

# Exhibitor Directory Yokosuka, Japan

MAND IN TOUTON

# **SUSTAINMENT ACCELERATOR** US Naval Ship Repair Facility and Japan Regional Maintenance Center

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### Advanced/Additive Manufacturing

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# **3D Printing Corporation, K.K.**

Established in 2016, our company leverages advanced technologies, including 3D printing, to deliver equipment sales and custom manufacturing services. By utilizing additive manufacturing, we enhance component value, reduce lead times, and cut costs, earning the trust of numerous clients and partners.

To address diverse industry needs, we developed "Taiga," a digital manufacturing platform designed for efficient production of complex geometries and new components. Taiga excels in challenges like reproducing obsolete parts and handling low-volume, high-mix production, making it a powerful solution for supply chain optimization.

Our approach combines cutting-edge digital tools with extensive manufacturing expertise to deliver flexible, sustainable solutions that meet today's evolving demands. By continuously innovating, we aim to empower our customers and enhance operational efficiency across sectors. Focus Area: Advanced/Additive Manufacturing

#### Contact

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PROBLEM STATEMENT  Language and cultural barriers in communication Coordination issues with global networks and suppliers Inability to source critical U.S. parts Local sourcing challenges disrupting the supply chain Difficulty producing complex designs and new components Challenges with obsolete parts and low-volume, high-mix production Long lead times and high costs of traditional manufacturing	BENEFITS • Streamlined workflows for faster project completion • Reduced costs through efficiency and waste minimization • Real-time tools enhance team collaboration • Smooth global coordination with international teams • Flexible support for low-volume, high-mix production • Enables complex designs and advanced components • Eco-friendly operations with less waste and local sourcing
TECHNOLOGY SOLUTION • TAIGA offers real-time tools like shared 2D editing and chat to overcome communication barriers. • Centralized project management enables smooth global coordination. • Flexible local sourcing resolves U.S. parts shortages and stabilizes supply chains • Advanced technologies like 3D printing and CNC produce complex designs efficiently. • TAIGA shortens lead times, lowers costs, reproduces obsolete parts, and handles low-volume, high-mix production.	GRAPHIC

### TAIGA

# **DMG MORI Federal Services**

The DMG MORI Group is a leading innovator in the machine tool industry with an expansive portfolio of manufacturing equipment. We are focused on customer support, quality, service, and advanced technology. Our product line includes 5-Axis Milling machines, 4 and 5-Axis Horizontal Machining Centers, Additive machines, Hybrid machines, Vertical Machining Centers, CNC Turning machines, CNC Boring mills, and a variety of Palletized systems and Grinding machines. With over 12,000 team members world-wide, our group companies specialize in providing unmatched applications support, service and training to large OEMs, Tier-one contractors, and the US government itself. DMG MORI Federal Services (DMFS) works exclusively with US federal and State government agencies to support government initiatives while focusing on federal acquisition regulations and cybersecurity compliance. DMFS is also (ITAR) Registered, (CMMC) 2.0 complaint ready, and (NIST) compliant. We currently have active projects with the Army, Navy, Air Force, Department of Energy, and NASA.

Focus Area: Advanced/Additive Manufacturing

#### Contact

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FEDERAL SERVICES

### DMG MORI Advanced Manufacturing and Additive Manufacturing Solutions

PROBLEM STATEMENT <ul> <li>How to reduce Machining Time</li> <li>How to reduce scrapped parts</li> <li>How to increase accuracy of machined parts</li> <li>How to reduce the number of machines needed</li> <li>How to reduce the number of complex and expensive fixtures needed to machine components</li> <li>How to reduce lead time to repair critical components</li> <li>How to train machine operators</li> </ul>	BENEFITS           • Reduces scrap parts           • Reduces the number of machines needed to complete a part or repair- Smaller footprint           • Reduce cycle/ production time           • Reduce cycle/ production time           • Reduction of repair time           • Higher quality and increased precision           • Less tooling and fixtures required           • Less Machine Operators needed           • Reduced energy consumption and CO2
TECHNOLOGY SOLUTION   Additive manufacturing enables the creation of parts and products with complex features previously not possible  Use of both additive and subtractive technologies in one machine (DMG MORI Hybrid DED Machines) combine operations and reduces the need for complex fixtures  S-Axis Milling and turning in same machine reduces the number of machines, fixtures, set ups, scrapped parts, leading to reduced time needed to make the part complete  DMG MORI Academy offers expert training in operation and repair of our machine tools	GRAPHIC <b>DMG MORI</b> FEDERAL SERVICES

# **FONON Technologies**

Fonon Technologies is a leading laser R&D and manufacturing company that provides military-grade, trade-compliant laser solutions. Fonon's elite team of scientists and engineers develops stable processes for disruptive technologies, offering safer, chemical-free alternatives. Fonon's lasers remove rust, paint, and corrosion, and ensure traceability in defense applications, fostering healthier work environment while enhancing productivity and efficiency. Focus Area: Advanced/Additive Manufacturing

#### Contact

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### DefenseTech Handheld Laser Cleaning System



# **Nikon Corporation**

Nikon Advanced Manufacturing Business Unit is at the forefront of innovation, leveraging Nikon's extensive expertise in optical technologies to revolutionize the manufacturing landscape. Specializing in metal 3D printing and laser ablation systems, the division is dedicated to delivering cutting-edge solutions that enhance precision, efficiency and flexibility in production processes.

With a foundation built on decades of optical engineering excellence, the Nikon Advanced Manufacturing Division integrates advanced optical systems into its metal 3D printers, enabling high-resolution, complex geometries and superior material properties. These capabilities empower industries such as aerospace, automotive, and medical devices to push the boundaries of design and functionality.

In parallel, the division's laser ablation systems offer unparalleled accuracy and control for material removal and surface modification. By harnessing the power of laser technology, Nikon provides industries with the tools to achieve meticulous precision in micro-machining and surface texturing, thereby optimizing product performance and durability.

Through continuous research and development, and a commitment to quality and innovation, the Nikon Advanced Manufacturing Division stands as a leader, driving the future of manufacturing with its pioneering optical-based solutions.

Focus Area: Advanced/Additive Manufacturing

#### Contact

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### Automated Weld Repair on Multiple Work Pieces in a Single Batch

	PROBLEM STATEMENT	BENEFITS
	Repair weld on difficult-to-weld material requires high level of welding skill and re-work often takes place. Automation of repair weld on multiple work pieces has not been realized due to difficulties of maintaining positioning accuracy of each pieces through processes.	<ul> <li>Nikon's automated repair reduces labor cost by minimizing chance of re-work on difficult-to-weld material and post process by precise modeling (welding).</li> <li>Nikon solution enhances sustainability by reducing waste and enabling precise repair instead of full replacement.</li> </ul>
	TECHNOLOGY SOLUTION	GRAPHIC
•	Combination of 3D scan module and metal 3D printer enables auto-repair of damaged/worn metal parts with high precision.	Lither Black Repair
Ť	Additive repair path is automatically generated by the system, including adjustment of inherent distortion that each worn parts may have.	
*	Positioning accuracy of multiple parts through scanning to modeling (welding) are maintained by common fixture.	Metal 30 Printer LM300A Scan Module 58100 Chipped Die Repair

## **Siemens Government Technologies**

Combining the real and the digital worlds makes it possible to seamlessly integrate the entire value chain from design to realization, while optimizing with a continuous flow of data. A true Digital Enterprise is able to harness the unlimited power of data by gaining valuable insights to make fast and confident decisions – and to create best-in-class products through efficient production. Focus Area: Advanced/Additive Manufacturing

#### Contact

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# SIEMENS

### **Process Digital Model**

# PROBLEM STATEMENT • Provide Many of our depots used for maintenance and repair across the

services are aging and struggle to support the depends of operational availability of our nation's military assets.

 Provide Each service has plans for modernization of those facilities and equipment therein.

 Provide These efforts require more than just brick and mortar but bringing industry 4.0 and modern process and digitalization to solve the complexities of these efforts.

TECHNOLOGY SOLUTION

Siemens is the only company who can offer holistic solutions that take
advantage of IT and OT convergence technologies to solve many of the

 Our Digital Industries organization drives IT solutions for complex configuration management, engineering and manufacturing planning and execution directly to the shop floor. Merging those capabilities with hardware solutions that provide for modern manufacturing capabilities.
 These solutions have been proven across industry, including Siemens ourselves, one of the largest global manufacturing companies in the world.

#### BENEFITS

Provide a Closed-Loop environment where Engineering, Manufacturing and Quality can work in a cohesive environment.
Manage and deliver the machine code using secure cyber controls and

threat detection for manufacturing equipment directly to the machines to ensure proper processes and data are used.

 Execute work orders through a Bill of Process utilizing Electronic Work Instructions for operators.

 Virtually commission manufacturing equipment and fully simulate the processes before ever beginning actual manufacturing.

#### GRAPHIC



challenges faced.

# **Google Public Sector**

Google Public Sector brings the magic of Google to the mission of government and education. With powerful technologies such as artificial intelligence (AI), advanced analytics, and security offerings, decision makers can streamline processes and improve citizen services delivered by public sector organizations across all domains. Focus Area: Business IT and Analytics

### Contact

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https://cloud.google.com/publicsector?hl=en



### Shipyard AI Enterprise Search

PROBLEM STATEMENT The Navy's shipyards face modernization challenges due to the underutilization of modern digital technologies. The causes: Inefficient scheduling: delays; poor resource allocation Outdated processes: manual systems slow operations Limited collaboration: Poor data sharing Reduced predictability: Inability to forecast This leads to diminished competitiveness and readiness.	BENEFITS GenAl can revolutionize Navy shipyards, propelling them into a new era of digital modernization. By optimizing complex processes, predicting maintenance needs before failures occur, and facilitating data-driven decision-making, GenAl can unlock significant efficiency gains. This translates to reduced downtime for ships, optimized resource allocation, and ultimately, a more capable and ready fleet. Furthermore, GenAl can toster a culture of innovation by automating routine tasks and empowering shipyard personnel to focus on developing cutting-edge solutions.
TECHNOLOGY SOLUTION Google configured a GenAl solution demo grounded in Navy technical manuals to show how shipyard workers can find information faster and work more efficiently by: Quickly find maintenance requirements Understanding and executing workflows faster Finding and referencing graphics and diagrams Training and upskilling workers in an interactive manner	GRAPHIC

# **IBM Consulting**

Achieving full mission readiness is becoming increasingly complex and requires dynamic defense technology solutions. New threats and domains for warfare continually emerge, including cyber and space along with disruptive technologies, like AI and Quantum. Dealing with these threats necessitates using data as a critical enabler for information driven operations.

As defense departments navigate increasingly sophisticated threat landscapes, they are eyeing a shift to a DevSecOps mindset to ensure they can securely innovate. At a recent roundtable, produced by Government Executive Media Group and hosted by IBM and Red Hat®, DoD experts provided insights on the critical role that DevSecOps plays to support the mission. These insights are captured in the Top Takeaways: 4 Ways the Defense Department Can Leverage DevSecOps and a report from the IBM Center for the Business of Government on Achieving Mission Outcomes through DevSecOps.

IBM can help you transition to an advanced hybrid cloudbased environment built on technology that is designed for your mission, including AI, SAP S/4HANA and "cloud to the edge" innovation. Through the IBM cloud management capabilities including Red Hat OpenShift®, you can securely access data anywhere within this new environment, regardless of cloud provider—or even if the information resides on in-house systems. Focus Area: Business IT and Analytics

#### Contact

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PROBLEM STATEMENT	BENEFITS
<ul> <li>Need a way to capture data we do not have on the existing process while reducing administrative burden of workers.</li> <li>Currently capturing data by hand on TGIs</li> <li>Manual process to update downstream systems</li> <li>Lack end to end process observability and metrics</li> <li>Scan-&gt;Read-&gt;Write data to SYB System</li> <li>Create NSY consolidated "Driver Tree" with goal towards Productivity and Efficiency</li> </ul>	Improve mission readiness & reduce backlog; • Increase Time on Task (ToT) • Reduce administrative burden and overhead • Need for immediate and incremental change • Develop framework to drive continuous improvement measurement & motivation Unlocks potential in process and manually curated data • Supports implementation of process change, automation, and GenAI • Promotes near, long, and dynamic planning and action • Clarifies driver thee and NorthStar metrics • Network effect of data for new initiatives and outputs • VBA – Fraud, Policy Change, Public Health Informatics • 0LA – Promote Customer Engagement, Digital Business • Organic & Incremental Crawl, Walk, Run
<ul> <li>TECHNOLOGY SOLUTION</li> <li>Implement Intelligent Document Processing and downstream system update (IDP+Integration) &amp; provide measurable impact assessment</li> <li>Align Driver Tree to processes, identify gaps, and opportunities for improvement</li> <li>Develop roadmap and backlog of next step enhancements</li> <li>Establish foundational process, data, knowledge models and technology to drive future automation, analysis, and process/resource analytics</li> </ul>	

### Shipyard Digital Transformation – TGI Reader

# **Amazon Web Services**

Amazon Web Services (AWS), the world's most comprehensive and broadly adopted cloud, helps millions of customers around the world reduce costs, become more agile, and accelerate transformation with the most capabilities, the largest community, security they can count on, continuous innovation that ensures they always have what they need, and the most operational expertise that helps them build faster and with more confidence. AWS gives customers areater choice and flexibility by offering the broadest and deepest set of cloud capabilities to meet their specific needs. Choice and flexibility makes easier and more cost effective to move applications to the cloud and build nearly anything you can imagine. Security is our top priority. AWS is architected to be the most flexible and secure cloud computing environment available today. Our infrastructure is built to satisfy the security requirements for governments, global banks, and other high-sensitivity organizations. We work backwards from our customers' needs, understand where they're headed, and continually innovate to help customers move ideas to reality and accelerate transformation, today and in the future. AWS has the most operational experience, at the greatest scale, of any cloud provider, with unmatched performance, reliability, and quidance customers can depend on for your most important applications.

Focus Area: CBM+/Predictive Maintenance

#### Contact

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#### **PROBLEM STATEMENT** BENEFITS . The lack of a central repository for the vast amounts of sensor Accelerate by deploying into the existing NMMES CHE and system data results in difficulty effectively leveraging data to · Transform data into a strategic asset, accelerating schedule work, predict maintenance, and manage the supply innovation, enhancing operational effectiveness, and improving chain ship and submarine availabilities. · End-to-end data governance so your team can move faster · Mechanisms for making decisions are highly manual and time with data and meet appropriate security requirements consuming. Workers must find and reference various system · Combine data from various systems to identify opportunities documentation, databases, and applications, increasing the to streamline operations and reduce costs possibility of errors and delaying ship availabilities. · Predict maintenance, enable proactive and cost-effective repairs and procurement ,and minimize unexpected downtime by ingesting and analyzing sensor data from naval assets. · Quickly synthesize insights, reduce manual tasks, make data driven decisions, and create synthetic training data using generative AI models. GRAPHIC **TECHNOLOGY SOLUTION** A scalable and secure data lake with the Naval Maritime Maintenance Enterprise Solution (NMMES) Cloud Hosted Environment (CHE) on AWS provides a central repository for shipyard data and the foundation to use AWS data analytics and generative AI services, as well as third party tools, to easily ingest, store, and analyze data from any source. · Create custom, secure applications for shipyard operations using AWS generative AI tools, including Amazon Bedrock Amazon Bedrock offers the broadest selection of leading LLMs and FMs, allowing you to choose the right model for the job. Build, scale, and secure generative AI applications that are production ready at the right cost and speed.

### Advanced Data Analytics for Shipyard Optimization

# **DIT-MCO** International

For cable testing, harness testing and other automated product testing, customers rely on DIT-MCO wiring analyzers. DIT-MCO is your complete solution provider for electrical testing of cables, harnesses, wired boxes, panel assemblies and more. From simple cables to complex assemblies requiring EE & LM, DIT-MCO has the solution. We also provide custom adaptation and test programming, giving you a complete turnkey solution. Focus Area: CBM+/Predictive Maintenance

#### Contact

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### Agile Cable Repair System



# G.C. Laser Systems Inc.

G.C. Laser Systems Inc. is an American laser cleaning system manufacturer and a CWOSB with headquarters in Illinois. Our unique and globally patented laser cleaning technology is proudly designed and made in the USA. This proprietary technology was initially developed to clean cultural heritage buildings and artifacts with unmatched precision, and has evolved into many heavy duty industrial and DoD applications. From making our own scan heads and optics to fabricating our systems with durable stainless steel and powder coated aluminum to endure humid and corrosive environments, we specialize in delivering off the shelf and custom bespoke laser ablation tools that can work during all four seasons worldwide. Notable cultural heritage projects that have utilized our laser ablation technology include the US Supreme Court, the US Senate Building, Notre Dame, Sydney Harbor Bridge, Capitol of Maryland, the Egyptian Obelisk in Central Park, the Smithsonian, and buildings and monuments worldwide. On the industrial side our technology is used for rust removal, paint removal, chloride removal, surface prep, hydrocarbon removal, radiation decontamination, lead abatement, and various other industrial applications that demand precision and efficiency. Branches of the DoD such as the US Army, the US Coast Guard, and the US Air Force use our laser equipment to maintain and service valuable assets.

Focus Area: Coating and **Corrosion Prevention** 

### Contact

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	ig Equipment
PROBLEM STATEMENT Removing corrosion and coatings from a variety of surfaces can be challenging and the process of abrasive corrosion removal can wear down the thickness of the assets being cleaned, reducing its useful service life, as well as pose environmental concerns with traditional blasting media and chemical stripping containment. Traditional cleaning techniques rely on consumables and have a lot of clean up and disposal costs.	BENEFITS           • Environmentally friendly.           • No consumables.           • No damage to substrate being cleaned.           • Less heat on surface than other laser ablation systems.           • Patented high speed and hot-spot-free laser cleaning.           • The beam never stops in one place and rotates at high RPM.           • 2-3 times faster cleaning than competitors.           • Patented circular scan efficiently delivers two cleaning passes per movement as the leading arch (1) interacts first and the trailing arch (2) interacts and cleans a second time.           • Designed and made in the USA.           • Made for use in humid and corrosive environments.
<b>TECHNOLOGY SOLUTION</b> G.C. Laser Systems offers environmentally friendly, durable, and compact portable laser systems for removing rust, paint, coatings, and contamination from surfaces. Built with an in depth understanding of the photomechanical, photothermal, and photochemical effects that laser pulses can have on a surface, our highly tunable systems offer unmatched precision, control, and repeatability with laser ablation cleaning and surface prep. Corrosion, salts, and coatings are removed from metal surfaces without causing any damage or thickness loss to the substrate.	GRAPHIC

### Lasor Cleaning Equinment

# **Shape Waterblast Group**

The SWG (Shape Waterblast Group) combines premier waterblasting companies under the Shape Technologies Group, the global leader in ultrahigh-pressure technology solutions. Unifying APS, Aqua-Dyne, RPS, and Flow SP under a single umbrella empowers us to harness over 125 years of collective wealth of expertise, resources, and innovation. This enables us to provide an even more robust and comprehensive solution at an unparalleled value to our customer's needs. Focus Area: Coating and Corrosion Prevention

#### Contact

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### **Ultra High Waterblasting Equipment**

# Valkyrie Enterprises

Valkyrie Enterprises enhances defense and industrial operations by providing engineering and technological expertise, real-world and simulated training programs, critical infrastructure security and products, data analysis in virtual environments, systems engineering and training analysis, and hands-on maintenance and fabrication services.

Valkyrie Enterprises is an innovation-focused company that elevates customer goals from baseline to astounding.

Focus Area: Coating and **Corrosion Prevention** 

#### Contact

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### Ship 2 Shore Corrosion Control

# ADS Inc.

ADS is the world's premier equipment, procurement and support solutions specialist to the military, law enforcement, first responders and the defense industry. We are focused on solving your challenges through the largest product and service selection, the broadest array of procurement and contract options, and world-class support and logistics solutions to enhance readiness and your acquisition strategy. Bring us your mission. Focus Area: Energy, Environmental, Health, and Safety

#### Contact

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### Tiffany 10 gallons per day Atmospheric Water Generator

PROBLEM STATEMENT The AWG technology stands to solve the world's increasing shortage of drinking water. The current state of water purification systems is limited to locations where raw water is available and limited to contamination. The AWG can produce water in most environments and does not require a water source.	BENEFITS - Provides water without the need of a water source - Provides water in both neutral or alkaline pH values - Water is treated with mineral cartridges to ensure essential minerals and electrolytes are provided with every sip. - On board 10-gallon storage tank. - Constant application of aqueous ozone treatment prevents bacterial, viral, or fungal growth.
TECHNOLOGY SOLUTION The AWG operates in environments ranging from +100 °F to 55 °F with relative humidity ranging from 40% to 100%. The AWG technology can provide quality drinking water to people, farmland, and cattle in locations that do not have access to clean water.	GRAPHIC XXXX8 XXX8 X

# Nekotronic, Inc.

Nekotronic, founded in 2021 and based in Yokohama Japan, is a cutting edge startup providing a patented framework for the safe systematic coordination and orchestration of multiple UAV's for a particular purpose.

Nekotronic prefers to remain market, device and application agnostic and works with customers and partners to deliver stunning domain specific asset coordination enabled products derived from our core technology and capability.

Our platform, SkyCar / SkyX (TM) may be used to construct, configure and manage air space, for the purposes of air mobile device usage – providing autonomous and realtime reactionary navigation of participating devices. All visually displayed, monitored, and controlled via a simple to use User Interface.

Originally designed and architected to provide the support for a safe Multi-Dimensional SkyHighway infrastructure enabling the social realization and implementation of a digital highspeed airway transportation system for drones and flying cars.

This may be provisioned and delivered under a dual use model to help enable security and defense for the US and her allies including, but not limited to, a diverse multi-asset enhanced inspection and maintenance operations. Focus Area: Enhanced Inspection

#### Contact

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### SkyCar / SkyX – Airspace configuration and multi-UAV coordination

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PROBLEM STATEMENT Ship hull inspections tend to be manual or inflexible processes. • Prone to human error • If any, existing solutions are designed more as a spot fix. • Drone assist still requires human "driver(s)", is not multi-asset capable nor coordinated. • Inspection video feed processing from the individual drones is	BENEFITS
to centrally managed.     There is no system specifically designed to streamline multi-asset enhanced ship inspection operations.	scan of the target vessel exterior, in a subsequent version. • Patented route deconfliction. Mutual exclusivity of space & time is systematic, improving safety.
TECHNOLOGY SOLUTION Nekotronic proposes a new product (based on Nekotronic's existing SkyCar): SkyX - autonomous, realtime, multi-drone /	GRAPHIC
agnostic enhanced vessel exterior inspection system. 1 - Set the 3D model of the vessel targeted for inspection. 2 - Configure the Airspace to be used during the inspection.	
<ul><li>3 - Add in the UAV drone assets equipped with cameras.</li><li>4 - Start, pause, monitor &amp; complete the inspection process.</li></ul>	
5 - Use video image processing to search for anomalies. Audit.	

# Edlore

Edlore is a pioneer in Al/ML and 3D technological solutions, reshaping industry standards with its interactive manuals and wearable device integrations. Our patented Al-driven platform transforms complex technical orders into digestible, contextually relevant insights, streamlining operations. With state-of-the-art mobile and wearable technology, professionals achieve access to crucial data, ensuring efficiency and precision. Our platform also encompasses a robust Work Order Management system, enhanced by asset tracking and multimedia attachments, facilitating seamless operations and maintenance processes. At Edlore, we blend innovation and practicality, consistently delivering excellence in an ever-evolving technological landscape. Focus Area: Workforce Development/Visualization

#### Contact

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### Transforming Legacy 2D Manuals into Interactive 3D Solutions for Enhanced Maintenance

<ul> <li>PROBLEM STATEMENT</li> <li>Maintenance inefficiencies in defense sector results in high downtime, costing billions annually.</li> <li>Traditional methods for equipment diagnostics and repairs rely on manual processes and fragmented documentation, delaying critical decision-making.</li> <li>Limited access to off-line Al tools for troubleshooting and automated parts identification hinders quick repairs and accurate part replacements.</li> <li>Following legacy equipment 2D manuals is time-consuming, prone to errors, and delays maintenance tasks.</li> <li>Challenges in locating parts and following standardized repair procedures efficiently, impacts operational readiness.</li> </ul>	<ul> <li>BENEFITS</li> <li>Reduces maintenance downtime by up to 40% through offline AI-driven troubleshooting and automated parts identification.</li> <li>Simplifies operations by transforming outdated 2D manuals into intuitive, interactive 3D visualizations.</li> <li>Enhances accuracy in diagnostics and part replacement, minimizing errors and improving operational readiness.</li> <li>Saves costs by streamlining workflows and reducing reliance on redundant or fragmented documentation.</li> <li>Increases efficiency with standardized repair procedures and easy-to-use tools, even in offline environments.</li> <li>Improves safety by eliminating manual errors and ensuring clear, guided processes for personnel.</li> </ul>
<ul> <li>TECHNOLOGY SOLUTION</li> <li>Offline AI-powered troubleshooting enables rapid diagnostics and guided repair processes without internet dependence.</li> <li>Automated parts identification simplifies locating and selecting replacement components, minimizing downtime.</li> <li>Converts legacy 2D manuals into interactive 3D visualizations, enhancing clarity and reducing errors.</li> <li>Provides step-by-step repair procedures and safety protocols accessible via intuitive interfaces.</li> <li>Compatible with existing workflows and adaptable to diverse maintenance environments.</li> <li>Scalable platform supports integration with legacy systems while maintaining ease of use for field personnel.</li> </ul>	GRAPHIC

# EFCO USA, Inc.

Established in 1978, EFCO has been a world-leading manufacturer of portable and stationary valve repair and testing equipment. Wherever fittings, valves, and pumps are used, EFCO equipment is also needed to maintain, repair, and test sealing surfaces, shut-off bodies, and housings. We are a family-run business with the philosophy of making our customers our partners – working together to create machining and testing solutions. Customer experience from the extensive use of our machines continuously contributes to our product development.

EFCO equipment is used worldwide, certified to DIN EN ISO 9001, and is characterized by our quality, durability, easy handling, and superior results. Our product range for in-shop and in-field service includes portable and stationary grinding and lapping equipment, flange facers, portable lathes, test benches, and workshops for valves, flanges, and pipelines. Our technically advanced tool line gives anyone repairing or maintaining valves the edge to improve valve maintenance fast and efficiently, resulting in cost-effective work with machines that last.

The EFCO USA Headquarters is located in Charlotte, NC and services Shipbuilding & Repair, Oil & Gas, Petrochemical, Energy, Shipyards, Valve Service and Manufacturing, and other industries in all of North and South America. Focus Area: Workforce Development/Visualization

#### Contact

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PROBLEM STATEMENT	BENEFITS
Time and budget-consuming manual processes	Easy to use, durable, and efficient
Inconsistent results	Versatile, easily customizable, and expandable
Complicated, limited, or dangerous processes	Use systems more effectively
Tool and testing reliability issues	Consistent results
	Keep downtimes to a minimum
	Increase the quality and productivity of maintenance
	Use human resources more responsibly
TECHNOLOGY SOLUTION	GRAPHIC
Stationary and portable equipment for valve repair and testing	
Valve grinding and lapping equipment for gate, globe, control, safety, and ball valves	
ID- and OD-mounted flange facers, with CNC options	
Portable lathes with manual, automatic, and CNC options	
Test benches for control and safety valves - body, seat leakage and set pressure	

### **Valve Repair & Testing Equipment**

# **Sharp Vision Software**

Sharp Vision Software develops innovative solutions for training, engineering, manufacturing, maintenance, and field service using cutting-edge technologies to clients in defense, healthcare, pharmaceutical, aviation, power, and oil & gas industries with customers including U.S. Army, Navy and Air Force, Uniformed Services University, General Electric, Pfizer, ExxonMobil, Intel, and CAE. Focus Area: Workforce Development/Visualization

#### Contact

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### AI-Powered 3D Model-Based Work Instruction Authoring Tool for Equipment Maintenance, Repair, and Overhaul and AR/AI/LLM/NLP/CV Tool for Combat Casualty Care

part, feature, or process

More efficient knowledge trans

experienced artisans.

misunderstanding and error

prevents slow down of production

#### PROBLEM STATEMENT

Traditional technical documents that describe overhaul and repair processes for aircraft and aircraft components are limited in the ways technical information can be conveyed from engineers to artisans.

 Parts with complex features or many of a similar feature can be difficult to describe using conventional two-dimensional diagrams and/or images.

The current procedure for revising technical documents is cumbersome and can often delay small, but important updates from being incorporated into new revisions quickly.

#### TECHNOLOGY SOLUTION

- Enhance existing technical document into a 3D model based digital work instruction format or draft completely new digital work instructions from the ground-up using AVARIS.
- Implement 3D scanned or 3D Computer Aided Design (CAD) models into work instruction steps to enhance understanding of complex parts and processes.
- Condenses 3D models, images, diagrams, data tables, and text information into an easy-to-navigate window that can easily be accessed by artisans on a tablet - which otherwise may be a 100+ page PDF.
- Utilizes rapidly growing network of digital content across the DoD to enhance work instruction understanding.



BENEFITS Utilization of 3D scanned and 3D modeled parts to further enhance ability to describe a

Quick feedback/question tools for simple questions from artisans to engineers that

Easily convert existing 'paper' technical documents into digital work instructions

Quickly deployable to DoD sustainment sites for use in bulletins, AFCs, training-aids, and Maintenance, Repair, and Overhaul (MRO) type work operating integrated within PLM systems or as a standalone system.

Visual-based training for new artisans, also helps to capture 'tribal kno

fer from engineer to artisan - less chance for artisar