



Dedicated to innovation in aerospace

AEROSPACE OPERATIONS

TRAINING, SIMULATION AND OPERATOR PERFORMANCE

Creating synergy by connecting all aspects of human effectiveness

PRODUCTS & SERVICES



Human factors are vital in the safety and effectiveness of air transport and military air operations

Human effectiveness requires an understanding of, and integrated approach to, the aviation professional.

To optimize how a professional operates in his or her environment, knowledge about the abilities and limitations, and the operations needs to be integrated in comprehensive solutions. Increasing human effectiveness therefore spans all aspects of training, human factors and simulation. These knowledge areas are actively tied together to achieve optimum efficiency through synergy.



KEY ACTIVITIES

- Performing research to optimize training effectiveness and efficiency
- Integration of knowledge and experience in working environments, training design and training media into effective training solutions
- Finding the best fit between selection, training, training media and learning abilities
- Developing and improving the models, methods and systems needed for an optimal training effectiveness
- Using modeling and simulation to open the door to a better understanding of complex, future situations
- Improving safety and efficiency by determining the optimum human-machine interface and/or concept of operation
- Measuring and gathering data to design the interfaces of tomorrow

KNOWLEDGE AREAS

Through years of research and development, NLR has developed a large body of knowledge and practical experience on human effectiveness. This expertise is divided in three main knowledge areas:

- Education and training
- Modeling and simulation
- Operator performance

EDUCATION AND TRAINING

Training offers the possibility to optimize efficiency and get the best out of both user and equipment. NLR offers scientific research into the full range of aspects that revolve around training of cockpit crew, air traffic controllers, drone operators and support staff. By developing and utilizing innovative training solutions, and integrating training media and training effectiveness measurement tools, full potentials can be unlocked.

MODELING AND SIMULATION

The full potential of modeling and simulation for training and validation is increasingly recognized in the aviation industry. Offering a realistic, safe, controllable, and relatively inexpensive experimental environment, simulation can seamlessly be integrated into modern training designs. NLR continually develops and improves the models, methods and systems needed for an optimal training effectiveness. In the development of new operational concepts, doctrines and capabilities, modeling and simulation also opens the door to a better understanding of complex, future situations.

OPERATOR PERFORMANCE

The way humans interact with their equipment largely determines their effectiveness and inherently the safety of the operation. Determining the optimum human-machine interface can provide important advantages to the pilots, air traffic controllers, drone operators and many others that utilise this equipment on a day to day basis. NLR combines in-depth knowledge of human effectiveness and the work domain to design the user interfaces of tomorrow. A wide range of measurement tools is used to study e.g. visual sampling behaviour, situational awareness, and operator status assessment for validation of new concepts.

