



KONGSBERG

SIMflash

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KONGSBERG awarded simulator contract with the Swedish Army



KONGSBERG Simulation & Training is awarded a contract worth SEK 100 mill. for the development and delivery of the new Combat Training Centre – Ground Based Air Defence (CTC-GBAD) for the Swedish Armed Forces. CTC-GBAD will be installed in the existing Air Defence training centre in Halmstad.



The Combat Training Centre will consist of simulator based training equipment for all the main Air Defence sensors and effectors in the Swedish Armed Forces. This includes:

- Surveillance Radar Unit 23 (Giraffe AMB)
- Surveillance Radar 90 (Giraffe PS90)
- Fire Unit 97 (HAWK)
- Fire Unit 70 (RBS70)
- Control and Reporting Centre (CRC) workstations
- Direct Subordinate Commander (DSC) workstations

Further is a capability of training with real Ground Based Air Defence units offered as an option. The system is prepared for integration with a National Training Network. The CTC-GBAD solution provides:

- Individual operator training
- Collective training at crew level
- Collective training at unit level

The contract is one of the most complex simulator programs in recent years in the Nordic countries and a valuable reference for KONGSBERG Simulation & Training.

Increasing training effectiveness by developing a National Defence Training Standard

“Training is also a major financial commitment taking some 15% of all planned Defence spending

Written by Charles Smith-Holland - Thrulife Support Services Ltd.

Military Capability is the ability to achieve a specified military objective. In order to deliver military capability a series of fundamental inputs are required; known as Fundamental Inputs to Capability (FIC). These FIC are all required in order to perform operational tasks and must be integrated, coherent and interoperable. Table 1 shows that, no matter the nation, Training is a Fundamental Input to delivering military capability.

| US DoD | UK MoD | Canadian DoD | Australian DO |
|--------------------|----------------|-------------------------------------------|-------------------------------------------|
| Doctrine | Training | Organisation | Command & Management |
| Organisations | Equipment | Personnel (including Individual training) | Organisation |
| Training | Personnel | Collective Training | Major Systems |
| Leader Development | Information | Major Systems | Personnel (including Individual training) |
| Material | Doctrine | Supplies | Supplies |
| Personnel | Organisation | Support | Support |
| Facilities | Infrastructure | Facilities | Facilities |
| | Logistics | Command & Management | Collective Training |

Table 1 - Fundamental Inputs to Capability

Training is also a major financial commitment taking some 15% of all planned Defence spending. The delivery of cost-effective training is therefore a key requirement for any National Defence Organisation intent on delivering Military Capability within a budget.

As training budgets are pre-determined it is training effectiveness that we must concentrate upon in order to maximise cost-effectiveness of training.

To measure training effectiveness, training is often evaluated after delivery (using an evaluation such as Kirkpatrick's 4 level model). The problem with this type of evaluation is that it discovers deficiencies in training after the event, so we have delivered sub-optimal training. Also, deficiency correction, training re-delivery and re-evaluation may have to occur several times before all deficiencies are corrected, leading to increases in

“invest in a National Training Standard – It delivers enhanced capability with less risk and lower costs”

time and costs (where funding may be difficult or impossible to obtain against a pre-determined budget).

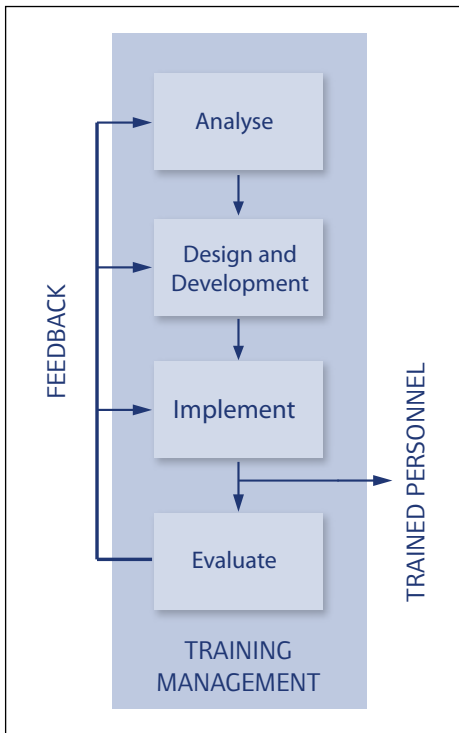


Figure 1 – Training Development Processes

Training deficiencies occur because one or more of the training processes are sub-optimal; so we need to identify what the potential variables are within the training processes and then minimise or eliminate them.

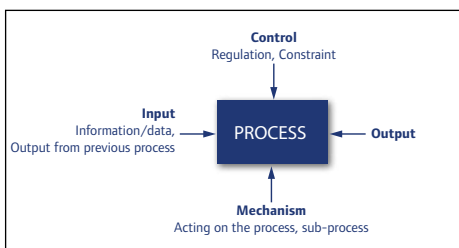


Figure 2 – A process

There are 3 readily identifiable variables:

1. The Process and Sub-Process methods

2. The Human performance when undertaking the process
3. The information/data upon which the process will be performed

In order to remove these variables it is possible to develop a Training Standard featuring:

- **Training Process Models, that are:**
 - Descriptive
 - Track what actually happens during a process.
 - Look at the way the process was performed to determine improvements that will make the process perform more effectively and efficiently.
 - Prescriptive
 - Define the processes and how they should be performed.
 - Establish rules, guidelines and behavior patterns which, when followed, will lead to the desired performance.
 - Explanatory
 - Provide the rationale behind the processes.
 - Explore and evaluate possible courses of action based on rational arguments supported by evidence.
 - Establish an explicit link between processes and the requirements of the model.
 - Pre-define points at which data is extracted for reporting purposes.

- **Personnel Competences**

- Training Analyst
- Course Designer
- Trainer/Instructor
- Training Manager

- **Information Management**

- Training organisation
- Stakeholder matrices for all Fundamental Inputs to Capability
- Common information repository
- Templates and Exemplars

The Training Standard can also be used to standardise training assurance and provide

governance for all training; from Individual Training and Education, through Leadership Development to Collective Training.

As the common information repository the Standard can also link to bespoke information, where best practice is readily updated; like guidance on technical requirements for fast developing technological training systems such as simulators, or guidance on training system interoperability.

Developing a Training Standard of this type increases the comprehension of those who use it, provides a coherent approach to training, facilitates consistency of the quality and integrity of the end result, streamlines the processes to achieve efficiencies, removes arbitrary methods and allows continuous improvement with good practice identified and implemented.

A Training Standard allows the Military customer and Industry supplier to have a common understanding, common processes and common goals. This enhances communication effectiveness, improves collaboration and reduces risk, thereby reducing cost.

Maybe you already use a Training Standard from another nation; if so look at Figure 2 and ask yourself “Is what I want out of the process the same as what they want?” If not, you need your own National Standard. If it is then ask yourself “Are my inputs, controls and mechanisms exactly the same as theirs?” If not, you need your own National Standard. The differences in the FIC (Table 1) demonstrate that even similar nations differ enough to warrant their own Training Standards. My advice; “invest in a National Training Standard – It delivers enhanced capability with less risk and lower costs”.

ITEC 2011, Cologne

and the ADL Conference, Gol

ITEC 2011 Cologne

This year at ITEC (10-12 May) KONGSBERG will demonstrate the PROTECTOR Training System and the Robot System 70 simulator (RBS70).

The PROTECTOR Training System covers every aspect of training for the PROTECTOR Remote Weapon Station. That includes the gunner skill trainer, a tactical crew trainer, computer based trainer for operators and the interactive maintenance library.

The RBS70 simulator is a complex air defence weapon system that can be used as a stand-

alone trainer or be integrated into a complete Air Defence battery trainer.

Visit us at ITEC, stand #D100

ADL Conference at Gol

KONGSBERG and Pitch Technologies will jointly present and demonstrate concepts and capabilities for the development of a National Training Network in Norway at the ADL Conference (24-26 May).

The demonstration will show:

- Distributed training capabilities based on existing simulators and real/live equipment.

- The use of standards and existing COTS components for distributed simulator architecture.
- Simulators running in different geographical locations.

All simulators and equipment will be operating in the same terrain in a common scenario. The purpose of this session is to show that proven technologies already exist to support the requested capabilities in a National Training Network.

KONGSBERG is also the main sponsor for this years ADL Conference at Gol, Norway.

Pictures from I/ITSEC in Orlando, Florida November/December 2010

