



## Intelligent Automation (IA)

### GOAL

*Develop and deliver solutions that overwhelm current and future adversary threats using autonomy, artificial intelligence (AI), and unmanned systems for next generation surface and expeditionary warfare, combat and weapon systems.*

### Background

Competitors worldwide are actively embracing autonomy, AI, machine learning, and unmanned systems in warfare. These technologies are game-changers, as the pace of battle surpasses human capabilities. The nation that can swiftly advance and incorporate autonomous warfare tech will gain a crucial military edge.

### Objectives

#### **Lead Collaboration, Dissemination of Intelligent Automation (IA) Expertise Across the Center**

NSWCDD is establishing an IA thrust center to foster collaboration among different departments in developing IA products. Research and development priorities will be coordinated across the division with input from the IA center, focusing on critical technologies for faster IA capabilities deployment. The thrust center will promote shared, open, and government-owned intelligent automation architectures for technology application and integration across various systems. This collaborative effort will combine expertise to create innovative IA products that prioritize robust cyber, safety, and human factors engineering.

#### **Accelerate IA Technology Development and Integration**

NSWCDD is driving IA technology for military systems to meet warfighter needs and quickly integrate them into Navy and Marine Corps operations. We'll share our IA expertise with sponsors, prioritize IA in our projects, and collaborate with various partners.

#### **Enable IA through the Creation of Digital Infrastructure**

NSWCDD will enhance computational resources with High Performance Computing (HPC) and digital engineering tools. We'll improve data handling and use modeling for IA-enabled systems, also applying IA to these tools and processes.

#### **Build an IA Capable Workforce**

NSWCDD is dedicated to building a skilled workforce. We'll offer various training options, from basic IA education to advanced technical training and degrees. We want to keep our top employees and attract new talent. Our workforce will be capable of handling a broad range of technical work, from research to IA system deployment. We'll also provide informal training and hands-on experience, focusing on NISE projects and NEDA opportunities. Plus, we'll offer IA tools to boost productivity across different tasks.

#### **Create an IA Test and Evaluation Environment**

NSWCDD is in a unique position to integrate IA throughout the systems engineering process. We're improving the Potomac River Test Range's instrumentation, data recording, and data processing which is crucial for developing IA products. We aim to make the test range user-friendly, staffed by qualified personnel, and adaptable for test and evaluation of IA-enabled systems. We will use standard systems engineering methods and requirements generation techniques for IA-enabled systems. Additionally, we will work on refining practical approaches for ensuring system safety, certification, and verification and validation of IA-enabled systems. Collaborations with other initiatives in digital engineering, HPC, and cyber security will speed up system development and deployment.

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