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EDUCATION & INDIVIDUAL TRAINING QUALITY ASSURANCE POLICY



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ACKNOWLEDGEMENT

“A COE is a nationally or multi-nationally sponsored entity, which offers recognised expertise and experience to the benefit of the Alliance, especially in support of transformation.” A COE is not part of the NATO Command Structure (NCS), but forms part of the wider framework supporting NATO Command Arrangements (NCA)”.

COE definition

Shortly after the Istanbul summit in 2004, the Slovak Republic assumed the role of Lead Nation for Explosive Ordnance Disposal (EOD) and Consequent Management within the Conference of National Armaments Directors CNAD Defence Against Terrorism Programme of Work (CNAD DAT POW). In 2005 and 2006 political-level talks were held in the Slovak Ministry of Defence to analyse the ability and define options for the establishment of the Explosive Ordnance Disposal Centre of Excellence (EOD COE) within the Slovak Armed Forces.

On 1 October 2007, Slovakia as the Framework nation, with the contribution of the Czech Republic, France, Hungary and Romania, as sponsoring nations, established the EOD COE. The Functional and Operational Memorandum of Understanding (MoU) were signed in 2010. Later on, in 2011 Poland joined the EOD COE. The last change in the composition of Sponsoring nations happened in 2013 when France left the EOD COE.

The EOD Centre of Excellence was accredited on 28 April 2011 and thus became the 16th unique NATO Centre of Excellence.

During the ACT series of the Periodic Assessment Visit (2014,2019 and 2024) the NATO EOD COE reaffirmed its excellence as a result of its systematic approach to NATO. The NATO EOD COE meets the Military Committee criteria for accreditation and assures continued NATO accreditation status.

1. THE NATO EOD COE EFFORT IN QUALITY OF EDUCATION AND INDIVIDUAL TRAINING

The purpose of this document is to describe the NATO EOD COE Quality Assurance Policy (QAP) and Strategy. It is applicable for training provided internally at the NATO EOD COE as well as for external training support and support of the COE's role as the Subject Matter Expert in EOD matters within NATO and NATO partners' community.

The NATO EOD COE's main effort is to attain the highest quality in Education and Individual Training (E&IT) by continuous quality improvement of existing and developing deliverables (reinforced by Lessons Learned) and development of applicable EOD technologies. To meet the required level of quality, the NATO EOD COE applies processes and procedures that are in line with NATO minimum criteria for Quality Assurance System.

These processes and procedures are paramount to the NATO EOD COE Education and Individual Training Quality Assurance, elaborated by NATO EOD COE in this QA Policy and it is COE's intellectual property. The main body of this policy is releasable to the public, however, the annexes are dedicated for internal COE use only.

1.1. Policy Statement

The historical and present evolution of armed conflicts is influenced by insurgent groups' dissatisfaction with a political, economic or religious mastership. These factors of the adversary/enemy activities are reflected in their Technics, Tactics and Procedures, which pose and dictate the Explosive Ordnance Threat, that the NATO and coalition forces have to face. Nevertheless, the Explosive Ordnance (EO) contamination hampers NATO and coalition forces during and after military operations.

To reduce the number of NATO and coalition forces casualties due to unskilled, non-professional manipulation with EO, many training activities have been developed by NATO nations which increased the force protection and freedom of manoeuvre. As a solution in countering EO risk and threat, the NATO EOD COE contributes to Alliance transformation and its operational efforts through the provision of EOD expertise and the development of NATO-wide tactics, techniques and procedures, following the latest technological development.

To meet NATO requirements in the EOD area, the NATO EOD COE implements internal quality assurance in close cooperation with Allied Command Transformation (ACT) as the NATO's Strategic Command quality assurance authority for training and courses.

1.2. Implementation of the QA Policy

In response to the NATO-identified requirements on E&IT, any improvement of the NATO EOD COE in E&IT is annually processed during the QA Annual Conference and then implemented.

The COE QA policy and its implementation improvement process have to reflect all of the changes and identified shortfalls within the NATO QA policy. It includes changes in the NATO EOD COE structure, manning, and the EOD COE internal documents (e.g. SOP). This process of QA policy improvement is conducted by the Quality Management Team (QMT), monitored by the Command Group (DIR, DDIR, COS, DHs and National representatives) and are annually evaluated during the QA Annual Conference (QAAC).

2. POLICY AND PROCEDURES

2.1. EOD COE Mission and Vision

Mission

The role of the NATO EOD COE in the evolution of EOD specialization is assigned by the Functional MoU, which describes the NATO EOD COE mission as:

“To support and enhance the NATO transformation and operational efforts in the field of EOD”

The COE is designed to perform tasks in support of the COE mission, including:

- Education and Training
- Analysis and Lessons Learned
- Concept Development and Experimentation

- Doctrine Development and Standards
- Supporting activities (Technologies, Research & Development)

The way how EOD COE influences, interacts, develops and promotes identified evolution requirements on the EOD domain is described in the **EOD COE Long-Term Vision**:

“To be NATO’s catalyst for improvement and transformation of EOD”.

2.2. Quality Standards

- a. The EOD COE follows the principles of Education and Training Directives 075-002 and 075-007 for Course Development and Course Documentation. The process typically starts with the corresponding Training Needs Analysis (TNA) to address the training deficiency which is identified in the Training Requirement Analysis (TRA) of a specific discipline or by the ACT Joint Force Development Directorate.
- b. The EOD COE adopts the System Approach to Training (SAT) model to analyse, design, develop, implement and evaluate existing (including courses out of NATO Education and Training Facilities (ETF)) or new courses.
- c. During courses, all students, instructors, and other involved persons are obliged and required to follow applicable safety principles as stated in the NATO Standard ATP-3.18.1 Allied Tactical Publication for Explosive Ordnance Disposal and make safety and health prevention part of their daily routine. Following safe work methods and relevant regulations should ensure that any health risks for course participants are mitigated when working with explosive ordnance or surroundings.

Gradual understanding and practical application of safety regulations is achieved and maintained by exploitation of these tools and procedures:

- Classroom training. During this phase, students become familiar with the NATO doctrines and procedures for EOD.
 - Briefing on safety precautions concerning national safety regulations, explosives and dangerous material handling.
 - Practical training. During this phase, students are instructed through demonstrations on how to complete a task successfully and safely.
- d. The safety of students and instructors requires the implementation of specific control measures to reduce the risks inherent to the handling of explosives. The institution authorities and students are responsible for implementing and maintaining safety measures that will comprehensively ensure the safety of all involved staff.

2.3. Quality Strategy

The quality strategy aims to support a systematic approach to education and training in line with respective NATO doctrines, policies and directives, where responsibilities to meet quality are clearly defined.

The quality strategy enhances the QA policy with monitoring, revision and implementation of best practices observed during the evolution of E&IT deliverables. The E&IT solutions are available not only for Sponsoring Nations but also for NATO and partners. The QA policy supports the sustainment and development of E&IT by setting conditions for the improvement of the course directors’ knowledge, instructors' and guest speakers’ selections, regular updates of students’ guidelines and tools to promote the most effective delivery and efficient quality.

2.4. Organization of the Quality System

To deliver the COE E&IT, the Quality Assurance within the NATO EOD COE institution is recognized as all staff members’ responsibility. The particular responsibilities of the QA process are assigned to the NATO EOD COE stakeholders as follows:

- **The NATO EOD COE E&IT Quality Management Team (QMT)** ensures the implementation of QA processes and supervises their effectiveness in accordance with the Annual Quality Assurance Plan (Annex A). The structure of the QMT is depicted in Figure 1 – highlighting the main stakeholders. The QMT consists of the NATO EOD COE Director as the team supervisor, it is directed by the Chief of Staff/Quality Assurance Manager, Department Heads, Branch Chiefs, Course Directors (CDs), and Action Officer. In line with the Bi-SC 075-007 directive, the QMT submits a written annual QA report (AQAR) to the ACT DCOS MDFD. The AQAR monitors, analyses and evaluates the Key Performance Indicators (KPI) which are described in Annex L including the Responsible, Accountable, Consulted, and Informed (RACI) matrix, which clarifies the roles for the successful delivery . All members of QMT prepare necessary documents related to their inputs to QAAC and AQAR from their area of responsibility. QMT members must strictly follow the QA Plan and the determined deadlines.

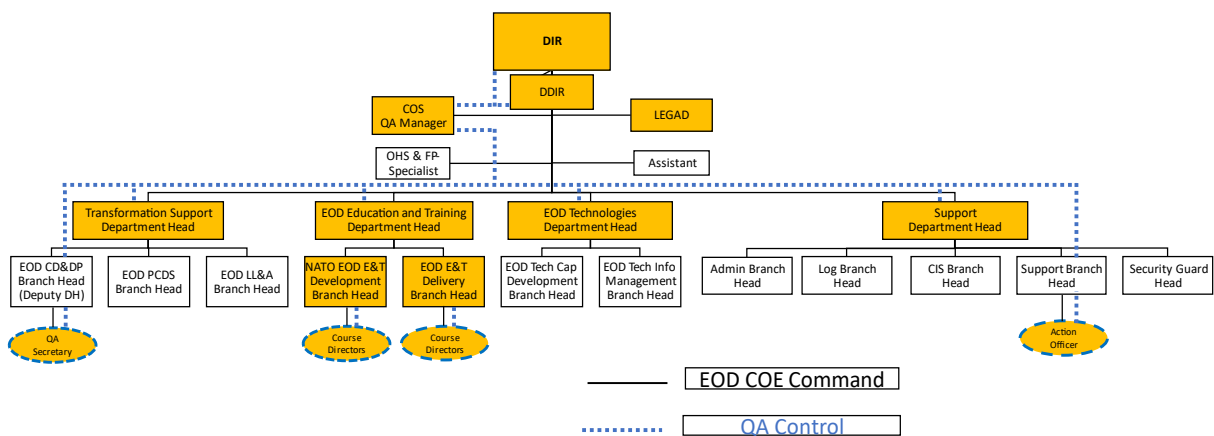


Figure 1: Structure of NATO EOD COE E&IT QA Control

- a. **Director** of the NATO EOD COE is responsible for the implementation of the E&IT QA policy, Quality Management System (QMS) and other QA procedures through the Chain of command (as depicted in Figure 1).
- b. **Deputy director** acts as a commanding officer in case of the Director's absence and exercises the responsibility of the Director. Deputy director is Co-chairman of the QMT and s/he leads the QMT in the absence of QAM and oversees the QA process.
- c. **Chief of Staff - Quality Assurance Manager** is responsible for the QA process within the centre.
 - Is responsible for the QA process within the centre.
 - Chairs and directs the QMT meetings (including the Instructors Needs Coordination Meeting and AQAC).
 - Supervises and coordinates the annual Quality Assurance Plan (Annex A), and harmonises it with the NATO EOD COE's program of work.
 - Monitors the completion of planned QA steps.
 - Leads the development of the COE Communication Plan.
 - Provides inputs/requirements to EOD COE POW Personnel Development Plan (PDP) for sustainment training of internal EOD COE instructors.
 - Monitors personnel satisfaction including working conditions, and flow of information.
 - Endorses particular CD nomination to award E&IT "Trainer" badge (see Annex J).
- d. **QA Secretary**
 - The role of the QA Secretary is to support the QAM in ensuring the smooth functioning of the QMT, QMS and related QA processes. There is no sole person for this assignment. The responsibilities are delegated by DIR to one of the EOD COE permanent employees from subordinated departments with the task of enhancing internal communication and to facilitate administrative matters. (harvesting/sharing of inputs or documents, registry, distribution, minutes elaboration and so on). There is no change to subordination. The QAM ensures that C2 is followed with regard to the coordination of the secretary.
- e. **Head of EOD Education and Training Department.**
 - Is responsible for the QA process in the EOD Education and Training Department (ETD).
 - Oversees process QA policy and strategy management review.
 - Oversees particular Course Director's contribution to QA.
 - Identifies performance deficiencies for every series of courses during Analysis.
 - Conducts Internal QA on instructional processes.
 - Leads the evaluation of the quality of the training and the performance of measurement of instructors and students.
 - Oversees SAT model implementation during Curriculum Designing.
 - Oversees SAT model and standards for course documentation during Curriculum

Development.

- Supervises E&IT planning, Curriculum Implementation, and Course Certification.
- Supervises the Student Evaluation process and Instructor Evaluation process.
- Oversees Faculty Development (including proposing the annual training plan for COE's instructors).
- Oversees Quality Research/ continuous improvement.
- Oversees and coordinates the preparation of Course QA Battle Rhythm and monitors, updates and improves the operational procedures as required.
- Supports QA Annual Conference.

f. Chief of EOD Education and Training Delivery Branch

- Leads the process of QA policy and strategy management review.
- Applies internal QA on instructional processes.
- Identifies performance deficiencies for every course's iteration during analysis.
- Supports Measurements and Assessment process.
- Identifies training solutions and design training during curriculum designing.
- Leads draft and update of Course Curriculum.
- Leads Education and Individual Training planning and Curriculum implementation.
- Applies Course Certification in his duties (i.e. Course Control Documents (CCD) preparations).
- Verifies Student's Evaluation process.
- Applies Instructor's Evaluation process.
- Assists (proposes) in knowledge development.
- Leads Quality Research/continuous improvement.
- Manages Instructors Training within the scope of the relevant Course QA Battle Rhythm.
- In cooperation with QAM coordinates the preparation of Course QA Battle Rhythm and monitors, updates and improves the operational procedures as required via the chain of command.
- Is responsible for the Course Curriculum design based on SAT as well as for their adherence to the Generic Course Battle Rhythm described in Annex B.
- Is responsible for allocation of required SME support (i.e. syndicate mentors, lecturers, instructors, etc.) to the courses provided or directed by the COE in collaboration with the Heads of Departments.
- Endorses particular course final reports, including Lessons Learned (LL) and best practices observed, and implemented before, and during course implementation as well as recommended steps for the next course's continuous quality improvement.
- Coordinates the instructors' needs via coordination meetings and prepares the training for COE's instructors. Upon Command Group decision it is included in POW.

g. Chief of NATO EOD Education and Training Development Branch

- Coordinates with MILENG Discipline Department Head (DH) the implementation of

MILENG Discipline Strategic Training Plan (STP), TRAs, TNAs and Discipline Alignment Plans (DAP) into design, development and provision of NATO EOD COE E&IT products in EOD area.

- Supports training needs analyses within the MILENG discipline Department Head delegated function; within EOD area of expertise.
- Designs, develops and evaluates E&IT solutions to identify MILENG discipline-related EOD gaps.
- Manages the NATO EOD COE's Courses Certification within the NATO Global Programming framework.

h. Head of Transformation Support Department.

- Supports the QAM in the quality management monitoring, measurement and assessment of instructors and students and the identification of performance deficiencies in each course iteration and series of courses via available manpower in the EOD Lessons Learned & Analysis Branch (LL&AB).
- Conducts surveys focused on course curricula effectiveness and applicability. Inputs of surveys are collected from the course attendees within 6 months after course completion (Delayed Course Feedback (DCF)).

i. Head of EOD Technologies Department.

- Supports training efforts via collecting relevant data about EOD technologies, and EOD equipment with a focus on new trends in EOD technologies development, which are utilized for particular course and training.
- Supports courses and QM system with his expertise specifically in review of courses and training evaluation.

j. Head of Support Department

- Cooperates with Course Directors to ensure logistic, administrative and CIS Branch support for Education and Training.
- Coordinates the Framework Nation's contribution to delivered education and training events.
- Ensures appropriate training environment for effective delivery of COE courses based on the chosen teaching method (classroom lectures, practice, demonstration, etc.).
- Ensures and supervises IT infrastructure and services provision to enhance the security and integrity of collected data held in COE databases.

k. Action Officer

- Serves as Institution's administrator to maintain related education and individual training databases e.g. Education and Training Opportunities Catalogue (ETOC), electronic Partnership Real-Time Information Management and Exchange System (ePRIME) etc.
- Prepares Calling Notices, collects Registration Forms, produces course students' lists, issues Confirmation Letters and archives course packages.

- Generates Personal Development Plan of the EOD COE staff concerning the Job Descriptions and outputs from Instructors' Needs Coordination Requirements.

I. Course Director

- Responsible for preparation, execution and evaluation of assigned course delivery IAW valid COEs SOPs. CD prepares all related administrative documents such as Request Of Purchase (ROP), Request Of Event (ROE), Task Responsibility Check List (TRCL), etc.
- Responsible for execution of Course QA Battle Rhythm (see Annex B) and delivery of the course. CD ensures that all quality assurance steps specified in related plans are observed and applied.
- Participates in the kick-off instructor needs coordination meeting and submits the instructor training needs for the following training cycle.
- Selects SMEs and instructors and ensures that the knowledge which is delivered meets the most current and updated version of the Course Performance Objectives and Programme of Classes. He is supported by the EOD Education and Training Delivery Branch as well as with other EOD COE SMEs.
- Supports the QAM in adhering to the General Course QA Battle Rhythm.
- Collects students' test/performance assessments, instructors' critique forms, students' critique forms and their observations during the course. These sources of information support the EOD LL&AB analysis after the completion of the course.
- Prepares the final reports which shall include the Lessons Learned (LL), best practices observed (implemented before or during the course delivery) as well as recommended steps for the quality improvement of the next course.
- Proposes nomination to award E&IT "Trainer" badge (see Annex J).

m. NATO EOD COE members

- Supports the QA processes with their expertise.

2.5. Educational Business Model

a. Common Understanding of the NATO Strategic Guidance

The NATO EOD COE applies the NATO global programming framework referred to Bi-SC 075-002 Education and Training Directive to promote Education and Training requirements that reflect the NATO operational requirements in line with political and military guidance.

In its scope (see Figure 2), the NATO EOD COE ensures that the operational requirements are developed into E&IT products based on identified requirements of the Requesting Authority, Department Head for EOD-related matters and identified Operational Commanders' performance gaps.

The NATO EOD COE commitment to enhanced quality of NATO EOD E&IT aims to ensure a match between each learner's skills and the knowledge acquisition from the appropriate course

assessment.

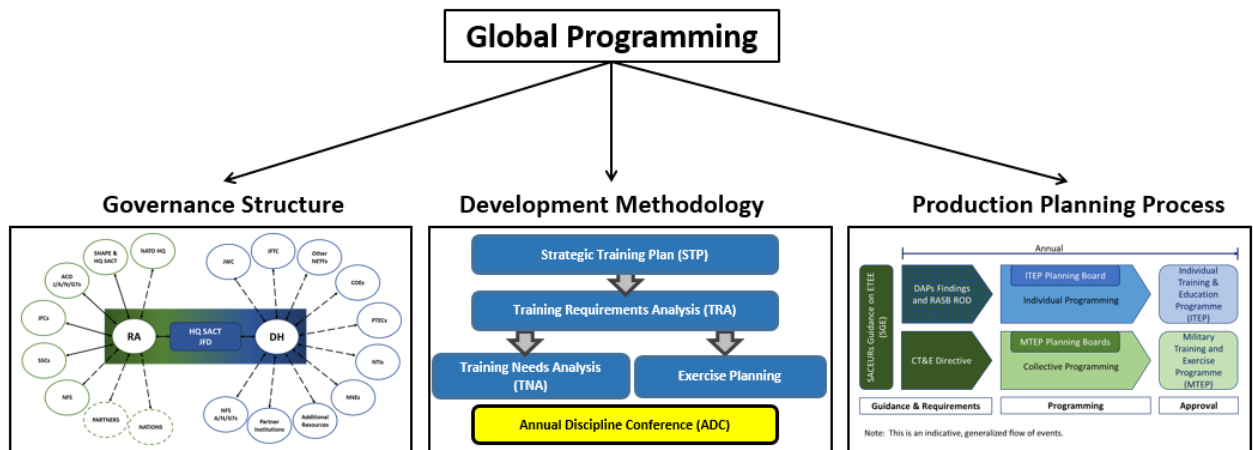


Figure 2: Global Programming Framework

b. Guiding Principles

The NATO EOD COE’s standards and guidelines for quality assurance include:

- A publicly available Quality Assurance Policy for the continuous enhancement of quality including the EOD COE organization, and the description of the students’, SMEs’ and instructors’ involvement.
- Formal mechanisms for the approval, periodic review and monitoring of EOD COE’s E&IT activities.
- A consistent student’s assessment, which includes criteria, regulations and procedures.
- A teaching staff quality assurance program to ensure that the staff is qualified and competent. It includes procedures to identify the current level of SME expertise, guest speakers/contracted lecturers.
- Learning resources, by utilization of adequate and appropriate instruments which ensures the best learning process for each course.
- Internal management information system, to collect, analyse and use relevant information for effective management of the NATO EOD COE courses through student satisfaction criteria and instructor satisfaction criteria.
- Public information, means to ensure that the NATO EOD COE course catalogue contains the description of products with current and accurate data.

c. Review Process

Internal reviews of courses or courses' content parts are carried out by the Evaluation Team (ET).

The Evaluation Team consists of the following members:

- QAM (chairman)
- Head of ETD
- Head of EOD LL&AB

- Course Directors
- Action Officer

To ensure that updated objectives meet NATO operational requirements, the E&IT adopts changes of the particular course content, based on the inputs from external SMEs (e.g. ACT MDFD Directorate and ACO).

The RA, MDFD Directorate and the QAM are routinely informed about all course enhancements and adjustments. This is accomplished through outputs from the annual QA Annual Conference and throughout the scrutiny of the annual Programme of Work.

d. Quality Process

COE Quality processes contain two different measures:

Quality Assurance (QA):Quality Control (QC) and

- QA is a way of preventing deficiencies with a focus on the process when developing a product. It is a proactive process. The goal of QA is to improve development and test processes so that the product is suitable for the intended purpose and deficiencies (mistakes) are avoided or at least eliminated.
- QC aims to identify deficiencies with a focus on process output. Quality control, therefore, is a reactive process. The goal of QC is to emphasize uncovering and identifying weaknesses of the final product before it is released.

Principles in Quality Management reflect the NATO EOD COE processes, manning and available resources which reinforce the continuous improvement within the entire staff of the institution. This QAP document and the related Standard Operational Procedures (SOP) address the capstone of the QA processes. A detailed scope of the internal/external stakeholder’s engagement in QA processes is listed in Table 1. The QA processes are updated annually through the NATO EOD COE internal process and submitted to the NATO EOD COE director for approval.

Following the NATO QA and NATO QC regulations in the field of Education and Individual Training, the NATO EOD COE identified and implemented processes which are depicted in the following matrix.

No	Process	EOD COE E&IT STAKEHOLDERS					
		QAM	QMT	Head of E&T Department	Course Curriculum Developer (RA/DH)	Course Director	Support Staff *
		A	B	C	D	E	F
1.	QA policy and strategy management review	Oversee process	Establish review and update	Lead	Support	Support	Support

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No	Process	EOD COE E&IT STAKEHOLDERS					
		QAM	QMT	Head of E&T Department	Course Curriculum Developer (RA/DH)	Course Director	Support Staff *
		A	B	C	D	E	F
2.	Internal QA on instructional processes	Lead/ Conduct	Establish and oversee the process	Apply	Apply	Apply	Apply
3.	Analysis	Identify performance deficiencies for every series of courses	Review	Lead/ Endorse After Action Reports for QAM approval	Identify performance deficiencies for every course iteration	After Action Report review	Support Data Collection
4.	Measure and Assessment	Lead/ Evaluate the quality of the training/ Lead the performance measurement of instructors and students	Establish processes	Support	Support	Assist	Data Collection
5.	Curriculum design	Oversee SAT model implementation	Lead/ Endorse	Identify training solutions and design training	Assist in curriculum designing process	Assist in curriculum designing process	Support
6.	Curriculum Development	Oversee SAT model and standards for course documentation	Approve	Lead/ Draft and update	Develop Course Control documents	Assist Curriculum development	Support
7.	Education and Training planning	Supervise	Provide direction and guidance	Lead	Apply	-	Publish
8.	Curriculum implementation	Supervise	Verify	Lead	Assist	Conduct	Support
9.	Course Certification	Lead/ Supervise	Verify and endorse	Apply (CCD preparation)	Assist	Assist	Support
10.	Students Evaluation process	Supervise	Establish the process	Verify	-	Lead	Assist and collect data
11.	Instructors Evaluation process	Supervise	Establish the process	Apply	-	Lead	Assist and collect data

No	Process	EOD COE E&IT STAKEHOLDERS					
		QAM	QMT	Head of E&T Department	Course Curriculum Developer (RA/DH)	Course Director	Support Staff *
		A	B	C	D	E	F
12.	Faculty Development	Oversee	Conduct/ Establish	Assist (Propose)	-	-	Apply
13.	Communication plan	Lead	Verify and endorse	Assist		Assist	Support
14.	Quality Research/ continuous improvement	Oversee	Verify and endorse	Lead	Apply	Assist	Support

Table 1: Education and Individual Training subject to Quality Assurance and Quality Control

*Support staff – any element (external/internal SMEs...), which is requested by CD in line with the course requirements and QA Policy Procedures.

2.6. Quality Assurance Management Review

The Centre’s QA Management Review (QAMR) as a part of QC is a self-assessment process to update this QA policy and identify new or lasting shortfalls and best practices. The scrutiny involves a comprehensive review of the management system to identify the need for changes and improvements. The result of the management review shall include decisions on measures for improvements of products and services as well as requirements for resources.

The QAMR is carried out annually by QMT during the fourth quarter of the year. The QAM is responsible for the planning, execution and evaluation of the review that is subject to the QAAC agenda.

The following topics are included in the Management Review:

- a. Results from audits or inspections and previous management reviews.
- b. Results of previous corrective or preventive measures.
- c. Results of courses review and series of courses review.
- d. Circumstances that may affect the QA management system (e.g. human resources, transfer of QA responsibilities, personnel replacement programme based on national regulations, etc.)
- e. Resource requirements.

The QAMR is endorsed at the annual QA Annual Conference that is attended by the NATO EOD COE E&IT QMT. The composition of the QMT is defined in Chapter 2.4.

3. APPROVAL, MONITORING AND REVIEW PROCESS OF PROGRAMME

3.1. Analysis and Development Criteria

a. Background

Education and Training are key elements of NATO effort in transformation. They are complementary activities, which reinforce each other. Education focuses on the function of explaining concepts, doctrines, practices and teaching procedures (for instance with the complexity of Lessons Learned and best practices). Training focuses on practising and applying that knowledge, which helps to assimilate the subject matter completely and provides preconditions for the well-trained soldier and successful operation in a multinational environment.

The multinational approach in education and individual training brings a more efficient approach towards education and training, in balance with the available experienced teaching staff, resources and time allocated. Effectiveness, efficiency and affordability are fundamentals for delivering education and training at the highest quality.

The NATO EOD COE is tracking the NATO principles in the analysis, design, development, implementation and evaluation of delivered courses and training to finally provide high quality E&IT products to the dedicated customers, choosing the best learning methodology for the entire course curriculum.

b. Requirements versus E&IT characteristics

The E&IT facilitated by the NATO EOD COE is shaped by requirements and below referred principles:

- **Flexibility.** As a result of asymmetric warfare in various environments, the needs of the target audience (EOD skilled personnel) constantly vary and force the provider to find flexible E&IT solutions. Nevertheless, at the same time, we must take into account the cost-effectiveness that nowadays plays a more and more important role. A system of flexible E&IT combines these main attributes of modern learning and delivers the Right Training, to the Right Audience by the Right People, at the Right Time and the Right Place.
- **Demand Driven.** Effective E&IT depends on changes in the evolving operational environment and is needed across the whole EOD capabilities spectra. The NATO EOD COE tries to deliver demand-driven E&IT and together with the customer determine and validate the final product.
- **Active involvement.** In modern teaching, the students learn the most when they are actively involved, lessons are interesting and lecturers are adequately experienced. Motivated students are the most important factor influencing the quality of course delivery. In addition, the instructors are encouraging students to cooperate to take advantage of learning techniques in syndicates.

- **Comprehensive Approach (CA).** The NATO EOD COE reflects the challenges coming alongside NATO's view of the Comprehensive Approach. Here, the NATO EOD COE within the scope of offered courses, delivers courses from basic up to advanced level in which knowledge is entangled from the basic to the most complex.
- **Applied modern civilian education.** The NATO EOD COE applies the recent teaching methods and innovative technologies that are used in the civilian environment for modern and adult education delivery, to keep the E&IT deliverables at a high-quality level. The NATO EOD COE permanently invites selected guest speakers from academic soil (the MILENG COE, JCBRN Defence COE, ISEM Institute, Geneva International Centre for Humanitarian Demining (GICHD), ATF NCETR Huntsville, Alabama, Thermo Scientific PAI, ALLUVIAM LLC, University of Rome TOR VERGATA, University of Žilina, University of Pardubice, University of Trenčín, Finnish Defence Forces, the 15th Engineer Regiment Bechyne, SVK Armed Forces Academy, Romanian Combat Support Training Centre, Polish Military Engineering and CBRN Centre); and cooperates with many other contributors from military and civilian industry, whose expertise is implemented into courses curricula.

c. Development Criteria

As indicated in paragraph 2.5 above, a training project to which QA principles and standards are applied starts with the corresponding TNA to address a training deficiency previously identified during the TRA. In addition, other projects may arise as a consequence of direct customers' requests or by COE's initiative. These requests may vary from single SME support as a guest lecturer to complement customer's training or exercise, up to full ad hoc training provided by a selected Mobile Training Team (MTT).

As a general rule, the following principles are applied to training development conducted by the COE:

- RA to address the identified requirements,
- Developed in close cooperation with the EOD Community of Interest,
- In line with the current NATO EOD standards,
- Consistent with minimum proficiency for EOD trained personnel,
- Open for IP Countries as much as possible,
- Use of the most recent didactical tools and learning methodologies,
- Modular composition of courses when possible,
- Developed in close coordination with the requestor/customer.

3.2. Curriculum Design and Development, Educational Standards

The training or course development process followed by the Centre is a complex of external and internal factors and actions influencing the end state of the final product. The requirements are coming either from the Sponsoring Nations or other NATO actors. Once the requirements have been assessed and validated, the Centre continues with the product development in accordance with the Global Programming Framework.

Applying the recent information from the theatre, concepts development and suitable

education methodologies, a pilot course is introduced to review and validate the course content. Even if the ultimate goal is to achieve the NATO certification of the course, the NATO approval is not awarded automatically. This enables more freedom of action in tailoring the course content to better reflect the changing environment or customers' needs. The EOD COE approach to course curriculum design is depicted in **Figure 3**.

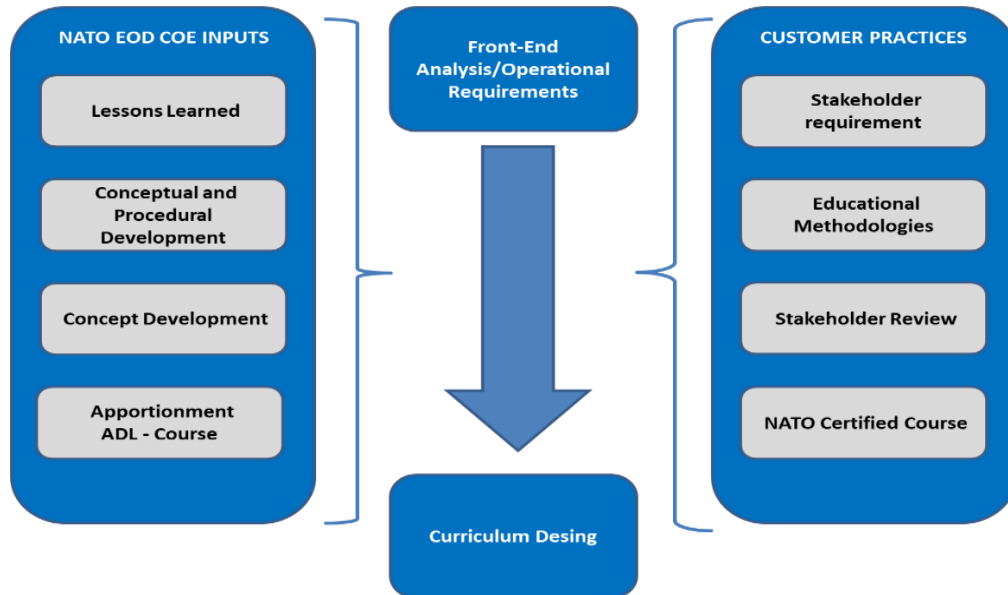


Figure 3: The NATO EOD COE approach to curriculum design

a. Determination of Learning Methodology

For delivering knowledge through a course curriculum as stated above, the NATO EOD COE selects the next four suitable learning methodologies which are applied to course development.

- **Competence-Based Learning (CBL):** Focuses on outcomes and addresses what the learners are expected to be able to do rather than to learn about (know).
CBL advocates defining educational goals in terms of precise measurable descriptions of knowledge, skills and behaviours, a student should demonstrate at the end of a course. CBL is adaptive to the changing needs of students and the customers 'needs.
- **Scenario-Based Learning (SBL):** The SBL puts the student in a real context. The use of scenarios helps a student to better understand the decisions he/she has to make. Scenario-based training provides an active learning experience with proven effectiveness.
- **Project-Based Learning (PBL):** This is the methodology where students are working in a group (project setting), analysing a complex problem of the actual working field/context. Based on an assignment, the problem shall be resolved in the form of a realistic occupational product. The focus is not only on the product but also on the process.
- **Advanced Distributed Learning (ADL):** To increase the flexibility of studies and to promote individual learning, NATO EOD COE sets the goal by using NATO's e-learning NATO platform (JADL). This platform facilitates particular courses in pre-study documents (Blended Learning) as well as standalone ADL E&IT deliverables. For ADL

product analysis, design, development and delivery, the principles described in the Bi-SC-075-007 directive are used.

b. Motivation

NATO EOD COE follows the next four learning methodologies:

Competence-Based Learning because:

- Learning methodology needs to be flexible as a result of national and international changes in the operational environment.
- Variety of the NATO EOD COE students with their specific needs is increasing. This resulted in tailor-made courses using CBL individual learning.
- The NATO EOD COE is focused on outcomes, demand-driven education and training rather than inputs.
- The NATO EOD COE emphasizes skills.
- The CBL approaches education as a whole. Instead of focusing mainly on the transfer of knowledge/topics, CBL concentrates on the learning of competencies (combination of knowledge, skills and attitude).
- The CBL learning matches with the concept of “train as you fight”.

Scenario-Based Learning because:

- The SBL is in line with the concept of “train as you fight”.
- The SBL has proven to be a successful and effective training method for many years in both the military and the civilian environment.
- The SBL methodology is familiar to most military personnel. A commonly understood methodology is an easy-to-use learning tool as a means that enables to reduce the time for introducing the learning methodology.
- The SBL includes an active role for the student. Since the NATO EOD COE underlines an active role of students, this methodology is suitable for course delivery as well as to students’ needs.

Project-Based Learning because:

- In general, military personnel who fulfil tasks in staff are working in project groups. Therefore, adapting a learning methodology where students will typically be working in project groups is advantageous.
- The focus is not only on delivering a product but also on the process. Thus, during the courses emphasis will be put as well on improving the process itself.
- When engaged in project-based learning, students will typically be assigned a project or series of projects related to the actual working field/context that require them to use diverse skills. This supports the self-motivation of students and their active engagement.

Advanced Distributed Learning because:

- The ADL provides free choice for students. Their active role in the learning process is amplified. They can manage all aspects of the learning process (what, when, where and how long).

- Once the curriculum is provided to the students, instructors are able to enhance the weight of other methodologies.
- As students are from various environments with different backgrounds and the level of knowledge the ADL allows them to align the knowledge of students in advance.

c. Curriculum Design

During the design phase of the curriculum, the combination of strategies and learning methods, human and material resources, assessment procedures and work schedule are employed to fulfil the particular course objectives.

Curriculum developers ensure that the final product follows sound instructional principles and that the used methods and activities are well-defined and appropriate to the specified target audience. These instructional principles follow the Depth of Knowledge (DoK) as stated in the Bi-SC Directive. The Depth of Knowledge is described in Table 2.

Level	DoK Title	Description	Key Word
500	Master Skills and Competences Concept Knowledge Level	The full extent of comprehension	Initiate, Shape and Influence
400	Expert Skills and competences	Investigate and apply solutions to complex problems	Enable/Advise
300	Advanced Skills and competences	Reason, analyse and interpret concepts, patterns and relationships	Apply
200	Foundation Skills and Competences	Use foundational conceptual and procedural knowledge	Assist
100	General Knowledge	Recall elements and details of structure or process	Follow

Table 2: Depth of Knowledge

When designing the Performance and Learning objectives, instructional designers are to use **Bloom’s taxonomy** (see Table 3), to match the required tasks with the appropriate level of the course. The use of Bloom’s Taxonomy to establish objectives and the use of objectives during course design will help promote a coherent and measurable course.

For any given category, there are keywords that help the instructional designer develop and write the performance and learning objectives. The following table provides an example of words and verbs for each level.

Category	Example and Key Words (verbs)
Follow: Recall or retrieve previously learned information.	Key Words: arrange, define, duplicate, identify, label, list, mark, match, name, order, recall, recite, reproduce, recognize, reproduce, select, state.
Assist: Comprehending the meaning. State a problem in one's own words.	Key Words: arrange, categorize, classify, convert, distinguish, estimate, explain, extrapolate, group, illustrate, label, match, paraphrase, predict, reiterate, restate, reword, rewrite, report, select, separate, summarize, translate.
Apply: Use a concept in a new situation or unprompted use of an abstraction.	Key Words: administer, apply, calculate, change, compute, construct, examine, execute, employ, identify, implement, manipulate, modify, operate, perform, predict, prepare, produce, relate, respond, show, solve.
Enable/Advisor: Separates material or concepts into component parts so that its organizational structure may be understood.	Key Words: condense, contrast, deconstruct, design, diagram, differentiate, discriminate, distinguish, divide, experiment, extrapolate, graph, infer, interpret, modify, measure, plan, plot, predict, produce, project, quantify, resolve, revise, search, solve, test, troubleshoot.
Initiate, Shape and Influence: Make judgments about the value of ideas or materials.	Key Words: categorize, combine, compile, compose, conclude, construct, contrast, create, critique, defend, design, derive develop, devise, diagnose, discriminate, encrypt, estimate, evaluate, formulate generate, hypothesize, integrate, interpret, invent, investigate, judge, justify, measure, modify, outline, originate, organize, plan, predict, propose, rank, rearrange, recommend, reconstruct, reframe, revise, rewrite, summarize, validate, war game, write.

Table 3: Bloom's taxonomy¹

The learning objectives are developed with these essential parts:

- Standard
- Condition
- Criteria

The Standard defines the minimum acceptable performance. The Condition defines the environment, tools and processes that are used to achieve the minimum acceptable

¹ More details are content of the BISC 075-007, ANNEX O

performance. The Criteria define how the minimum acceptable performance will be measured. NATO EOD COE deliverables DoK is a part of the course review and elaborated via Annex G with the result of the QAP update (see Annex G).

The learning/performance objectives are the backbones of the course instructional design as it is referred to in the BiSC 075-007 directive. Annexes of the BiSC 075-007 also provide templates for supporting documentation that covers training audience description, the learning sequence and activities, the student assessment strategy, prerequisites for the course, the instructor's number and characteristics, as well as generic timetable and resource requirements.

3.3. Curriculum Implementation

The purpose of the Curriculum Implementation is to put into operation the management, support and administrative functions necessary to successfully conduct E&IT solutions. Conducting E&IT addresses the planning, preparation, execution as well as wrap-up of the activities for a specific course.

The curriculum implementation at the Centre results in the train up of qualified graduates. The curricula implementation is described in Figure 4.

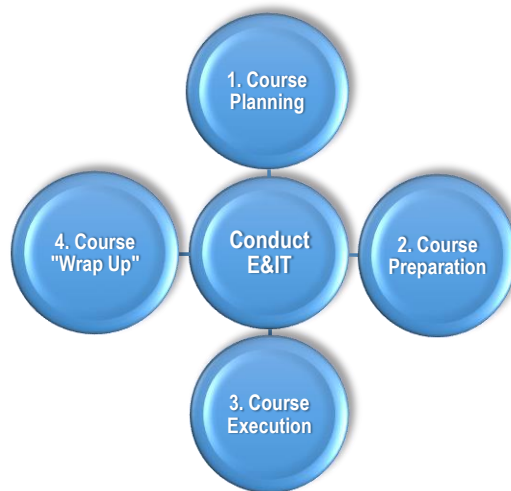


Figure 4: Conducting E&IT

3.4. Instructional Process and Curriculum Evaluation

a. Quality Assurance Processes

The Quality Assurance Processes and Procedures set out at the NATO EOD COE are supported by review processes, operational standards and guidelines as required. They are fully integrated into the annual COE Programme of Work, in implementation and reporting cycles. They are reviewed annually and recommended changes or amendments are submitted for approval together with other tasks in the Programme of Work.

Two distinct processes are supporting the Evaluation Phase:

- Post course reviews, which focus on judgments pertaining to a specific E&IT solution. It is the process of gathering and analysing data from inside and outside of the E&IT environment to determine how E&IT was conducted and in what way graduates were

prepared for their jobs.

- Institutional reviews, which are focused on the institution and provide an overall evaluation of periodic reviews with regard to quality management.

The overall NATO EOD COE Quality Assurance Cycle (see Figure 5) depicts the Evaluation Process within the NATO Centre of Excellence. The document pattern that supports the Single Course Evaluation Cycle is content of the Annex C. After several iterations of one specific course, the Evaluation team will initiate and conduct a Series of Course Evaluation Cycle as described in Annex D.

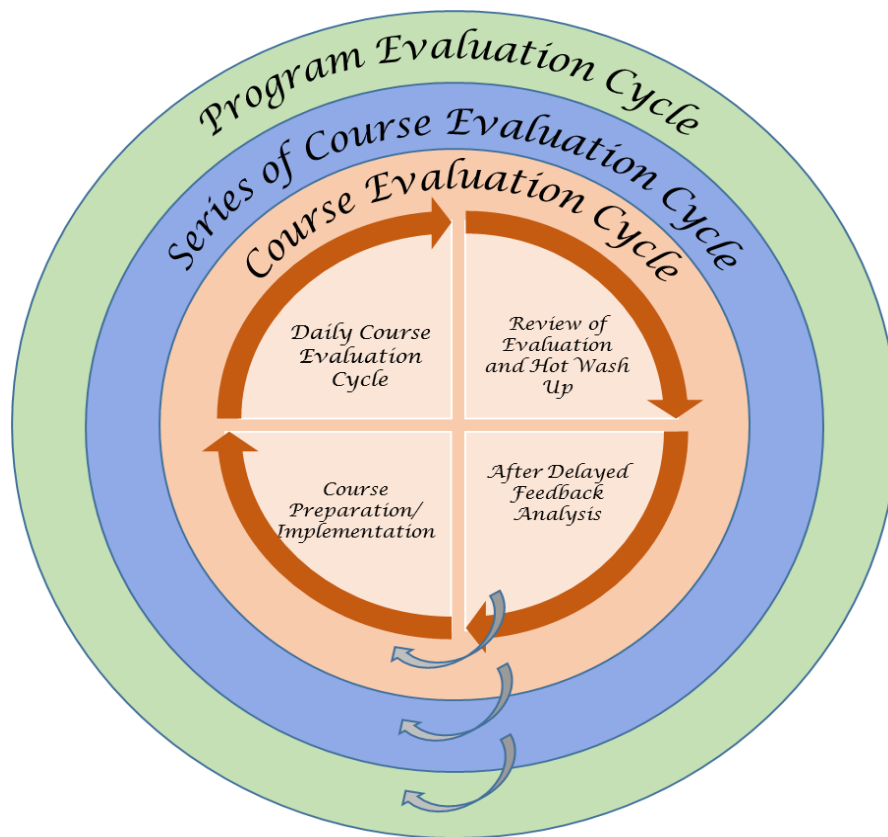


Figure 5: The NATO EOD COE Course Quality Assurance Cycle

Course Review/Evaluation (CRE)

The CRE is conducted by assigned QMT members and it is led by QAM. It is a final stage of the evaluation phase of a particular course. The result of the meeting is a final draft of the After Action Report (AAR) endorsed by the QMT and approved by the Director. As a minimum, the CRE team consists of a course director, external and internal SMEs and involved support staff as depicted in Figure 6.

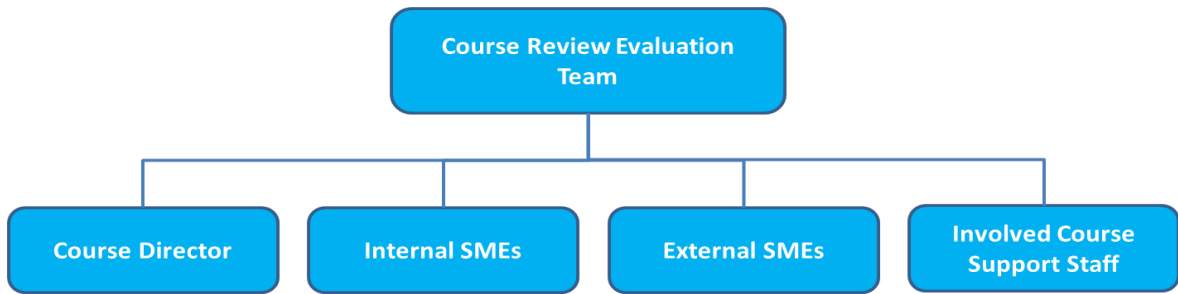


Figure 6: The minimum of CRE team

Series of Course Evaluation (SCE)

The SCE (see Annex D) is conducted by the Evaluation team based on the outcomes from the last three years' particular course evaluations and/or on the external inputs/demands of the Community of Interest (Requirement Authority, MDFD Directorate and NATO nations/partners). Outcomes of the SCE are clarified and improvement proposals are recommended to NATO EOD COE DIR for approval.

Program Evaluation Cycle (PEC)

The PEC for E&IT is conducted by QMT culminating at the annual QA Annual Conference based on the results of SCE.

The Multiple Iterations (MULIS) of the particular E&IT cover several short course execution phases (same E&IT product, with the same resources, under the same conditions etc.) with one preparation phase. When MULIS are delivered without significant changes, only one comprehensive CRE is conducted in line with its principles.

b. Annual Quality Assurance Plan

This plan summarizes all planned courses, the anticipated schedule for Quality Assurance, and evaluation reviews. The plan is prepared by QAM and approved by DIR. The annual plan provides an overview of the Programme of Work. It also highlights any planned improvements and additions to the Policy Review. This plan is also used as a summary feedback mechanism to improve strengths and weaknesses, enhance opportunities and eliminate threats. The format of the Annual Quality Assurance Plan is provided in Annex A.

c. Course Control Management Process

Figure 7 below depicts the detailed tasks of personnel involved in the course QA and Evaluation process.

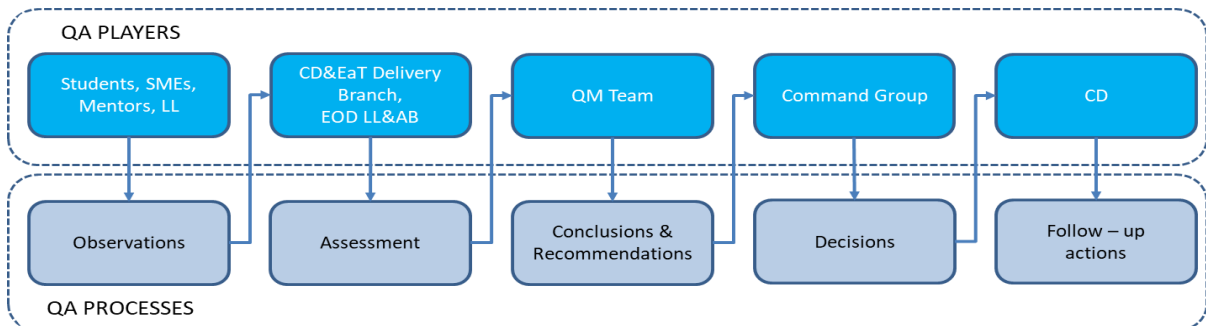


Figure 7: QA and Evaluation Process

d. Evaluation Scheme Per Single Course

The purpose of the single course evaluation is to assess the efficiency, effectiveness and overall quality of an E&IT solution. It seeks continuous improvement and evaluates whether it could be conducted better or more efficiently. The single course evaluation scheme is depicted below in Table 4.

Frequency	Lead	Who (Conducted by)	How	What	When	Where
Once	Course Director	Instructors	Meeting / Correspondence	Course Schedule	Week prior	Meeting room
Daily	Course Director	Students	Student Course Critique sheets	Lectures & exercises	During each day	Classrooms
Daily	Course Director	Instructors	Instructor Course Critique	Lectures & exercises	During each day "Hot Wash-Up"	Classrooms
Daily	EOD E&T Delivery Branch	Course Director	Course Critique sheets	Instructors' performance	During each day	Classrooms
Daily	Course Director	Instructors	Meeting	Hot Wash-up	End of the day	Classroom
Once	Course Director	Instructors Students	Briefing / Discussion	Overall Course completion	Last day	Classroom
Once	QAM	TSD EOD LLAB	Study	Analysis of Course Critique sheets, results & feedback	NLT 14 days after course completion	Office
Once	QAM	QMT	Study	Course report review/AAR draft	NLT 15 days after course completion	Office
Once	QAM	Course Director	Meeting	Course review evaluation/AAR final version	NLT 21 days after course completion	Meeting room
Once	TSD	Students	Survey	Delayed Course Feedback	NLT 6 months after the training	

Table 4: Guidelines for course evaluation

e. Course Feedback – Mechanism

Mechanism of the course feedback is paramount to evaluate and improving the quality of courses and training activities. The course feedback mechanism consists of collecting opinions, comments and best practices. This feedback is conducted by all QA personnel, including in-house instructors, guest speakers (if applicable), mentors, students and their superiors.

At the NATO EOD COE, the quantitative and qualitative analysis is conducted that feeds the first

step of the QA and Evaluation process. The feedback is monitored during the course preparation and execution as well as after a particular course conclusion. To reduce shortfalls in E&IT, the NATO EOD COE carries out Delayed Course Feedback (DCF) to evaluate the course effectiveness and validity over time.

The DCF is submitted within six months after the training activity conclusion and is incorporated into the Series of Course evaluation cycle. The whole mechanism of the course feedback is depicted in Figure 8. The EOD COE LLAB is responsible for DCF and works in close cooperation with the EOD ET Delivery Branch and particular Course Director.

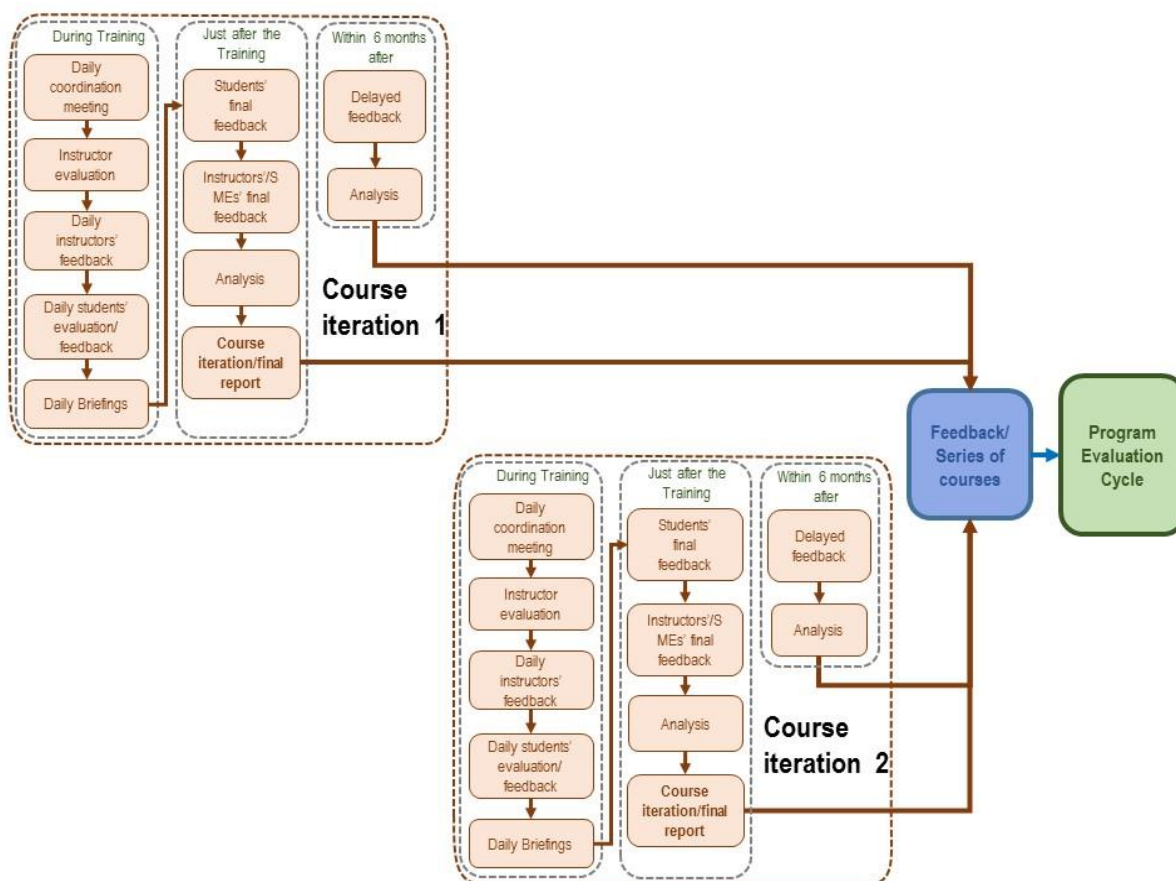


Figure 8: Course Feedback and Evaluation Process

4. ASSESSMENT OF STUDENTS

4.1. Assessment Strategy

The students’ assessment strategy is based on the Bi-SC 075-007 directive in which the student assessment is expected to support students learning with the learning objectives of the course targeting curricula. In line with the created student assessment criteria, the NATO EOD COE demonstrates that the course/product or service complies with the stated requirements. In general, that means that the NATO EOD COE can rate the course participants’ progression towards the course learning objectives.

The NATO EOD COE applies two following Bi-SC 75-007 student’s assessments to deliver courses/products:

a. Formative assessment

The formative assessment takes place during the teaching process, i.e., before a teaching phase or after the completion of the course. This assessment aims to monitor the learning progression of both, the course student and the dedicated pull of instructors.

b. Summative assessment

The summative assessment aims to measure what course participants have learned during the teaching phase or after the completion of the course. The summative assessment is the basis for a final assessment of the course participant.

Both of the above-mentioned assessment methods need to be included in each course curricula, when applicable within particular course content.

Because some of the E&IT deliverables are focused on the demonstration of obtained knowledge, the instructors must develop practical examinations to verify the student's skills. The CDs, with dedicated instructors/SMEs, are responsible for setting up these practical examinations.

The practical examination criteria must be elaborated in a written form, for example as an instructor checklist per student/working group which follows the course curricula and monitors student/working group performance and skills.

After each assessment, the CDs inform the students/working groups about their results. The CDs, supported by instructors/SMEs, explain to students/working groups where they meet the learning objectives, or where their skills must be improved.

Results of the formative, summative assessment and practical examination of students / working groups are the inputs to the training evaluation and review cycle.

c. Advanced Distributed Learning student assessment

The assessment of the students in ADL courses is automated – facilitated by respective ADL software. The assessments of the students are carried out via a multi-choice level test where the results are monitored by the particular ADL Administrator.

4.2. Student Final Grades

Student Assessment and Graduation Criteria at the NATO EOD COE

At the conclusion of each course, student assessment results are summarized and evaluated. The final grade is determined by the Course Director (CD), with input from instructors.

Within the NATO EOD COE, there are two possible final grades:

a. Successfully Completed the Course

To achieve this grade, students must:

Attain a minimum score of 70% on all assessments.

Maintain at least 90% attendance in both theoretical and practical lectures.

Students who meet these criteria will receive a graduation certificate along with the course's graduation badge.

b. Participated in the Course

A student will receive this grade if they:

Fail to meet the course assessment criteria.

Do not attend the minimum required number of lessons or exercises.

In such cases, a graduation certificate will not be issued. Instead, students will be formally notified by the NATO EOD COE Director or a designated authority, depending on their military rank.

The rationale for this grading system is to reduce the potential negative impact that assessments and grades can sometimes have on the learning process.

A course certificate, issued by the EOD COE and signed by the Director or a delegated authority, is provided to all students based on their performance. The final grade is recorded in the After Action Report (AAR) and stored in the EOD COE internal database.

These grading principles also apply to Education & Individual Training (E&IT) solutions delivered via Advanced Distributed Learning (ADL). For ADL courses, the distribution of graduation certificates is automated through NATO's Joint Advanced Distributed Learning (JADL) system.

4.3. Assessment Plan

The Assessment Plan is created by CD and it is a part of the specific Course Control Documents (CCDs) and should answer the following questions:

- Why is the assessment required?
- What should be assessed?
- Who should do the assessment?
- How is the assessment done?
- When will the assessment be done?
- What grades and assessment criteria are used?

The assessment plan as a part of the CCDs shall contain information about how the course participant's progression is tested and how the overall performance is assessed. Particular Course Directors inform the students in advance about the basic structure and composition of the assessment.

4.4. Assessment Concept

a. Single course, student assessment

Courses with a total study period of five days or less are examined only by the summative method of student assessment. This can be carried out for example, in a seminar form where active participation confirms that the learning objectives have been achieved.

Courses with a total study period of more than 5 days are examined using a combination of formative and summative assessment methods.

b. Practical examination

Examination of courses with practical examination/staff exercises method of assessment also includes a mentor's/instructor's assessment of each student's performance. The evaluation criteria and selection of assessment methods are stated in the assessment plan of the course, for example as instructors' checklist that is a part of course documentation.

c. Retesting of students

Courses with a total study period of five days or less, do not generally offer opportunities for retesting. In courses with a total study period of more than five days, retesting may be granted if participants who fail a "Successfully Completed" examination request a retest via a particular Course Director. In such a case, the Course Director informs the Command Group about the unsatisfied results with their submitted request for retesting.

d. Assessment of the ADL course student results

The successful completion of the ADL course is proved by the automatically issued certificate, generated by the ADL software itself.

5. QUALITY ASSURANCE OF FACULTY AND STAFF

To guarantee the quality of guest speakers and/or contracted lecturers and faculty and staff involved directly in E&IT deliverables, the NATO EOD COE practices procedures depicted in Figure 9.

5.1. Preparation and Assessment of the Course Instructors

To ensure adequate education and training for internal instructors/SMEs, the NATO EOD COE designed the Personnel Development Programme (PDPr) to improve the personnel skills of international and/or national SMEs before a course. The PDPr also includes orientation briefings to familiarise newcomers with processes at the NATO EOD COE. The processes are described in ANNEX J, and for internal instructors/SMEs, it is listed in their job descriptions.

Moreover, to maintain and to provide EOD COE members with a knowledge update, the PDPr includes all activities of the Centre's staff sustainment training.

The Centre's sustainment training can include specific international seminars, symposia and selected/identified courses, including train the trainer's courses.

Finally, the overall PDPr (staff orientation training, desired education and sustainment training) is designed by the Command Group and must be endorsed by EOD COE DIR and approved by the Steering Committee as a part of the annual POW.

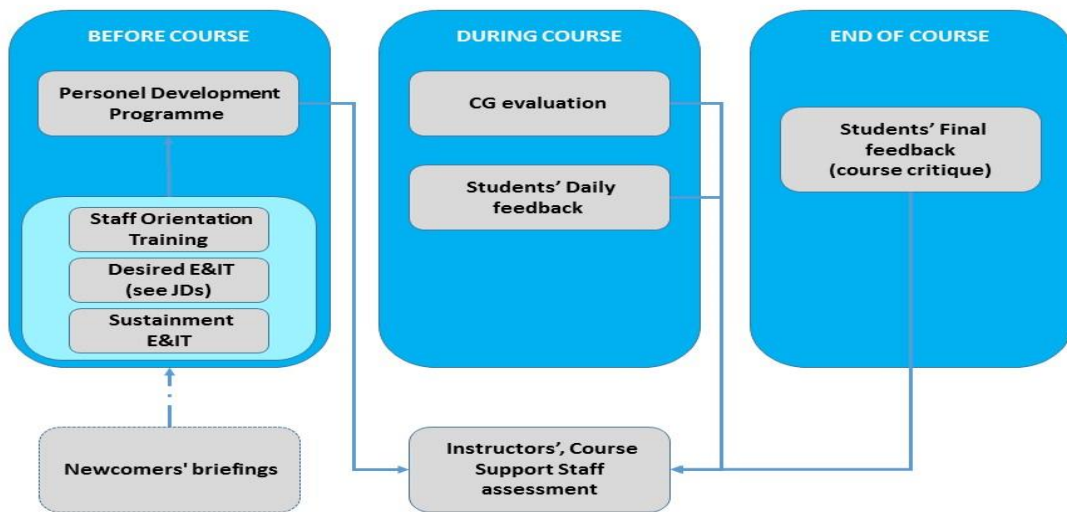


Figure 9: Instructors' and support staff preparation and assessment

Instructors are assessed on their abilities to:

- convey the intended learning objectives,
- structure and effectively schedule the program/lecture/practice,
- answer student 's questions and clarify unclear topics/matters,
- comply with safety regulations (practice and field exercises),
- guide the students towards a successful learning experience,
- use resources, material and teaching aids effectively (smart boards, projectors, etc.),
- conduct command and control,
- guide and mentor the students during practices and syndicates so they can reach the intended objectives on their own,
- use proper technical and NATO EOD terminology,
- express themselves in the English language.

The instructors' teaching skills are monitored by the Course Directors by their means (e.g. Instructor's Performance Evaluation (Annex I), students' course critique, course survey (Annex C) and so on), which are finally used as one of the inputs for the Course Review Evaluation, and finally is recorded in the AAR. The lectures or new contracted speakers (Annex H), who perform the particular lecture for the first time are monitored by the EOD E&T Delivery Branch Chief and CG members, too. The gratitude of the high level of the instructor's professionalism is expressed by NATO EOD COE DIR in the form of the E&IT badge of "Trainer", which criteria are content of Annex J.

5.2. Preparation and Assessment of the EOD COE Support Staff

An inseparable role in the quality of courses is achieved not just by highly educated and experienced instructors but also by well-prepared support staff that contributes to the overall course quality.

The EOD COE support staff supports the delivery of courses in:

- Administrative issues, e.g. booking training facilities of the Host Nation, recording of course documentation and communication with course applicants.
- Legal issues, e.g. preparation and signing of contracts with guest speakers/lecturers, if it's applicable.
- Financial issues, e.g. reimbursement of the course expenses/guest speaker's/lecturer's performance.
- Logistic support, e.g. procurement and supply with the material necessary for course execution; provision of transportation, lodging and catering.
- Preparation of classrooms, training fields and scenarios.
- Safety and security management.
- Medical or fire protection support in case of field exercise/practice, etc.

Preparation of EOD COE support staff conducting and servicing of the above-mentioned support to courses execution is based on the national/military education, which is stated in the NATO EOD COE job descriptions. In accordance with battle rhythm, the course director organises Course Coordination Meeting with designated support staff (see Annexes A and B). Moreover, to meet NATO standards the EOD COE support staff is educated by agencies and SMEs working in accordance with NATO objectives and requirements (i.e. NATO School, specific MTT). It is utilised through the identification of required courses for their support improvement.

These courses, e.g. courses dedicated to the Sustainment Programme of EOD COE support staff, are part of the yearly NATO EOD COE POW.

Assessment of the EOD COE support staff is carried out by the Course Director and reinforced by instructors' and students' feedback and becomes a part of the CRE and the course documentation. These assessment outcomes are fruits for thought for continuous improvement of the NATO EOD COE QA.

6. LEARNING RESOURCES AND STUDENT SUPPORT

The management of the learning resources and student support provided by the NATO EOD COE consists of facilities, teaching aids, learning resources (student study materials), etc. The main effort of the learning resources management and student support is to fulfil student's needs before and during the course execution.

The learning resources and support mechanisms should be:

- readily accessible to students,
- designed according to student's needs,
- relevant,
- responsive to feedback from those who use them,
- periodically monitored and improved.

The learning resources and student support within the NATO EOD COE are requested by Course Directors and provided by supporting staff in accordance with valid NATO EOD COE SOPs (Annex M). The EOD Glossary, terms, and definitions are available on the EOD COE webpage.

6.1. Material Resource Management

Material resources are provided by the NATO EOD COE in line with the NATO EOD COE operational and functional MoU, using the Framework Nation (FN) or the Host Nation capabilities for the particular courses.

a. In-house material resources include:

- 2 x classrooms with a modular design that can be configured differently according to the intended seating capacity.
- Classroom equipment and furniture.
- Classified areas with secured communication means.
- Visual aids: monitor and TV sets, smart boards, whiteboards, projectors.
- Audio sets, loudspeakers.
- Printers, fax machines, photocopy machines.
- C3 mobile team set.
- Mobile houses, and caravans for simulation of Homemade Explosives course scenarios (located at the Military Training Area Lest).
- Containers for storing the HMEC-A material (located at the Military Training Area Lest)
- Dedicated Homemade Explosives courses hands-on training kits.
- Consumable material for hands-on training.
- Consumable office/stationary material for instructors and students.
- Students' particular course learning resources (study materials in electronic and hardcopy versions, internet connectivity).

b. Framework nation resources include:

- Training facilities (fully didactically equipped classrooms; instructor's office) with teaching aids available at the 905. Centre for Specialized Combat Support (National Centre), Novaky.
- EOD equipment and EOD material at the 905. Centre for Specialized Combat Support (National Centre), Novaky.
- Permanent demolition site and indoor testing facilities at the national Centre for Testing of Ammunition.
- Permanent training areas at the Military Training Area Lest including classrooms, instructors' office, demonstration and demolition site.
- Military Garrison House facilities, Trencin.
- Communication and Information Systems HQ facilities, Trencin.
- Supply the explosives and specific materiel (firing machines, cables, etc.).
- Fire protection and medical support during procedures when working with explosives and chemicals.
- Simulation centres at the Military Training Area Lest and the Armed Forces Academy of Gen M. R. Stefanik in Liptovsky Mikulas.
- Necessary support of the Slovak Armed Forces Academy of Gen M. R. Stefanik.

Material and student support requirements (facilities, teaching aids, learning resources, etc.) are managed in accordance with Annex B to this QAP.

For booking or requesting Framework Nation resources, the Course Directors submit their requirements (coordinated with EOD E&T Delivery Branch) via chain of command to the Deputy Chief of Staff, who manages, coordinates, and incorporates these requirements into the Slovak Armed Forces planning process (i.e. planning of availability of SVK training facilities...). The Framework Nation resources are generally requested not later than four months before the course execution phase.

c. Sponsoring nations Education and Training Facilities (ETF):

The EOD COE sponsoring nations could offer their national ETFs in due to host the already available E&IT solutions that have been designed, developed and delivered by EOD COE. Hosting of the particular course with requirements on sponsoring nation support is content of the signed cooperation programme, where all of the parties are legally agreed on course management.

Upon sponsoring nations' consent, and further Cooperation programme, the EOD COE delivers the HMEC-B at the Romanian Combat Support Training Centre in Ramnicu Valcea.

With regards to the NATO EOD SOT delivery, the same principle of hosting the E&IT solutions is applied with the Polish Military Engineering and CBRN Centre in Wroclaw.

Intellectual property, quality of the course and the way of improvement are strictly the EOD COE's responsibility as the E&IT solution's authority e.g. design, development, delivery and evaluation of the hosted course.

Any course requirements (see EOD COE SOP 400, 401, 608), that are submitted by the Course Director, have to be consulted with the EOD Education and Training Department Head in advance.

Administrative details, such as lodging arrangements, meals and transportation to/from the COE are synchronized during the course coordination meeting. To start the preparation of entry passes (badges) and in-processing documentation, the CDs provide the final roster of students to the Deputy Chief of Staff/or to the respective institution POC that is hosting the course delivery.

To be able to successfully prepare, deliver and evaluate the E&IT solutions, all management of events is conducted based on the detailed resource management checklist (Annex F).

To improve learning resources management and students' support for a particular course, the NATO EOD COE is gathering observations and recommendations and is monitoring students' satisfaction, which is finally analysed and summarized in the "After Action Report".

6.2. Course Policy

a. Course Admission

The EOD COE course admission policy is annually updated and agreed upon (a year ahead) during the Autumn EOD COE Steering Committee meeting. For the NATO EOD COE Sponsoring Nations and NATO bodies students, the course fee is free of charge. For non-Sponsoring Nations students, the course fee is determined by the Steering Committee.

All details about E&IT deliverables including course fee are incorporated in the annual course portfolio, which is publicly available on the NATO EOD COE Web page (www.eodcoe.org/en/events) and NATO ETOC (<https://e-itep.act.nato.int/>). Before course delivery, these details are disseminated as an enclosure to NATO EOD COE particular course Calling notice, usually three months before course delivery.

b. Seat Allocation

The operational needs of NATO and NATO partners (further “customer” or “costumers”) on E&IT are monitored by the NATO EOD COE CG. It is the Centre’s highest priority to inform customers about iterations of courses (via Calling Notice with attached registration form) and to inform them about the particular course (from the course portfolio). Registration is available through the NATO EOD COE web page, too.

Applications for courses are collected by the Action Officer (before the registration deadline) and listed in a course students’ roster in accordance with the following criteria/priority:

- To satisfy SN’s needs in E&IT the NATO EOD COE SNs are privileged to have two seats allocated per every course iteration.
- To support NATO needs and efforts in transformation: NATO HQs can send their NATO nominees to attend NATO EOD COE courses. If the nomination is the NATO request, the NATO HQ reimburses course expenses (i.e. course fee, transport, lodging, and catering) to the NATO EOD COE in line with NATO’s reimbursement policy (via the hand of the Country Engagement Team/Military Cooperation Division , or Emerging Security Bureau, or other certified agencies). The course admission fee is not charged if the NATO nominee serves in the NCS/NFS position.
- When the aforementioned two requirements are covered then free seats of the particular course are offered to other customers.
- To continue the next part of the blended learning, the student must prove successful ADL completion via an issued course certificate. Without the ADL course certificate, the student cannot be admitted to the next part of the course. Seat allocation in courses, which are delivered as a Mobile Training Team (MTT), is agreed upon with the Host Nation and usually dedicated (but not limited) to one of the Sponsoring Nations (for more details see the NATO EOD COE MTT Terms of Reference).

The course students’ roster is summarised and submitted by the EOD E&T Department Head for the NATO EOD COE Director’s approval. When approved, all selected students are notified about their acceptance to the particular course and the “Confirmation Letter” (see Annex E) is sent to them.

In case of limited seat capacity per course, when customers’ demands cannot be satisfied, the customer is informed and upon its consent, recorded on a specific “Course Waiting List” by the EOD Education and Training Delivery Branch Head.

c. Course cancellation

Cancellation of any NATO EOD COE event is subject to the approval of the NATO EOD COE Director. The cancellation of long-term events that were recorded in the annual course portfolio (www.eodcoe.org/en/events) and NATO ETOC shall be sent through official channels to the selected students no later than fourteen days before the respective event.

If a cancellation of another event is implemented notwithstanding the previous paragraph or if an unplanned change has taken place under which the event would no longer comply with this Quality Assurance Policy, the NATO EOD COE Director shall take all due measures to ensure the quality management of the EOD COE.

d. Student's Appeal

Any student appeals, including complaints, requests, or aspirations, must be submitted by the individual to the specific Course Director (CD). The CD will address the student's appeals through the appropriate chain of command to ensure compliance with the Quality Assurance Management (QAM) processes. The responsibility for justifying student appeals lies with the NATO EOD COE QAM. Before the QAM responds to the student who submitted the appeal, the NATO EOD COE Director must be informed of the appeal's results.

7. COMMUNICATION AND INFORMATION SYSTEMS

7.1. Information and Knowledge Management

Information Knowledge Management (IKM) combines Information Management and Knowledge Management:

- Information Management is the collection and management of information from one or more sources and the distribution of that information to one or more recipients, directs and supports the handling of information throughout its life cycle ensuring that the right information reaches the right person at the right time and in the right form.
- Knowledge management is the process of capturing, developing, sharing and effectively using organizational knowledge. It refers to a multi-disciplined approach to achieving organizational objectives by making the best use of knowledge. Knowledge management efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization.

Information Knowledge Management within the EOD COE is supported by fundamental documents, Operational and Functional Memorandum of Understanding (MoU), EOD COE Strategic Plan and Communication Plan. It is tightly linked to the EOD COE structure, Standard Operating Procedure (SOPs), Communication and Information System and the Centre's Battle of Rhythm.

a. Information Systems

EOD COE Internal communication is executed through IP phones and e-mails.

COE's cloud allows COE members to share information internally through a WebJet Document Management System (DMS). The DMS provides a central storage and collaborative space for documents, information and projects. The DMS respects intellectual property and security principles. This system is not suitable for working with classified documents and information.

Each staff member of COE has been assigned a separate user profile at the DMS. It provides a reserved working space for each staff member.

For general use, there is a shared space at the DMS to share public information for COE members. Each department and branch has a functional workspace. It is a collaborative workspace where privileges are managed based on COE structure and access to documents is managed by managers of the dedicated space.

The information flow is not limited to electronic versions. Some documents are created, or received by COE in hardcopy (printed) only. These documents have to be recorded too. There is an archiving system at the COE, which is set via internal procedures. All COE members have the option to archive all documents in printed form. For the documents that need to be stored for a long period, there is an availability at the COE.

Internet connection is provided to all EOD COE staff members through the EOD COE private cloud.

b. E&IT communications and information activities

The following Table 5 summarizes the main communications and information activities for E&IT events, which are not specified in the EOD COE Communication Plan:

Communication	Lead	When	Who	Form	Remark
EOD COE course catalogue/ portfolio	EOD E&T Delivery Branch Chief	Annually in January	IKM/SPTB	PDF document available on the EOD COE website and DMS	Uploaded on website. This document specifies the E&IT provided by EOD COE for an upcoming year together with the description of the event, detailed info about DTG and seats available.
Calling notice	EOD E&T Delivery Branch Chief	NLT 90 days prior to the course opening	CD, Action officer	Written and PDF document sent by e-mail are available on EOD COE DMS	Sign by EOD COE DIR. The main purpose of the calling letter is to specify particular details about upcoming events to possible customers. It is distributed IAW global distribution list.
Students Administrative guidance	EOD E&T Delivery Branch Chief	Together with a Calling notice	CD, Action officer	PDF document available on the EOD COE website and DMS	Uploaded on website specifying information about locations, in processing, Real Life Support etc.
Admin correspondence	EOD E&T Delivery Branch Chief	Before the course	Action Officer	e-mail	Receiving of registration forms from requestors, clarification of all potential E&IT related issues.
Confirmation letters	EOD E&T Delivery Branch Chief	NLT 30 days prior to the course opening	Action Officer	Written and PDF documents sent by e-mail are available	Sign by EOD COE DIR. The main purpose of the confirmation letter is to announce and confirm the allocation of seats in a

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Communication	Lead	When	Who	Form	Remark
				on EOD COE DMS	particular event to a selected training audience.
Course coordination meeting	QAM/CD	NLT 7 days prior to the course opening	Instructors, support staff	Meeting Outputs available on the EOD COE tasker tracker system	Determining tasks and responsibilities on the evaluation and review process.
Daily hot wash-up	CD	Daily during the course	Instructors and Support Staff	Meeting	Recognizing, discussing and clarifying identified problems and shortfalls.
Overall course evaluation meeting	QAM/CD	Last day of course	Students, Instructors, Support staff, HNS	Meeting	Verbal guided discussion. Main inputs are provided by students IOT collect data not included in evaluation sheets.
After Action Report	QAM	NLT 21 days after the course	CD	Written and PDF document available on EOD COE DMS	Available for QA stakeholders. Written final product/summary of course review/evaluation.
Course review evaluation	QAM	NLT 15 days after course	CD, LL, Instructors and Support Staff	Meeting Outputs available on the EOD COE tasker tracker system	Participants provide processed data from course review/evaluation. QAM gives guidance on AAR preparation.
QA Annual Conference	QAM	Annually	QA stakeholders	Meeting	Inputs based on CRE and SCE Output represented by approved EOD COE QA plan. Written and electronic documents are available on EOD COE DMS.
ETOC/eITEP	EOD E&TD		Action officer	TSC and ITEP guidance	See para 7.2
ePRIME	EOD E&TD	Accordingly	Action officer	TSC and ITEP guidance	
EOD COE website	EOD E&T Delivery Branch Chief		IKM/SPTB		Main publicly available platform informing about EOD COE E&IT activities. Provides nearly real-time info.
EOD COE news letter	EOD COE DIR	Biannually	IKM/SPTB		Spread within the EOD community of interest
EOD COE steering committee meeting	SC chairman	Biannually	SN representative , EOD COE	Meeting	Directs and approves main activities of EOD COE, including E&IT

Communication	Lead	When	Who	Form	Remark
			DIR, EOD COE members		events and their schedule. Written and electronic documents are available on EOD COE DMS.

Table 5: E&IT communications and information activities

a. Specific procedures

- **MDFD Directorate-RA-DH-NATO HQ communication mechanism**

Within the NATO SAT, the RA, DH and Education and Training Facility (ETF) authority harmonize efforts to ensure NATO definition and delivery of E&IT solutions that are effective, efficient, and relevant.

The appointed DH supports HQ SACT/MDFD Directorate in the translation of NATO requirements into E&IT solutions. The DH coordinates with ETFs and supports HQ SACT/MDFD Directorate through the definition and development of E&IT solutions.

The EOD area has been recognized as a specialist area of expertise within the MILENG discipline. MILENG COE has been appointed as the DH for MILENG within NATO; the EOD COE is harmonizing communication mechanism with MILENG COE and appointed MILENG RA.

The process of communication among the abovementioned bodies related to the EOD specialized area is within the responsibility of the EOD COE DIR and conducted by QAM via its assets within QMT.

- **ETOC Procedures for training and E&IT events**

The NATO Education and Training Opportunity Catalogue (ETOC) as a part of the e-ITEP is a web-based application accessible through the NATO Unclassified Public Area Network (NUPAN).

It aims to provide all NATO and selected non-NATO (military and civilian) training providers with the opportunity to advertise their courses and to enable Nations, Partners, commanders, training managers, military operators as well as civilians to obtain an overview of the training possibilities/opportunities.

The ETOC permits NATO to align offered courses with a discipline and subsequently allow their certification.

The ETOC is managed by the SACT/MDFD Directorate/ E&IT Planning and Management Branch, even though the education and training institutions are the sole providers of the course information and their respective iterations.

Within EOD COE, the assigned ETOC administrator is responsible for information provision, updates and harmonization with EOD COE POW and EOD COE SC decisions

- **ePRIME procedures for training and E&IT events**

ePRIME is operated under the authority of NATO Nations, and managed by NATO's International Staff and International Military Staff. Procedures for the ePRIME are the same as for ETOC, guided by NATO Country Engagement Team /Military Cooperation Division annual estimates.

Information and Knowledge management processes are incorporated in the EOD COE Standing Operating Procedure (see SOP 200).

7.2. Communication Plan

Effective communication is vital to help any organization stay efficient and productive. It involves the seamless flow of information through the various internal and external links. Based on this, the EOD COE created the independent "NATO EOD COE Communication Plan" which provides a framework to manage and coordinate a wide variety of communications channels that are utilised during the training.

The EOD COE is a member of NATO and EOD/C-IED/Demining Community of Interest and we maintain excellent relationships with partners. The relationships are depicted in Annex K.

8. PUBLIC INFORMATION

In accordance with the COE's public information policy, all relevant information is available on the COE's website, which provides up-to-date details on annual E&T activities and application procedures. To ensure the security of sensitive EOD-related content, certain pages are accessible only to registered users (password-protected).

For E&IT, a dedicated section of the NATO EOD COE website (<https://www.eodcoe.org/en/education-training/about-us/>) offers comprehensive information on courses, training events, workshops, and related activities. Additionally, in line with NATO ACT directives, the NATO EOD COE publishes its E&IT deliverables in the NATO Education and Training Opportunities Catalogue (ETOC), where participants and stakeholders can access the latest details on training and courses. The information within NATO ETOC is continuously updated based on the approved NATO EOD COE Programme of Work (POW).

To enhance knowledge delivery through Advanced Distributed Learning (ADL), the NATO EOD COE utilizes the NATO Joint Advanced Distributed Learning (JADL) and GlobalNet portals, both administrated by NATO.

Recognizing the importance of modern communication trends, the NATO EOD COE has established social media accounts to promote its work and share updates with the EOD Community of Interest (COI).

As outlined in the Memorandum of Understanding (MoU), the NATO EOD COE serves as a multinational hub for information sharing. One of its key tools for disseminating the latest EOD developments is The EOD Express, a monthly online newsletter designed to keep the EOD COI informed.

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EOD COE Director

List of abbreviations

AAR	After Action Report
ACO	Allied Command Operations
ACT	Allied Command Transformation
ADL	Advanced Distributed Learning
AQAR	Annual Quality Assurance Report
ATF	Alcohol Tobacco Firearms
ATP	Allied Tactical Publication
C2	Command and Control
C3	Command, Control and Communication
CA	Comprehensive Approach
CBL	Competence Based Learning
CBRN	Chemical, biological, radiological and nuclear
CCD	Course Control Documents
CD	Course Director
CDS	Concept Doctrine Standardization
CG	Command Group
CIS	Communication and Information System
CNAD	Conference of National Armaments Directors
COE	Centre of Excellence
COI	Community of Interest
COS	Chief of Staff
CRE	Course Review/Evaluation
CRT	Curriculum Review Team
DAP	Discipline Alignment Plan
DAT	Defence Against Terrorism
DCF	Delayed Course Feedback
DIR	Director
DDIR	Deputy Director
DMS	Document Management System
DoK	Depth of Knowledge

E&IT	Education and Individual Training
EO	Explosive Ordnance
EOD	Explosive Ordnance Disposal
ETD	Education and Training Department
ETF	Education and Training Facility
ETDB	Education and Training Delivery Branch
ETDvIB	Education and Training Development Branch
ePrime	Partnership Real Time Information Management and Exchange System
ETOC	Education and Training Opportunities Catalogue
EXER	Exercise
FN	Framework Nation
HOTO	Hand Over / Take Over
IKM	Information Knowledge Management
IPC	Interoperability Platform Countries
IT	Information Technology
JADL	Joint Advance Distributed Learning
MDFD Directorate	Multi-Domain Force Development Directorate
LL	Lessons Learned
EOD LLAB	EOD Lessons Learned and Analysis Branch
MoU	Memorandum of Understanding
MTT	Mobile Training Team
MULIS	Multiple Iterations
NC	National Centre
NCA	NATO Command Arrangements
NCS	NATO Command Structure
PBL	Project Based Learning
PDCA	Plan, Do, Check and Act
PDP	Personnel Development Plan
PDPPr	Personnel Development Programme
PEC	Program Evaluation Cycle
POW	Program of Work

QA	Quality Assurance
QAM	Quality Assurance Manager
QAMR	Quality Assurance Management Review
QAP	Quality Assurance Policy
QAS	Quality Assurance System
QC	Quality Control
QMS	Quality Management System
QMT	Quality Management Team
RA	Requested Authority
ROE	Request of Event
ROP	Request of Purchase
SAT	System Approach to Training
SBL	Scenario Based Learning
SCE	Series of Course Evaluation
SME	Subject Matter Expert
SN	Sponsoring Nation
SOP	Standard Operating Procedure
STP	Strategic Training Plan
TNA	Training Needs Analysis
TRA	Training Requirement Analysis
TSD	Transformation Support Department
TRCL	Task Responsibility Check List