, these integrated product trainings have enhanced the preparedness and capability of ARS, Vita Inclinata and our customers, enabling us all to respond more effectively to the unique challenges of rough terrain, water, and wildfire rescue missions, whether in staged scenarios or in the real world.

SECTION 5: METRICS

Value: 15 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts, where predictive metrics indicate items that provide a view of how yesterday's actions and today's actions will affect the future timeline, cost or other requirement.

Provide charts/graphs that illustrate performance to these metrics:

➤ What are your predictive metrics?

At a fundamental level of predictive metrics within our training offerings, Accuracy, Precision, and Recall (Sensitivity) are consistently measured and monitored for each individual on the team. We assess each individual to ensure that each student fully learns the material and executes the requirements. Continuous assessment and repetition of training are keys to this model. In addition, our products and training courses fall under the guidelines/expectations listed below.

As an ISO 9001: 2015 Manufacturer, ARS designs and builds the most innovative and safety-oriented helicopter response equipment available. Course delivery includes using all required equipment for hoist

operators, rescue crew and victim extraction. PPE (i.e., flight helmet, flight suit, gloves, and communications systems) is not included. Continued testing and evaluation of course equipment will be arranged as requested.

Our training courses will prepare the student for safety-driven, precision helicopter operations at an unparalleled level. The ARS training curriculum and course syllabus for hoist and short haul human external cargo meet and exceed the minimum requirements of EASA SPA 100 Human Hoist Operations (HHO), FAA 133D Human External Cargo (HEC), Transport Canada (CARS 722), Australian Civil Aviation Safety Authority (CAO 29.11).

At the successful completion of the course, the student will receive certification that they have been taught to the requirements set forth in: EASA SPA 100 Human Hoist Operations (HHO), FAA 133D Human External Cargo (HEC), Transport Canada (CARS 722), and Australian Civil Aviation Safety Authority (CAO 29.11) as applicable to course offering.

➤ **How did you perform against these metrics?**

Our goal is to ensure each student successfully completes training as per the expectations provided by our customers and the various certification standards listed above. Although 99% of the students are able to successfully and satisfactorily complete the curriculum, not everyone is able to meet our standards of completion. Most often, these students do not have the physical or fundamental skill set required to complete the curriculum.

We often will conduct over 100+ hoists per day of training to ensure accuracy, precision, and recall of skillset requirements during operations.

➤ **How do your predictive metrics drive action toward program excellence? Please provide examples.**

Predictive metrics play a pivotal role in driving action toward the excellence of training programs by providing data-driven insights that guide decision-making. By leveraging predictive analytics, ARS can identify patterns and trends that signal future performance outcomes. This allows our training managers to proactively address potential issues, tailor training modules to meet specific needs, and allocate resources more effectively. For instance, if we identify that a particular team is likely to struggle with advanced Fluid Dynamic Hoist™ maneuvers, targeted curriculum adjustments can be implemented in advance to mitigate this risk, ensuring a smoother transition and higher overall competency over the long run. We focus on the overall health of our customer's programs over the long term, which may mean more fundamental work before advanced technique implementation.

Moreover, ARS will enhance the personalization of training programs, which is crucial for maximizing engagement and retention. By analyzing individual learning behaviors and performance data through video, audio, and team engagement, ARS can customize the training content to match the unique learning styles and paces of their students. This tailored approach not only boosts the effectiveness of the training but also fosters a more engaging and motivating learning environment. Teams are more likely to remain committed to their development when the training feels relevant and directly applicable to their roles, thereby driving better performance outcomes and continuous improvement.

Lastly, using predictive metrics fosters a culture of continuous feedback and improvement within our training programs. By continuously monitoring and analyzing customer feedback, we can quickly identify areas that require enhancement and make evidence-based adjustments. This iterative process ensures that training programs remain dynamic and responsive to changing needs and conditions.

