



## Integrated Training Solutions, Inc (ITS®)

### Company information

- North Carolina based Veteran-Owned Small Business formed in 1999
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### Capabilities Statement

**1. Research, Development, and Technology Transition** is a core ITS capability. ITS conducts leading-edge research that applies engineering and analytical disciplines for the deployment of new or improving warfighting capabilities. One of our strengths is the application of state-of-the-art understandings for concept formulation; assessment of system and subsystem requirements; development, analysis and evaluation of concepts, technologies, systems and subsystems; and, development of operational concepts and tactics for new or improving existing warfighting capabilities.

We understand the time, cost, and difficulty of transitioning early stage acquisition research programs from the laboratory through the “Valley of Death” to operational capabilities. Since 1999, ITS has assisted government agencies and defense contractors move research from laboratories through the “Valley of Death” to operational capabilities. Examples of ITS research that have transitioned to operational programs and are now being used for new or improving existing warfighting capabilities include U.S. Navy Multi-Mission Maritime Aircraft (P-8A) and Broad Area Maritime Unmanned System (MQ-4C), U.S. Army Life-long Learning, and the DoD National Language Service Corps (NLSC) -- knowing what is “doable” and “not doable” is a key ITS metrics for transitioning technology to operational capabilities for the warfighter

### 2. System Engineering

ITS capabilities include the use of engineering disciplines for developing new and existing capabilities and systems, significant alterations to existing systems, integration and interface of existing equipment or software into different applications or platforms, and support evaluation of foreign or non-developmental systems, equipment, and technologies. Our work experience includes the U.S. Navy Multi-Mission Maritime Aircraft (P-8A) training system masterplan being transitioned to the Prime Contractor for execution. ITS performed similar work for the U.S. Navy Broad Area Maritime Unmanned System (MQ-4C); this effort also culminated with the MQ-4C training system masterplan being transitioned to the Prime Contractor for execution.

A Top-down Functional Analysis (T DFA) is used to derive and link system tasks with theater warfighting missions. The approach initially focuses on missions defined in the Universal Joint Task List – Joint Mission Essential Task List (UJTL-JMETL). This model uses strategic, operational, and tactical tasks as well as a conditions and performance measures to model mission task requirements. The methodology provides an approach for developing individual, team and collective tasks. Human task requirements are identified using task analysis techniques. Task analyses uses technology-based Instructional Systems Development/Systems Approach to Training (ISD/SAT) techniques, constitute the bottom of the overall task analysis hierarchy and provide the basis for developing individual, team, and collective training.

The ITS model is an iterative process. Mission analysis determines overall goals, objectives and capabilities of the system and the environment in which the system, including personnel, operate. These analyses are used to determine functions the system is intended to perform and for which the training system prepares crew personnel to perform. The approach during mission analyses establishes system boundaries for defining inputs, outputs, environment, and other constraints.

Requirements analyses identifies the characteristics of the system necessary to meet mission requirements, determines the intended users, identifies and defines the activity-related needs of users, assesses the feasibility and internal compatibility of system requirements, defines system’s MOEs and MOPs and the mission, human, and job/task requirements, and defines top level strategies for manning, training, and cost guidelines. The analyses include identifying functional requirements to describe activities, tasks, or actions required to achieve the stated system mission as well as performance requirements for describing performance capabilities required for successfully meeting the mission. The work defines MOEs, MOPS, and metrics by which system performance is

assessed. A *Human Role Strategy* determines the decisions and activities to be performed by humans and/or those that are not allowed to be performed by humans.

*Function analyses* translate requirements into a functional architecture of system functions and requirements attached to those functions. *Design synthesis* assigns tasks, breaks the tasks down into levels of learning, matches learning to training means and distributes learning across a continuum of training domains. The completion of design synthesis provides training specifications used for developing engineering specifications and the basis for the acquisition plan. *Function allocation* distributes defined system functions between available resources that include humans, hardware, software and/or combinations of these resources. *Task design and analysis* identifies tasks from a master task list developed during function allocation to be performed by humans; e.g., operators, users, or maintainers.

*System analysis and control* consolidates the analyses for the training system. The major components of system analysis include *performance, workload and training level* estimations and the user and requirements review. *User and requirements review* applies the required user knowledge, skills, and attitudes. *Human interfaces and team development analyses* are conducted to determine where and how humans interface with the system and how systems teams can best be organized and developed.

*Media analysis* is used for associating and selecting specific attributes to determine media needs for training skills associated with task performance. The attributes are used to integrate human performance into the analyses. The analyses include distributing learning applications across training domains.

**3. Simulation-based Automation** is a unique ITS capability developed with company IR&D funds and is used to support our work – to include making these capabilities available to other members of our team when appropriate. The capabilities are accessible 24/7 to all individuals with access credentials via a PC (laptop), smart phone, or tablet. Examples of automation applications include front-end analysis, risk assessments, requirements determination, gap analysis, strategic planning, marketing, risk analysis, media analysis, program management, training system alternative (TSALT) analysis, organizational analysis, surveys, and proposal support. The automation capabilities quickly and efficiently deliver data-based assessments and information operations at significantly less cost than traditional methods, and processes. These capabilities are consistent with national trends where, with the challenges of limited time, strained budgets, and heavily burdened personnel, the Government and our nation’s industries are increasingly seeking to leverage the power of simulation-based automation for more cost-effective and efficient solutions.

ITS automation results in higher quality in 25% to 35% less time, cost and burden than traditional methods, *game changer*.

**4. Decision System Support Models (DssM)** developed by ITS reflect the “real-world” experiences of company leadership with DoD acquisition processes for major systems. ITS automation capabilities are customized for DssMs that provide visual presentations of tailored data/information for multiple levels of fidelity, to include a Common Operational Picture at the enterprise level. The DssM provides decision-makers the power and speed of simulation-based automation to support planning and execution of complex programs. When appropriate, the DssM includes interactive dashboards for the visual presentations.

**5. Teaming** is a cornerstone of the ITS business strategy. This strategy includes working with experienced partners to form a team with the skill sets necessary for making contract deliverables to specifications, on-time and within budget. As prime contractor, ITS executes contracts with our understanding of program management, work of skill personnel and the use of simulation-based automation and modeling capabilities. We also manage the contract to ensure deliverables are made to *specifications, on-time, and within budget*. Additionally, we routinely add other team members as required to our expand competencies, capacity, and capabilities.

**6. Summary:** ITS is an experienced and low-risk federal contractor with established relationships among leading defense contractors as well as academic and research institutions. We are confident our competitive rates and the qualifications of our personnel will equal or surpass those provided by other contractors, and the use of our unique simulation-based automation capabilities are a differentiator.