



Tri-Regional JETS 2025

Tri-Regional JETS 2025 Conference
October 21-23, 2025

Leveraging Artificial Intelligence for Enhanced Construction Management at NAVFAC SE

"More with Less" – Integrating DoD-Approved AI for
Warfighter-Supporting Infrastructure

Presenter: Alan T. Hall,
Regional Program Manager,
Construction Management Division,
ASR International Corporation

COMMITMENT TO SUCCESS THROUGH EXCELLENCE



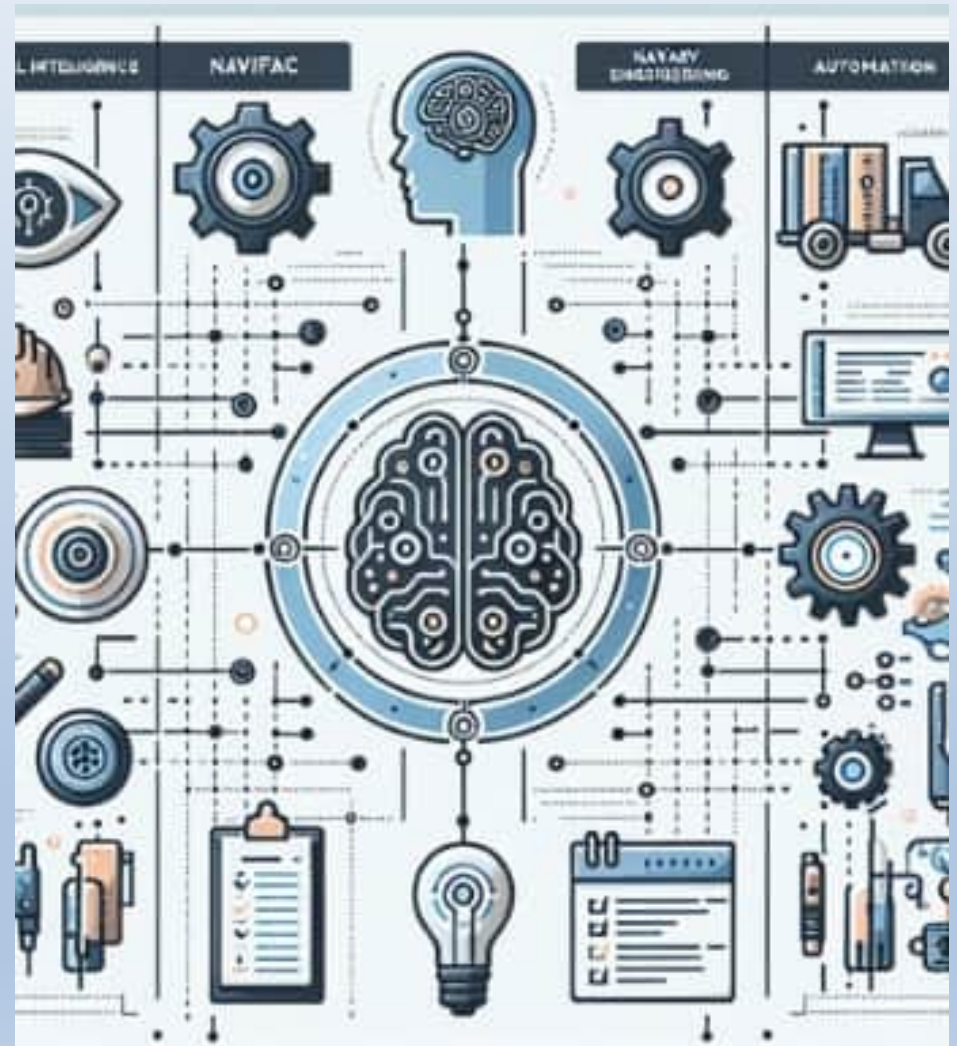
What Are You Doing To -

Fuel The Future?



Agenda

- "More with Less" framework integrates DoD-approved AI (e.g., DoN GPT, NIPRGPT, USACE JAQI, CMA²)
- Automates non-value-adding processes; focuses on core activities like Work In Place (WIP)
- Explores future tools: Microsoft 365 Copilot, Azure OpenAI
- Ensures data security, bias mitigation, and human oversight per DoN policies
- Collaboration with USACE for analytics, quality assurance, and predictive maintenance



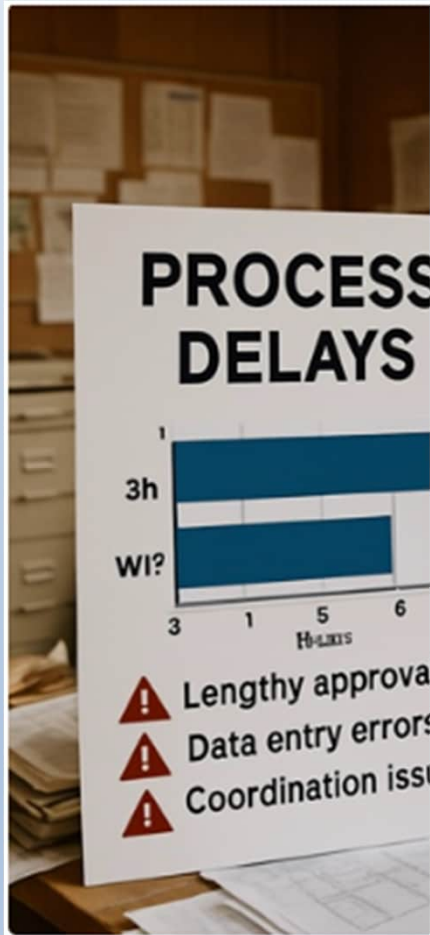


“More With Less”

- **NAVFAC's Role:** Oversees global facilities engineering for naval operations
- **Challenges:** Resource limitations, HQ mandates delaying WIP
- **AI Enablers:**
 - **DoN GPT** (launched May 2025 on Flank Speed IL5): Drafting, strategies, code
 - **NIPRGPT** (launched June 2024 on NIPRNet): Similar capabilities for construction
 - **USACE Tools:** JAQI and CMA² for analytics, QA, predictive maintenance
- **Future:** Microsoft 365 Copilot, Azure OpenAI in secure environments
- **DoD Strategy:** FY2025 Action Plan emphasizes digital fluency and predictive modeling



Current Challenges in NAVFAC Construction Processes



- Redundant documentation and approvals divert from WIP
- AI Adoption Barriers: Security concerns (e.g., Army's NIPRGPT block), cultural resistance
- Specific Issues: Manual scoping, compliance checks, communication
- Risks with Generative AI: Data exposure, hallucinations, unauthorized retention
- Mitigation: DoN 2023 CIO memo on guardrails (data protection, verification, oversight)
- USACE Integration: JAQI and CMA² address analytics, QA, predictive maintenance



Proposed "More with Less" Framework with DoD-Approved AI Integration



- Principles: AI-driven focus on WIP value, waste elimination, agile delegation
- Implementation: Map workflows, integrate DoN GPT/NIPRGPT for drafting/analysis
- Pilots: Inspired by AFCEC's AI agents for infrastructure
- Future: Microsoft 365 Copilot (embedded in Office tools), Azure OpenAI for missions
- Adherence: Prohibit unregulated tools; require reviews per DoN policies
- USACE Tools: JAQI and CMA² for analytics, QA, predictive maintenance



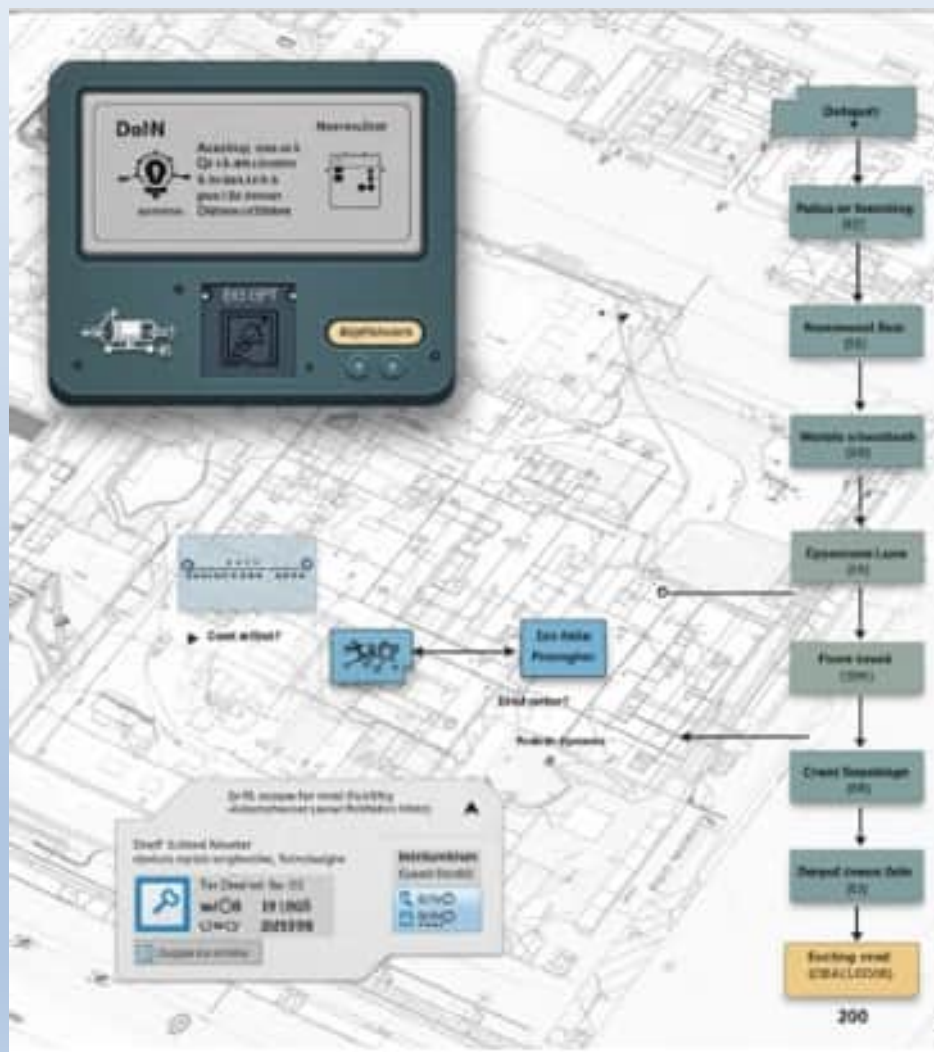
Identifying Essential Tasks Across Project Phases with AI Leverage

Phase	Essential Tasks (Minimum Set with AI)	AI Leverage (e.g., DoN GPT, NIPRGPT, and Future Tools)	Rationale for Minimization	QC Mechanisms
Planning	1. AI-assisted charrette and scope drafting. 2. Validate timelines/risks.	Draft scopes, narratives, specs; research UFCs/codes; identify risks/overlaps; natural language querying of data.	Consolidates HQ reviews; focuses on warfighter needs.	AI risk predictions; local approval.
Design	1. ECI with AI optimization. 2. Generate RFP/specs.	Refine RFP language, Division 01–48 specs; summarize standards; automated editing of documentation.	Automates iterations; integrates design-build.	AI validations; milestones.
Procurement	1. AI-optimized RFP. 2. Select via scoring.	Draft correspondence; standardize templates; task prioritization.	Reduces docs; pre-qualifies.	AI oversight; bonds.
Construction	1. AI-enhanced scheduling. 2. WIP monitoring.	QA/QC comparisons; lessons learned recall; predictive maintenance.	Eliminates reports; optimizes flow.	AI audits; certification.
Closeout	1. AI-automated handover. 2. Lessons analysis.	Draft summaries, change orders; align team actions; knowledge discovery.	Digitizes; skips audits.	AI warranties; loops.

USACE Note: JAQI and CMA² support analytics, QA, predictive maintenance



Design & Planning Support



- Tools: DoN GPT, NIPRGPT, JAQI, CMA²
- Functions: Draft scopes/narratives/specs; research UFCs/codes; identify risks
- Benefits: Reduces manual effort; ensures compliance
- Future: Azure OpenAI for decision support, multimodal analysis
- Policies: Verify outputs to mitigate hallucinations/biases



Documentation & Communication

- AI Streamlines: Technical reports, reviews, estimates
- Functions: Draft correspondence; translate tech language; prepare agendas/summaries
- Future: Microsoft 365 Copilot for meeting/email summarization, drafting





Process & Workflow Improvement



- Standardize Deliverables: Templates, AI drafting
- QA/QC: Compare docs to requirements; recall lessons/policies
- Functions: Draft LOCs, analyses; route change orders
- Future: Copilot reminders; Azure OpenAI interfaces for engineering/GIS
- Guardrails: Data security, OPSEC per DoN
- USACE: JAQI/CMA² for analytics, QA, maintenance



Potential Future DoD-Approved AI Tools

- Microsoft 365 Copilot: Rollout Summer/Fall 2025 in GCC High/DoD cloud (FedRAMP High, IL5)
- Functions: Summarization, querying, drafting, task management
- Azure OpenAI: In Azure Government for classified; decision support, predictive maintenance
- Challenges: Web grounding restrictions, access controls





Addressing Reluctance Among PMs, CMs, ETs, and CMSCs



- Barriers: Job fears, skill gaps, distrust, costs, inertia
- Strategies: Pilots, staff involvement, leadership framing, incentives
- Data Concerns: Transparency (e.g., eCMS/Kahua data pipelines), education on validation
- Demos: Case studies (15% PALT reduction, IoT safety)
- Privacy: DoD compliance, encryption
- Involvement: Feedback loops; industry evidence (McKinsey: 30% automation augments jobs)



Foundational Training Solutions

- Focus: Basics for drafting, analysis; ethical use per DoN
- Format: Online, 4-6 hours; no prior experience needed
- Content: Hands-on with DoN GPT; prompt engineering
- Target: PMs, CMs, ETs, & CMSCs
- Contracting Officers and CSs





Role-Specific Training Solutions

- CMs/CMSCs: Scheduling, risk management; 8-12 hours workshops
- ETs/CMSCs: Inspections, QA; 6-10 hours simulations
- PMs: Correspondence, workflows; 4-8 hours demos





Advanced Training Solutions

- Focus: Certifications in AI for defense; advanced prompt engineering, code
- Format: 20-40 hours; capstones, mentorship, helpdesks



COMMITMENT TO SUCCESS THROUGH EXCELLENCE



Evaluation of Training Solutions

- Methods: Surveys, KPIs (completion, efficiency gains 25-40%)
- Outcomes: Reduced delays, improved QA
- Adapt: Personalized paths; annual reviews





Maintaining Quality and Nominal Contractor Control

- AI Tools: Predictive analytics (20-30% less rework); dashboards in Kahua
- Benefits: Proactive QA, milestone tracking, alerts
- Compatibility: Kahua used by USACE/AFCEC for collaboration
- Evaluation: 15-25% reduced delays; compliance metrics



COMMITMENT TO SUCCESS THROUGH EXCELLENCE



Conclusion and Recommendations

- Benefits: 20-40% timeline/cost reductions; improved readiness
- Key Tools: DoN GPT, NIPRGPT, JAQI, CMA²; future Copilot/Azure OpenAI
- Recommendations:
 - Pilot Programs DoN GPT on projects
 - Prepare for future integrations
 - Implement training per DoN policies
 - Advocate HQ adoption
 - Monitor KPI
 - Train for Correct Prompt Engineering





NAVFAC AI Initiatives Update

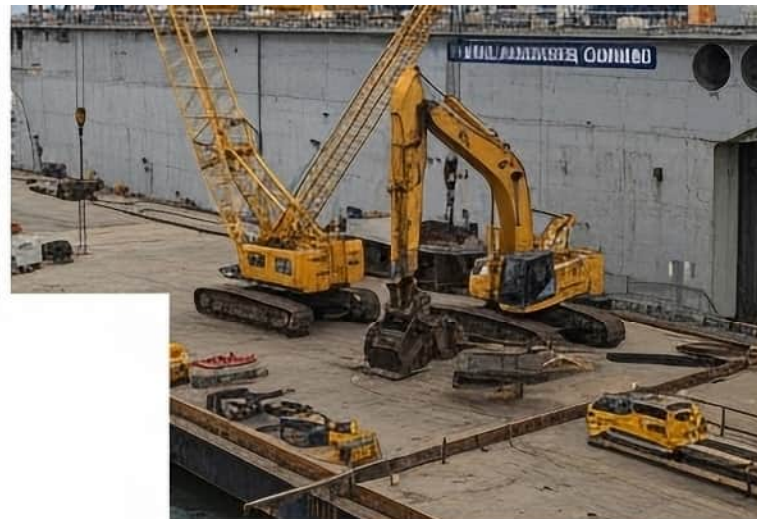
- **Giraffe** – 3D Virtual Planning Tool. NAVFAC acquired 10 test licenses for Giraffe, an AI-powered 3D planning environment.
- **Hedral** – Structural Engineering AI Collaboration
- **NIBS & NREL Partnership** – NAVFAC contracted NIBS and NREL to identify AI tools for MILCON project design.
- **AcqBot** – Field Testing for Acquisition TasksAcqBot modules are being tested for immediate field use. Early applications include CPARS evaluations and rapid Scope of Work (SOW) generation.
- **Center for Naval Analysis (CNA) Support** – Rapid AI Deployment for PDC Staff. CNA is leading efforts to identify and deploy quick-turn AI tools (e.g., NIPRGPT, ChatGPT) to reduce workload for Best Value Source Selection (BVSS) and Technical Evaluation Team (TET) reports.



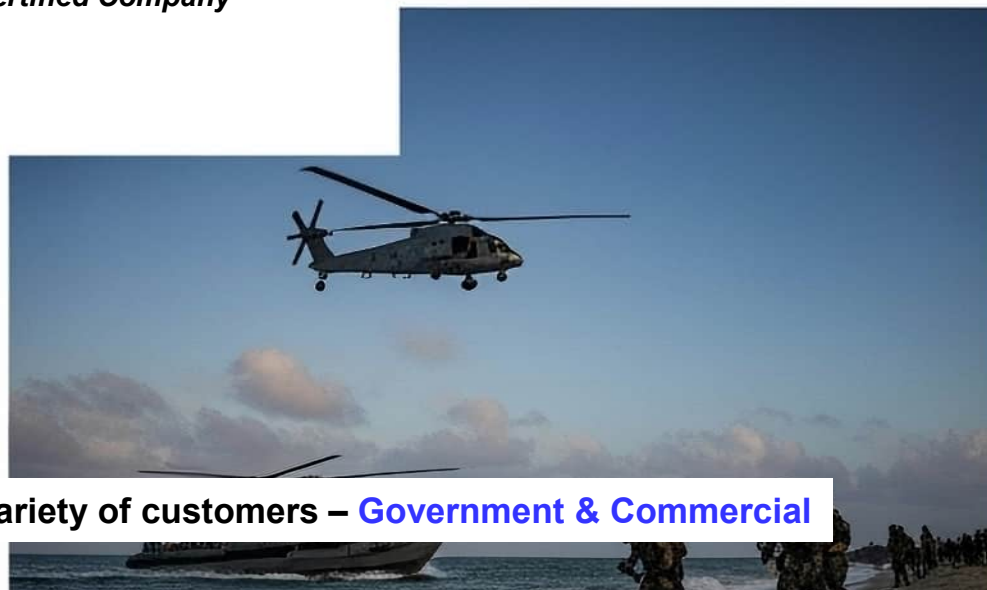
Source Materials

- List key sources (abbreviated for slide):
 - USACE JAQI Overview: <https://www.usace.army.mil/AI/JAQI/>
 - CMA² Platform: <https://www.usace.army.mil/AI/CMA2/>
 - DON Guidance on Generative AI:
<https://www.doncio.navy.mil/ContentView.aspx?id=16442>
 - DoN GPT Deployment: <https://meritalk.com/articles/departments-of-the-navy-deploys-don-gpt-in-flank-speed/>
 - NIPRGPT Launch: <https://www.af.mil/News/Article-Display/Article/3800809/departments-of-the-air-force-launches-niprgpt/>

“See the White Paper “***Leveraging Artificial Intelligence for Enhanced Construction Management for NAVFAC***” for the complete bibliography”



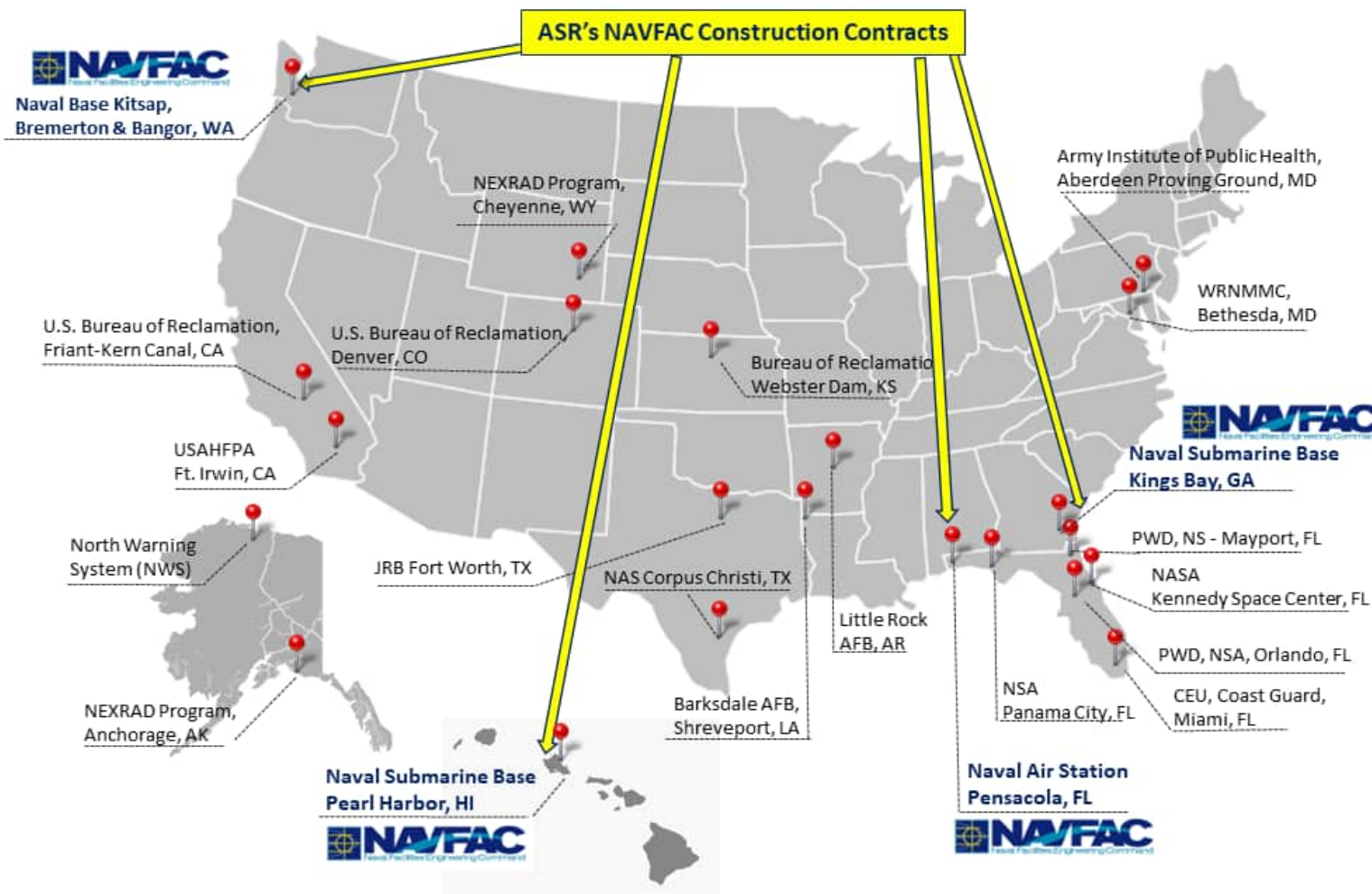
ASR International Corporation
An ISO 9001:2015 Certified Company



38 years of extraordinary support to a wide variety of customers – **Government & Commercial**



ASR - Construction Management Sites



COMMITMENT TO SUCCESS THROUGH EXCELLENCE



**ASR Management and Technical Services
ASR International Corporation**

***An ISO 9001:2015 Certified Company
Assessed at SEI CMMI Level 3***

For further information, please contact:

Rao S. Anumolu

President and C.E.O.

Alan Hall

Regional Program Manager

ASR International Corporation

580 Old Willets Path, Hauppauge, NY 11788

Phone: 631 -231-1086 Fax: 631- 873- 4087

Email: asr@asrintl.com Website: www.asrintl.com