

# Training



 Air Transport Division Training, Simulation & Operator Performance

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## "FINDING INNOVATIVE SOLUTIONS TO OPTIMIZE TRAINING EFFORTS"

Training is an essential part in human development intended to increase human effectiveness. NLR's training specialists excel in developing innovative training solutions that decrease the costs of training and increase training effectiveness at the same time.



NLR's experience ranges from developing complete training programs to detailed research and development. Although mainly active within aviation, NLR also provides training support outside the field of aviation. Recent focal areas are:

- competency-based training design and assessment;
- selection of effective training media; and
- training assessment and evaluation.

#### Competency-based training design and assessment

NLR has developed a competency-based training approach to design training programs that reflect the complexity of operational reality. To achieve this, the approach uses the principles of 'train-as-you-operate' and 'train-for-the-unexpected'. It combines an experience-based approach to training design with the latest insights in learning complex skills.

#### Selection of effective learning environments

The selection of training environments in military and civil aviation is often based on factors that have little to do with training effectiveness, such as available training environments, technological possibilities and current weather. Though these factors are important, the needs of the trainee should be the focus for the selection of learning environments. NLR has developed a method for selecting training media and learning environments that best fit the needs of the trainee.

#### Training assessment and evaluation

NLR has an extensive suite of high-tech human factors measurement tools, such as eye-tracking equipment, biobehavioural equipment and self-assessment tools. These tools are successfully applied to measure cognition, performance, and progress in learning objectives of trainees. Depending on the requirements of the customer, we can easily modify the tools for other measurement purposes.

An increasingly important topic in training is the formal evaluation of training effectiveness. NLR specifically looks into the possibilities to determine the Return-On-Investment (ROI) of existing and new training solutions. We can advise defense and the civil aviation industry in making adequate choices regarding future training designs.

NLR has direct access to operational knowledge from an extensive client network existing of both national and international civil and military organisations. Furthermore, NLR has close working relationships with research partners and universities across the world. As such, NLR knows well what is going on in aviation training today and is able to find solutions for current training issues.

### Training support

- Training needs analysis and development, including:
  - Syllabus definition and development
  - Training media specification and allocation
  - Grading and licensing of operators
- Team training:
  - Crew Resource Management (CRM)
  - Flexible and dynamic teams
  - Live, Virtual, Constructive (LVC) training, including Embedded Training (ET)
- Crisis management training
- Serious gaming
- Training for the 4th generation civil aircraft and 5th generation fighter aircraft
- Upset recovery training and manual versus autopilot flying
- Assessment and evaluation of competency-based training
- ROI of training



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