(1) Executive Summary of Component Project

The Test Access Network (TAN), led by the Rhode Island Commerce Corporation, solves the most persistent barriers to Autonomous Marine System (AMS) development: fragmented and costly prototyping and testing. Even with hundreds of miles of coastline in the region, companies face expensive operations, confusing regulations, and inefficient processes, making it hard to test and refine products. TAN streamlines access and reduces costs, helping companies develop products more efficiently and compete on a global stage.

TAN is a centralized, market-based effort that streamlines and coordinates access to test ranges, vessels, compliance support, data, and other resources to expedite the commercialization of AMS technology development for the MSA. It offers a Concierge Service and Vessel Operator Network to coordinate testing, mobilization, and compliance; deploys an online booking system; operates and connects a diverse range of industry-first test ranges and implements a Rapid Development Accelerator for pre-revenue to seed-stage firms with technology at TRL 6-7. Fully operational and self-sustaining within four years, TAN operates on a membership and fee-for-service model, ensuring independence from public funding and delivering strong value to taxpayers while making testing more affordable for AMS companies.

TAN supports the build-test-refine-deploy cycle for AMS development by streamlining company access to Rapid Prototyping Centers (AMS-RPC) and validating core technologies at the American Marine Test Range Network (AMTRN), creating a continuous development pipeline. TAN's Concierge and Rapid Development Accelerator provide critical support and navigation to businesses that shortens development timelines and strengthens operational readiness, accelerating time to market.

By year ten, TAN will support 100+ firms, onboard 50+ vessel operators, integrate 5+ test ranges, attract $500M+ in private investment, and grow annual revenues to $20M. By reducing costs, time to market and driving innovation, **TAN advances U.S. leadership in maritime technology under Executive Order 14269 and benefits American taxpayers.**

(2) Project-Specific Challenge

2.1 While AMS technologies are critical for maintaining U.S. maritime dominance, offshore energy, critical mineral mining, and national defense, many technologies that are ready for real-world testing remain stalled at TRL 5. Despite their readiness to operate in realistic marine environments, the lack of available, cost-effective testing assets prevents their validation in real-world conditions. Significant investments in research and development often fail to reach the market because companies cannot effectively demonstrate performance under actual operational conditions. Current testing processes typically rely on ad-hoc vessel rentals, which carry high mobilization costs, and navigating complex regulatory environments to conduct individual in-water testing, which are barriers that significantly slow innovation and deter private investment. These challenges disproportionately impact startups and smaller firms, limiting their ability to attract growth capital, scale operations, and advance prototypes beyond TRL 6.

These barriers create a "valley of death" between research and commercialization, leaving many prototypes untested and unvalidated. The fragmented investment landscape further complicates the situation, as ocean technology development is capital-intensive and high-risk, deterring

traditional investors. Even well-funded organizations face difficulties in establishing their own testing facilities, leaving smaller firms with limited options for validation and demonstration.

2.2 The private sector alone cannot solve these challenges due to the high costs and complex regulations involved in maintaining testing infrastructure. Even when test ranges and vessels are available, companies face significant mobilization costs, regulatory hurdles, and scheduling inefficiencies. Establishing a centralized booking and compliance system requires collaboration among multiple stakeholders and an initial investment that does not provide immediate returns. Individual companies are unable to justify the expense of building and operating test ranges or purchasing specialized equipment and vessels that may remain unused for long periods. Even well-capitalized firms struggle to cover these costs, leaving smaller companies with even fewer options. Furthermore, limited waterfront space and crowded waterways make privately owned development and testing infrastructure infeasible. This results in slower time-to-market, missed investment opportunities, and a decline in U.S. competitiveness.

These challenges are amplified by the iterative nature of field validation: because ocean conditions vary day-to-day, companies often need repeated deployments across different sea states and mission profiles to prove performance, not just a single demonstration run. Without a shared-use system, each iteration requires re-contracting vessels, rebuilding compliance documentation, and re-planning mobilization—driving costs that can exceed the financial capacity of early-stage firms and slowing the path from TRL 5 to TRL 7–8 commercialization readiness.

Public-sector investment can facilitate the development of shared-use regional assets, streamline regulatory pathways, and reduce costs through co-funding and centralized programs. Such efforts will mitigate risks, attract private investment, and serve national interests in maritime security. By providing accessible, affordable, and well-coordinated testing infrastructure, government and public partners will reinforce U.S. leadership in AMS.

(3) Project Specific Solution

TAN builds on prior state investments and growing momentum across the Ocean Tech Hub (OTH, and its design is grounded in demonstrated market demand. In an assessment of 40 companies, 100% identified testing as the primary barrier to product development. 97.5% need access to technology-integrated in-water test ranges, and 84.2% identified the need for coordinated vessel access. TAN responds to this demand through the following services:

1. **Navigator Program –** Streamlines access to marine testing infrastructure by serving as a regional coordinator for vessel charters, test range reservations, regulatory compliance, and logistics. By leveraging and expanding upon the New Bedford Ocean Cluster's (NBOC) Navigator Services model, OTH will (1) negotiate favorable rates and equipment access, (2) coordinate rental, scheduling, and mobilization, (3) establish shared-use partnerships, and (4) ensure adherence to AMS safety protocols in collaboration with the U.S. Coast Guard. A user-friendly online booking platform will support real-time scheduling and enable companies to search for vessels and ranges based on requirements such as size, onboard equipment, and mobilization needs

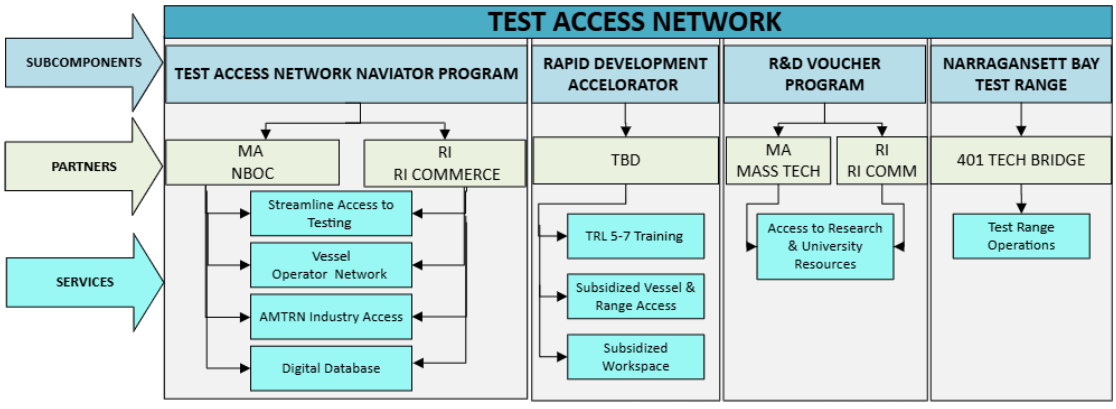
1.a Vessel Coordination Service – operating within the Navigator Program, this service will coordinate vessels and qualified operators to support in-water testing. Leveraging NBOC's vessel inventory and relationships across fishing, offshore energy, recreation, and research, TAN will expand regional capacity by helping firms identify appropriate vessels while confirming operators meet required licensing, certifications, and safety standards for compliant, reliable operations.

1.b AMTRN Industry Access – through the Navigator Program, companies gain streamlined access to AMTRN-connected test ranges by simplifying the rental process and operating the digital infrastructure that links regional test range nodes. Together, these services reduce administrative friction and enable AMS firms to move from prototype to real-world validation faster, with coordinated access to interoperable testing assets across the network

2. **Narragansett Bay Test Range Operations –** Operational support for the newly constructed industry-focused Narragansett Bay Test Range, which includes staffing, technology deployment, maintenance, safety, industry test coordination, as well as engineering and technical support.

3. **Rapid Development Accelerator** – for pre-revenue to seed-stage firms, combining coordinated resource support with expert advising to facilitate rapid product development. The program will assist startups with testing and product validation, navigating permitting and regulations, securing funding, and managing manufacturing processes. Participating companies will have access to test ranges, vessels, and shared workspace facilities at a subsidized rate.

4. **Ocean Innovation Voucher Program –** funding to promote collaboration between industry, research organizations, and universities, aiming to accelerate technology development by granting access to specialized R&D resources, such as facilities, technical expertise, prototyping support, and validation services. Reducing the cost and risk associated with experimentation and verification accelerates the development process. Vouchers will be awarded to companies through a competitive application process managed by Mass Technology Collaborative and RI Commerce.



3.2 This multi-faceted approach represents the most viable solution because it delivers a coordinated, end-to-end testing access framework that directly addresses the systemic barriers limiting AMS technology development, validation, and deployment. TAN replaces a fragmented, high-friction process with a single access and coordination platform. This integrated approach reduces administrative burden, shortens testing timelines, and lowers overall testing costs—improving the region's ability to keep pace with rapid technology advancement and commercialization demands.

Moreover, TAN increases utilization of vessels and test ranges by aggregating assets, fostering resource sharing, and creating new revenue opportunities, while enabling negotiated reduced rates that make testing more affordable. Critically, it removes persistent barriers to academic and federal testing resources—including security, permitting, capital, and scheduling constraints—maximizing existing infrastructure and accelerating technologies from development to field-ready deployment

3.3 The following are the organizations and partners involved in the project and their roles:

- **Rhode Island Commerce Corporation on Behalf of OTH –** *Fiscal Agent and Co-Managing Entity of the TAN Navigator Program and AMTRN data network* **–** State of Rhode Island's lead economic development agency, responsible for financial oversight, compliance, contracting, and reporting, ensuring responsible stewardship of public funds. In partnership with the New Bedford Ocean Cluster (NBOC), RI Commerce will provide strategic leadership, oversee staffing and program execution, and guide implementation of the Navigator Program in Rhode Island and the AMTRN interconnected Data Network. Additionally, RI Commerce will administer the Innovation Voucher Program for RI entities. RI Commerce is critical to the project by providing the administrative capacity, governance structure, and economic development alignment necessary to scale and sustain the OTH.

- **New Bedford Ocean Cluster (NBOC)** – *Managing Entity of the TAN Navigator Program* – a nonprofit marine industry association, serving as a **subrecipient responsible for industry engagement and coordination of the TAN Navigator Hub in Massachusetts.** In partnership with RI Commerce, NBOC will also oversee staffing and program execution, and guide implementation of the TAN Navigator Program for Massachusetts industry coordination. NBOC is critical to the project, ensuring that resources and services are distributed equally between the RI and MA.

- **Polaris Tech Bridge (Formerly 401 Tech Bridge)** – *Test Range & RADE Center Operator* – serves as the **subrecipient responsible for the management and operation of the Narragansett Bay Test Range and the RADE Center**, including scheduling, coordination with users, and operational readiness. As an organization experienced in advancing dual-use technologies, Polaris Tech Bridge ensures the test range is designed and operated to meet both commercial and defense-relevant requirements. This role is critical to providing a reliable, industry-informed testing and prototyping environment that enables safe, repeatable, and scalable AMS testing.

- **Massachusetts Technology Collaborative (MassTech)** – *MA Rapid Development Accelerator and Innovation Voucher Program Administrator* – MA public agency supporting business formation and growth in the state's technology sector, will serve as a **subrecipient**

Innovation Voucher Program for MA based firms, enabling firms from both states to gain access to resources.

- **University of Rhode Island (URI)** – *Technical Support Provider* – serves as a **university partner providing vessel assets, engineering expertise, and technical support to TAN Innovation Voucher Program participants**. URI will support AMS validation activities, data collection, and product development efforts leveraging its deep marine science and engineering expertise, as well as contributing research vessels and technical personnel.

- **University of Massachusetts Dartmouth (UMass**) – *Technical Support Provider* – serves as a **university partner providing vessel assets, engineering expertise, and technical support to TAN Innovation Voucher Program participants**. Through applied research and operational support, UMass Dartmouth will assist with system validation and performance testing critical to expanding regional testing and validation capacity.

- **Mass Robotics** – *RI Prototyping and Innovation Workspace Operator* – The operator of the Blue Robotics Lab, will serve as a **subrecipient providing workspace, technical support, and system integration facilities** for participants in the Rapid Development Accelerator program. The Blue Robotics Lab enables rapid prototyping, subassembly testing, and system-level validation. This role is critical to shortening development timelines and bridging the gap between lab-based development and in-water testing.

- **New Bedford Research & Robotics (NBRR)** – *MA Prototyping and Innovation Workspace Provider* – MA Prototyping and Innovation Workspace Provider – serves as a **subrecipient providing workspace, prototyping equipment, and technical support** *t*o Rapid Development Accelerator participants. NBRR is critical to the project by offering flexible innovation space, advanced manufacturing tools, and engineering staff support. With proximity to in-water testing, NBRR startups *leverage the Harbor-to-Bay Digital Twin to de-risk testing cycles while advancing TRL's*

3.4 Existing and new assets will be leveraged by TAN, which include:

- **Test Ranges & Water Access Points:** TAN is the entry point to the American Marine Test Range Network (AMTRN) digital platform, linking test ranges and water access points. TAN's Navigator Program service hubs in MA and RI will help industry partners identify sites and streamline scheduling and rentals, leveraging assets described in Section 3.4.

- **Vessels:** Vessels of opportunity, existing commercial or non-specialized vessels that can be used for testing or product deployment, will anchor the Vessel Operator Network. The following assets will be leveraged to launch the Vessel Access Network:
    - **University Vessels** – URI, UMASS and RWU research boats equipped for oceanographic deployments and AMS integration.
    - **Industry Vessels** – Raytheon, Thayer Mahan, General Dynamics Mission Systems, Vatn Systems, and others have and will make available their privately owned vessels.
    - **Fishing and Offshore Energy Fleet** – NBOC's commercial vessel inventory will be leveraged for cost-effective offshore trials.

- **University of Rhode Island Bay Campus** – Coastal research campus in Narragansett, RI, with dockside facilities providing access to Narragansett Bay and ocean engineering expertise.

- **University of Massachusetts Dartmouth** – Coastal research campus in New Bedford, MA, with dockside facilities providing access to Buzzards Bay and ocean engineering expertise.

- **New Bedford Research & Robotics (NBRR)** – An incubator and accelerator workspace that offers prototyping equipment, industry R&D, and workforce development.

- **Woods Hole Oceanographic Institution (WHOI)** – Coastal research campus in Woods Hole, MA with dockside, nearshore, and deep-water test assets providing access to Buzzards Bay and the Port of New Bedford's inner and outer harbors, and ocean science expertise.

3.5 TAN serves as the operational gateway, industry access point, and streamlined connection to the testing and R&D assets that foster the build-test-refine cycle accelerating technological progress. Through the Rapid Development Accelerator, TAN will offer dedicated workspace, training, and demonstration opportunities to support early-stage innovation and drive usage of AMS-RPC facilities. It will also provide R&D vouchers to fund collaborations between industry and universities. These vouchers will support product development through third-party feasibility and validation testing, granting industry access to extensive facilities and enhancing technical capacity to address technology gaps.

Building on years of established collaboration among industry partners within the region, TAN leverages a proven network capable of immediate integration and execution. This operationalizes the region's full maritime innovation capacity, ensuring that public and private investments in the Ocean Tech Hub translate into tangible commercial and defense advancements.

4.1-4.6 Baseline	**Outputs (Performance Period)**	**Intermediate Outcomes (5 years)**	**Long-term Outcomes (10 years)**	**Component Goal(s)**	**Contribution to Tech Hub Outcomes**
Fragmented and limited visibility into regional AMS testing assets and deployment	Launch the Testing Access Network (TAN) market-based platform	Onboard 50+ vessel operators and 5+ test range sites into the TAN network	Serve 100+ AMS firms and position the region as a leader in AMS testing and deployment	Reduce access barriers to vessel and test range deployment for AMS firms	Strengthens regional supply chain connectivity and maximizes infrastructure utilization
Lack of coordinated pathways for AMS testing and demonstration	Support 50+ AMS and AMS supply chain firms annually with coordinated testing access and logistics	Advance 50+ AMS-related technologies to TRL 7–8	Advance 100+ AMS technologies to TRL 7-9 with direct linkage to the Shared-Use Manufacturing Facility	Shorten commercialization timelines by up to 80% through coordinated logistics	Accelerate TRL advancement and access to commercialization of AMS technologies
Lack integrated support services, fragmented test scheduling, & high per-project testing costs (Est $750K validation cycle)	Deploy a concierge service and online booking system for streamlined testing & compliance scheduling	Reduce testing costs by at least 20% through shared-use scheduling, regulatory support, & cost-sharing	Lower testing costs by 30%+ as firms maximize asset utilization and reduce time-to-market	Enable early-stage AMS firms to access test infrastructure efficiently and affordably	Expand innovation capacity and optimize resource utilization across the regional ecosystem

Lack dedicated accelerators for AMS startups	Launch the Rapid Development Accelerator, a fee-for-service program, for early-stage AMS startups	Reduce early-stage failure rates, graduate 20+ AMS ventures, and attract $50M+ in private investment,	A self-sustaining innovation ecosystem that mobilizes $500M+ in private capital and anchors new regional firms	Provide seed-stage AMS startups with subsidized access, technical advising, and demonstration opportunities	Foster startup formation, attract private capital, build an innovation pipeline supporting OTH's financial viability
Lack sustainable revenue model for Testing Access Network	Design and launch membership and fee-for-service model to generate $2M+ in annual revenue from operations	Generate $5M+ in operating revenue, achieve operational breakeven & start expanding testing & service offerings	Generate $20M+ in operating revenue. Reinvest surplus into operations, upgrades, & R&D for long-term sustainability	Establish TAN as the national model for AMS testing coordination and acceleration	Position the region as a global AMS hub and demonstrate a replicable model for innovation ecosystems

(5) Project Specific Long-Term Viability or Sunsetting Plan

5.1 TAN is being established as a revenue-generating service model that will serve as the operational engine for maximizing utilization of OTH infrastructure and ensuring long-term financial sustainability. During the first 12 months of the project period, efforts will focus on program development, systems implementation, partner onboarding, and hiring. During this period, revenue generation will be limited or not yet realized. Following launch, TAN will generate revenue earned through membership subscriptions and fee-for-service offerings. Revenues in Years 2–4 are expected to ramp up gradually and are not projected to fully cover operating costs during the award period. Federal investment, therefore, leverages existing state investments and provides the necessary startup and stabilization capital.

By Year 5, TAN is projected to achieve a fully self-sustaining operating model, supported by recurring earned revenue sufficient to maintain and expand services without reliance on continued federal funding. If earned revenue combined with EDA investment results in a net positive operating position during the award period, surplus funds will be reinvested in TAN to support service enhancements and process improvements based on operational learnings and market demand

5.2 TAN will continue in perpetuity as a self-sustaining, operating on a tiered membership and fee-for-service model. These revenue streams will cover ongoing costs for technology maintenance and upgrades, cybersecurity, and staffing. Anticipated challenges include maintaining competitive pricing and adapting to evolving AMS technologies; these will be mitigated through continuous market feedback and partnerships with industry leaders. As utilization grows, revenue will be reinvested into expanding digital capabilities and maintaining best-in-class maritime development and testing infrastructure.

5.3 TAN is not intended to sunset: rather, transition into operational readiness and commercial management under OTH. Future enhancements will include integration with predictive analytics, AI-driven scheduling, and expanded compliance automation, keeping TAN competitive and responsive to industry needs, reinforcing its role as a permanent, market-driven solution.

6.1 TAN will drive regional economic growth by reducing logistical barriers and enabling more frequent AMS testing. By connecting companies to 50+ vessels and 5+ testing range sites

through a single platform, TAN is expected to shorten development cycles by up to 80% and lowers costs by around 30%, expanding throughput for build–test–refine processes. This efficiency attracts startups, creates 1,000+ maritime jobs, expands the local supplier base, and attracts $500M+ private investment, multiplying the impact of federal seed funding and aligning with national priorities to revitalize U.S. maritime industries.

6.2 TAN represents one of the world's first integrated networks of ocean-based testing resources, strategically designed to address the critical challenges hindering the advancement of AMS technologies. By leveraging this interconnected network in conjunction with the region's existing institutional assets, TAN will strengthen U.S. leadership in the global maritime economy. These assets will serve as catalysts for business attraction and economic growth, fostering opportunities for foreign direct investment. The coordinated efforts of OTH, coupled with the interoperability of the TAN network, are projected to attract over 100+ companies within 10 years, generate approximately $20M in annual revenue, and create an estimated 1,000+ high-quality jobs, thereby advancing regional and global economic competitiveness in maritime innovation.

6.3 AMS technologies are critical to naval readiness, infrastructure protection, and maritime domain awareness. China is investing aggressively in large unmanned underwater vehicles, AI-enabled surface combat vessels, and drone carriers capable of deploying dozens of unmanned systems, technologies designed to challenge U.S. dominance. TAN ensures rapid deployment of U.S. AMS capabilities at a value to taxpayers by providing streamlined access to secure testing environments, improving operational efficiency, and supporting defense applications that strengthen deterrence and readiness. Aligning with statements made by **Joint Chiefs of Staff Chairman General Caine at the House Appropriations Committee, Defense Subcommittee meeting. "Today's hearing reflects our shared commitment to maximize efficiency, accountability, and lethality to our taxpayers' investments, ensuring that every expenditure increases the survivability of our Joint Force, providing our war fighters with the advanced capabilities and capacity and cutting-edge technologies required to dominate our adversaries.**

6.4 TAN exemplifies a high-value, low-risk investment for taxpayers. Federal funding is catalytic, enabling a platform that becomes self-sustaining within four years through memberships and service fees. Projected revenues will cover operational costs and fund future enhancements, reducing reliance on public dollars. By fostering private-sector participation and creating a competitive marketplace, TAN delivers measurable returns, strengthening the economy, advancing national security, and ensuring taxpayers benefit from a durable, market-driven solution.

The Department of War is the primary customer of AMS technologies. High costs are passed directly to the federal government and, therefore, the taxpayer. Offering **less expensive, efficient testing opportunities and reducing time to market,** OTH components lower the cost of commercialization, delivering direct savings to taxpayers while advancing national security and economic competitiveness. If the total product development and go-to-market costs are $10M, a 30% reduction in go-to-market time can potentially save a company approximately $3M.