

NUCLEAR LEARNING PROGRAMS FOR NEW BUILD PROJECTS

Unparalleled and Effective Training Program Development for the New Nuclear Workforce

New nuclear builds require the development of rigorous regulatory-compliant training programs to reflect a variety advanced nuclear designs. Nuclear regulation guidelines detail rigid training development methodology and requirements to ensure learning objectives are satisfied. L3Harris blends an arsenal of unique learning technologies and methods to meet the required learning objectives more efficiently, effectively and at a lower cost than traditional methods.

The international model for nuclear training program development is the Systematic Approach to Training (SAT) process. SAT is based on five elements, each element containing specific actions to ensure the SAT process is followed correctly and completely. The SAT process deliverables include:

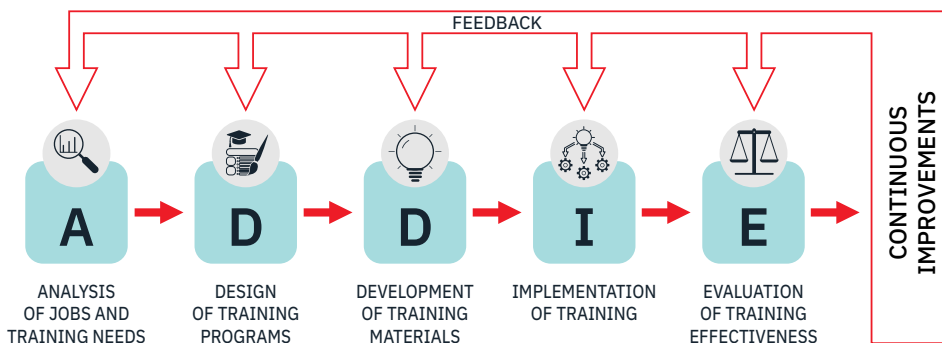
- > Analysis of job and training needs
- > Design of training programs
- > Development of training materials
- > Implementation of training
- > Evaluation of training effectiveness

EXPERIENCED L3HARRIS TRAINING PROGRAM DEVELOPERS

L3Harris is experienced in all phases of SAT design, development and deployment — from the ground up. We clearly understand the philosophy, background and purpose of the SAT process. Our personnel know exactly what steps are

necessary to develop all phases (1-5) of the SAT program. The overarching goal is to produce a quality training program that meets accreditation of most institutes of higher education and produces qualified, knowledgeable and reliable nuclear operations personnel — for licensed operations, non-licensed operations, maintenance, radiation protection, and engineering.

While SAT is an overall process, the Initial License Training (ILT) design process is a major portion of the effort, requiring an operations/training team to investigate, understand and document each new build system for students and instructors. The team must work in parallel, independently, efficiently and consistently to adhere to development schedules.



TECHNOLOGY OPTIONS

- > 3D animated and interactive nuclear plant components (Learning Modules)
- > Interactive nuclear system process simulations
- > Detailed interactive system logic and control simulations
- > Operable, visual plant system models (System Knowledge Modules)
- > Dynamic 3D interactive reactor plants (Learning Simulators)
- > 3D animated and interactive simulators for radiation experiments (Radiation Principles Simulators)
- > 3D maintenance procedure simulators (Synthetic Maintenance Trainers)
- > Graphical touchscreen representations replicating control panel or digital/distributed control system (DCS) manipulation and operation (Touchscreen Simulators)
- > Full-scale Operator Training Simulators
- > Accurate, immersive virtual 3D plants reproducing physical nuclear plants (3D Immersive Simulators)
- > Learning content delivery mechanisms (in class and remote learning)

WHAT MAKES L3HARRIS SAT DIFFERENT?

In theory, the SAT process will yield the same learning objectives regardless of the SAT developer. Traditionally, the developer has only the tools of the written word with static 2D (and sometimes 3D) figures and a full scope operator training simulator to satisfy the learning objectives. The L3Harris SAT developer has additional and numerous technology options to best satisfy the learning objective.

Our SAT developers can choose which technology or combination of technologies will best meet specific learning objectives. Ultimately, students' comprehension and retention of a particular concept is enhanced and done so more efficiently by seeing operations versus interpreting verbal descriptions or imagining how a static figure representing equipment actually works. The instructor's and student's face time is reduced allowing more effective and complete understandings at a lower cost.

MULTI-DISCIPLINE PROGRAM DEVELOPMENT

Analysis, design, development, implementation and evaluation. This process is also commonly referred to as the ADDIE process. While this process is generic in nature, the outcomes produce detailed training programs specific for each personnel discipline for the new build design. The technologies described above are applied for each of these disciplines:

- > Field operator
- > Senior reactor operator
- > Reactor operator

- > Shift supervisor
- > Shift technical advisor
- > Instrument and control technician
- > Electrical maintenance technician
- > Mechanical maintenance technician
- > Radiological protection/health physics personnel
- > Chemistry technician
- > Engineering support personnel

COMPLETE TRAINING SERVICES OFFERINGS

In addition to providing SAT-based training programs, L3Harris also offers the following services:

- > Recommendations on design of training facilities, equipment and infrastructure
- > Compliance with relevant regulatory requirements, industry standards and references
- > Long-term planning associated with training facilities and training resources
- > Training demand for the operational phase of the new build
- > Delivery of training to qualify operators, technicians, operator instructors and engineers to defined standards

LEARN MORE

For more information on L3Harris' Nuclear Learning Programs send us a request at power.mapps@L3Harris.com

PROGRAM DELIVERABLES

- > Instructor guides
- > Student on-line learning modules
- > Digital training/media
- > Scenario and lab guides
- > On-the-job training and task performance evaluation guides
- > Examination banks and developed quizzes/exams

New Nuclear Builds Require New Robust Training Programs

© 2023 L3Harris Technologies, Inc. | 01/2023

These item(s)/data have been reviewed in accordance with the International Traffic in Arms Regulations (ITAR), 22 CFR PART 120.33 and the Export Administration Regulations (EAR), 15 CFR 734(3)(b)(3), and may be released without export restrictions.

L3Harris Technologies is a Trusted Disruptor for the global aerospace and defense industry. With customers' mission-critical needs always in mind, our 46,000 employees deliver end-to-end technology solutions connecting the space, air, land, sea and cyber domains.



8565 Côte-de-Liesse
Montréal, Québec, Canada H4T 1G5
t +1 514 787 4999 | f +1 514 788 1442
power.mapps@L3Harris.com