Council of the
European Union

Brussels, 14 May 2018
(OR. en)

8763/18

EUMC 81
CSDP/PSDC 236

COVER NOTE

From:	European External Action Service (EEAS)
To:	European Union Military Committee (EUMC)
Subject:	Military Engineering Concept for EU-led Military Operations and Missions

Delegations will find attached document EEAS(2018) 224 REV 2.

Encl.: EEAS(2018) 224 REV 2

EUROPEAN EXTERNAL ACTION SERVICE

European Union Military Staff

Working document of the European External Action Service

of 14/05/2018

EEAS Reference	**EEAS(2018) 224 REV2**
Distribution marking	**PUBLIC**
From **To**	**European Union Military Committee (EUMC)** **European Union Military Committee (EUMC)** **CSDP/PDSC; EUMC**
Title / Subject	**Military Engineering Concept for EU-led Military Operations and Missions**
[Ref. prev. doc.]	**-**

Delegations will find attached the Military Engineering Concept for EU-led Military Operations and Missions, which was agreed by the EUMC on Tuesday 08 May 2018 by silence procedure.

MILITARY ENGINEERING CONCEPT

FOR

EU-LED MILITARY OPERATIONS AND MISSIONS

TABLE OF CONTENTS

REFERENCES

A. Treaty on the European Union (TEU) and Treaty on the Functioning of the European Union (TFEU) (Official Journal of the European Union C 326, 26. 10. 2012, P. 13).

B. A Global Strategy for the EU's Foreign and Security Policy (ST 10715/16, dated 28 June 2016).

C. Council conclusions on implementing the EU Global Strategy in the area of Security and Defence (ST 14149/16, 14 November 2016).

D. Council conclusions on progress in implementing the EU Global Strategy in the area of Security and Defence (ST 6881/17, 06 March 2017).

E. Joint Communication to the European Parliament and the Council: the EU's comprehensive approach to external conflict and crises 11.12.2013.

F. European Union Military Staff (EUMS) Terms of Reference and Organisation (ST 9762/17, 09 Jun 2017).

G. Council Decision 2017/971 of 8 June 2017 determining the planning and conduct arrangements for EU non-executive military CSDP missions and amending Decisions EUTM Somalia EUTM Mali and EUTM RCA.

H. EU Concept for Military Planning at Political-Strategic level (ST 6432/15, dated 23 Feb 2015).

I. EU Concept for Military Command and Control (ST 5008/15, dated 5 Jan 2015).

J. EU Concept for Force Generation (ST 14000/15, dated 11 Nov 2015).

K. EU Military Rapid Response Concept (ST 17036/1/14, dated 08 Jan 2015).

L. EU Battlegroup Concept (ST 13618/06, dated 11 Dec 2012).

M. EU Concept for Contractor Support to EU-led Military Operations (ST 8628/14, dated 7 April 2014).

N. EU Concept for Logistic Support for EU-led Military Operations and Missions (ST 15040/14, dated 03 Nov 2014).

O. Host Nation Support Concept for EU-led Crisis Management Operations (ST 7374/12, dated 06 March 2012).

P. EU Concept for Civil-Military Co-operation for EU-led Military Operations (ST 11716/1/08, dated 03 Feb 2009).

Q. Comprehensive Health and Medical Concept for EU-led Crisis Management Missions and Operations (ST 10530/14 dated 03 June 2014).

R. Concept for the Implementation of a European Air Deployable Operating Base (ST 6908/1/10, dated 19 March 2010).

S. EU Concept for Reception Staging Onward Movement and Integration (RSOMI) for EU-led Military Operation (ST 9844/12 dated 11 May 2012).

T. Council Decision (CFSP) 2015/528 of 27 March 2015 establishing, a mechanism to administer the financing of the common costs of EU operations having military or defence implications (ATHENA) and repealing Decision 2011/871/CFSP, dated 19 Dec 2011.

U. EUMC Glossary of Acronyms and Definitions (ST 6460/18, dated 20 Feb 2018).

V. EU Concept for Strategic Movement and Transportation for EU-led military operations and missions (ST 00785/12 dated 16 June 2017).

W. Suggestions for crisis management procedures for CSDP crisis management operations (ST 7660/2/13, dated 18 June 2013).

X. Council conclusions on progress in implementing the EU Global Strategy in the area of Security and Defence - Council conclusions (ST 6875/17, dated 06 March 2017).

Y. EU Headquarters manning guide (EEAS 01510/14, dated 16 July 2014).

Z. Concept for Countering Improvised Explosive devices (C-IEDs) in EU-led military operations (ST 9594/16 dated 30 May 2016).

AA. EU concept for CBRN EOD in EU-led Military Operations (ST 8948/08 dated 29 April 2008).

BB. European Union Military Concept on Environmental Protection and Energy Efficiency for EU-led military operations (ST 13758/12, dated 14 September 2012).

CC. Technical requirements for contracted camp building and camp management for EU operations and Missions (ST 11516/17 dated 26 July 2017).

DD.

INTRODUCTION

1. In a complex, connected, and contested world, European Union wants to enhance its strategic autonomy and become a stronger actor on the international scene to promote peace and security in its neighbourhood and beyond. This goal has been stressed in the "Global Strategy for the European Union's Foreign and Security Policy" adopted in June 2016 (Ref B).

2. The Implementation Plan on Security and Defence (IPSD) set out actions to implement this EU Global Strategy (EUGS) that aim to develop a stronger Union in security and defence, which is able to tackle today's threats and challenges more effectively, with the right capabilities, tools and structures to deliver more security for EU citizens. The EU must contribute to responding to external conflicts and crises, building the capacities of partners and protecting the Union and its citizens.

3. The need to improve the EU's capacity to plan and conduct civilian and military missions and operations has been identified in this IPSD with the overall objective to provide faster, more effective and more seamless response. In that perspective, Member States have been adapting structures and at a strategic level the Military Planning and Conduct Capability (MPCC) has been established in 2017 within the European Union Military Staff.

PURPOSE

4. The purpose of this document is to establish and update the concept for Military Engineering in order to synchronise and optimize Military Engineering (MILENG) support to EU-led Military Operations and Missions at all levels.

SCOPE

5. The document determines the relevant principles of Military Engineering Support to EU-led Military Operations and Missions. It particularly focuses on the core tasks of MILENG staff at strategic and operational levels of a Joint Operation or Mission and draws the implications of the

EU specific funding mechanism, the EU Comprehensive Approach and the International Framework. However, it also considers the tactical level.

KEY DEFINITIONS AND PRINCIPLES

6. **Military Engineering.** Military Engineering (MILENG) is a function in support of operations and missions to shape the physical operating environment.

7. **Coordination.** MILENG as a function is coordinated by a MILENG staff.

8. **Description.** MILENG is an inherent aspect of each joint function; at all levels of command, in any mission, campaign or operation, and in all phases. It supports the achievement of the desired objectives by enabling or preventing manoeuvre or mobility; developing, maintaining, and improving infrastructure. MILENG incorporates areas of expertise such as engineering, Explosives Ordnance Disposal, Environmental Protection, military search and management of infrastructure, including contracted civil engineering. MILENG also makes a significant contribution to Countering Improvised Explosive Devices (C-IED), protecting the force and providing life support.

9. **Military Engineering roles.** Traditional roles of MILENG in terms of mobility, counter mobility, survivability and general MILENG support which categorize MILENG tasks/activities remain valid. MILENG supports commanders to shape the physical operating environment in a manner that best meets campaign and operation's objectives by achieving effects[1].

10. **Chief Engineer.** The "Chief Engineer" is the senior military engineer advisor[2] to the Commander and the staff on all aspects of MILENG and he is the head of the MILENG Branch. Acting on behalf of the Commander, the "Chief Engineer" has co-ordinating and technical authority over the allocation and employment of engineer assets in order to ensure capabilities and resources are used most effectively.

11. **Principles.** The main principles cover the command and control aspects and should be considered at each level of command when planning and executing the MILENG support to an operation or a mission.

[1] MILENG effects: to facilitate freedom of movement or manoeuvre; to prevent an adversary's freedom of movement or manoeuvre; to facilitate life support and force protection; to facilitate enhanced sustainment.
[2] At military strategic level = Senior Joint Chief Engineer; at operational level = Joint Force Engineer; at tactical level = Chief Engineer

a. Command and control (C2). EU Military Commanders have a direct authority over MILENG capabilities and units assigned in the Statement of Requirements (SOR) and over engineer resources financed or managed commonly. As Engineer assets may be tailored to any Joint Force organizational structure, simplicity and clarity of command relationships are mandatory. Other MILENG capabilities, as part of a national support element, remain under the authority of the Troop Contributing Nation (TCN).

b. Early and centralised planning. The "Chief Engineer" is responsible for contributing to the planning process at the strategic, operational, and tactical levels. Early MILENG considerations in any phase of an operation are vital for delivering efficient plans to the Commander. It is of the utmost importance that the "Chief Engineer" and his staff are fully integrated early in the planning and execution of operations. The "Chief Engineer" is responsible to the Commander for providing clear, focused and timely advice and support.

c. Centralised Technical Authority. The "Chief Engineer" at strategic, operational or tactical level has a full technical authority over MILENG capabilities and resources. His primary role is to advise on engineer tasks and priorities and to develop appropriate procedures, particularly for the Management of Infrastructure (regularly in compliance with Host Nations (HNs) rules and regulations, and with EU best practises). For the MILENG capabilities out of the SOR, Forces should implement their own national standards but with an interoperability3 approach. In addition the “Chief Engineer” advises the EU Military Commander on technical aspects and impacts of MILENG.

d. Execution. In most cases, execution of tasks will be decentralised and delegated to the lowest appropriate level of command. This may include MILENG capabilities of own forces, host nations, contractors, international organizations, other organizations and agencies, as available and willing to support.

e. Common efforts. Multinational or common solutions have to be pursued whenever national capabilities are insufficient. At Force level, pooling of Engineer assets allows stronger efforts for the benefit of the Force as a whole. At component level, multinational Engineer

[3] Different EU initiatives contribute to interoperability such as training; common equipment, procedures (e.g.: see Ref CC) and concepts.

capabilities can complement significantly a national approach. Finally, even when Engineer capabilities remain under national control, adequate multinational co-operations are encouraged.

f. Contractor Support to Operations (CSO). The possibility to outsource engineering capabilities, works and resources to support operations may at times be relevant to complement the MILENG support. CSO is a vital aspect of the planning process and requires close co-ordination with the financial and logistic experts to the Commander.

g. Relevance of information gathering. Credible and reliable information is vital for the planning process. At strategic level, engineers must be part of the Fact Finding Mission (FFM) and Military Strategic Information Gathering Team (MSIGT) in order to be able to contribute adequately to the planning process at the strategic level. The same applies to the operational level where the deployment of engineers in the Operational Liaison and Reconnaissance Team (OLRT) is essential for gathering relevant data and information, fine-tuning the planning process and for initiating local tasks related to the preparation of the operation or mission. During the execution, the MILENG Branch will be the central collection and development point for MILENG reconnaissance and intelligence collection.

SUPPORT TO JOINT FUNCTIONS[4]

It is of importance to highlight that in this "support and contribution to joint functions" section, tasks are not necessarily linked to a single joint function but tasks may be performed to support several joint functions.

12. **Support to Command and Control.** At all levels of command, an appropriate well-structured and robust MILENG expertise, composed of the "Chief Engineer" and his Engineer staff, is essential for supporting the C2. His principle task is to act as a technical advisor :

    a. Advisory duties. The "Chief Engineer" is the advisor on MILENG issues to the Commander and, pending the HQ structure, also to the Chief of Staff and his deputies. In his capacity as the “Chief Engineer”, he advises on the whole range of MILENG matters[5].

[4] See Overview in Annex A
[5] It includes considerations affecting the targeting process, especially when infrastructure demolitions are foreseen.

b. Contributions to HQ activities. In-house MILENG expertise contributes directly with the wide range of military disciplines: planning activities, monitoring of engineer subordinate levels, synchronisation of engineer support, contribution to others HQs activities.

c. Subject Matter Experts (SMEs). HQ C2 procedures require the installation of boards and working groups. The MILENG staff contributes to their work through SMEs.

d. Liaisons[6]. The "Chief Engineer" and his staff establish appropriate liaisons according to the key principles with a special focus on technical co-ordination, co-operation, CSO and control. They liaise adequately, both "horizontally and vertically", with all relevant HQ branches, military and non-military institutions, and/or individuals.

13. **Support to Manoeuvre and Fires.** The MILENG support to Manoeuvre and Fires is a direct support to the current or imminent operations. Pending type of Military Operation and the Crisis Management response framework, this support provides the force with the means to move, live and fight (including demolition actions when appropriate) on the battle field through the application of engineer resources to enable kinetic forces to achieve the advantage over their adversaries. It encompasses the following tasks: gap crossing, breaching, demolitions, area /route denial and clearance, countermine, military search[7] (aiming at locating people, information, and material resources employed by the adversary in order to interdict his ability to conduct operations against friendly forces and friendly populations) and road construction/improvement.

14. **Support to Force Protection (FP).** FP merges the measures and means to minimize the vulnerability of personnel, facilities, materiel, operations and activities from threats and hazards in order to preserve freedom of action and operational effectiveness thereby contributing to operation or mission success. Engineers have unique equipment and specially trained personnel which allows them to contribute significantly and technically to FP. MILENG support to FP covers the following tasks:

a. Protective works. It consists of passive measures covering all aspects of physical protection[8] of camps, bases, operational and facilities with a direct benefit for personnel, weapons, and materiel against the effects of adversary weapon, blast effect, unexploded ordnance (UXO),

[6] See also para 26 /b/iv Additional requirements.
[7] Military search is not implemented by all nations.
[8] E.g.: security fencing, lighting, obstacles, guard posts, watchtowers, bunkers, vehicle barriers, ammunition depot, protective positions.

improvised explosive device (IED) and explosive remnant of war (ERW). It may also include deception and concealment measures.

b. Participation in Explosive Ordnance Disposal Operations. EOD operations require the ability to conduct reconnaissance and search actions, to detect and guaranty a safe access to any unexploded ordnance (UXO), to provide diagnostics, to ensure appropriate protection and containment measures, to apply render safe Procedures and finally to dispose the UXO. Military engineers participate directly in some or most part of the tasks depending on Member States' (MS) national views on affiliation of EOD to MILENG.

c. Contribution to Countering-Improvised Explosive Devices Operations. Countering-Improvised Explosive Devices (C-IED) is provided by the collective efforts at all levels to defeat the IED system by attacking the networks, defeating the device and preparing the Force in order to reduce or eliminate the effects of all forms of IED used against friendly forces and non-combatants. Military engineers play a role in countering IEDs at all levels of command.

d. Support to Chemical, Biological, Radiological and Nuclear Defence. The aim of Chemical, Biological, Radiological and Nuclear (CBRN) Defence is to help to prevent the CBRN incidents, to protect the Force from the effects of CBRN incidents, and to take recovery actions, so that forces are able to accomplish the mission and maintain freedom of action in a CBRN environment. Engineers can support CBRN Defence by providing resources such as EOD capabilities, the construction and maintenance of expedient facilities for decontamination sites and Collective Protection.

e. Fire Protection. It includes the design and construction of fire prevention and suppression systems within infrastructure. It also includes the development, implementation and monitoring of a fire safety program within a camp, including training, exercises and the evaluation of the fire protection plans adopted by the military units/camps. The "Chief Engineer" has the responsibility for advising the Commander on the proper level of fire protection and prevention services within the theatre of operations depending on national views on affiliation of Fire Protection to MILENG.

15. **Support to Sustainment.** Sustainment is defined as the comprehensive provision of Logistic, Medical & Health and General MILENG Support necessary to maintain combat power throughout

all phases of operations.. In addition, Environmental Protection (EP) impacts on the Force are of an increasing interest[9]. MILENG support to Sustainment covers the following tasks:

a. Management of Infrastructure[10]. Management of Infrastructure covers the construction, restoration, acquisition, repair, maintenance and disposal of those infrastructure facilities required to mount, deploy, accommodate, sustain and redeploy the Force. It includes the construction, restoration and maintenance of camps and bases, **air and sea platforms** and lines of communication[11], CIS platforms, medical roles and evacuation facilities, power and water plants. In addition to military engineer capabilities, CSO[12] complements significantly the panel of solutions to implement the infrastructure support.

b. Environmental Protection[13]. EP is integration and application of environmental considerations to prevent or mitigate environmental impacts resulting from military activities. This environment encompasses water, air, ground, flora, fauna, natural and cultural resources. EP focus mainly on the development of "environment friendly" infrastructures, waste and sewage plants, sustainable water and power installations and of remediation solutions for mitigating the impact of military activities on environment.

c. Management of Class IV Supply[14]. Engineer operations regularly require a considerable amount of equipment, stores and special supplies. The management of fortification and construction materials, including outsourced engineering heavy equipment, is the responsibility of the Engineers.

16. MILENG Support to Sustainment globally falls under the logistic principles of collective responsibility. The "Chief Engineer" is in charge of the "common[15]" engineer support to sustainability and the related capabilities and resources.

---

[9] EP is becoming increasingly important since it minimizes adverse environmental impact, ensures the safety and health of personnel and reduces post-mission environment clean-up (See Ref BB).

[10] Management of Infrastructure was previously called Support (IES) or General Engineer Support at tactical level.

[11] Air and sea platforms and lines of communication usually enable both operational and sustainment activities.

[12] Management of Infrastructure is in charge of planning, designing and monitoring the works assigned to civilian companies and the works developed by any provider through arrangements.

[13] See Ref BB.

[14] Class IV Supplies are usually understood as Engineer Material and Resources.

[15] Common by nature: common used infrastructures, the resources financed on common costs and the dedicated engineer units under OPCON. Common by decision: on a voluntary base from TCNs, multinational dedicated units, resources financed together.

17. When Management of Infrastructure is embedded within a comprehensive and exclusive framework for Logistics and Sustainment, it might be considered as a joint logistic function[16]. In such a situation, the coherency of the C2 requires a well identified staff of infrastructure experts with a chief.

18. **Support to Intelligence.** The joint Intelligence process facilitates the understanding, analysis and assessment as well as the planning, execution and support of all operations. The Engineer Information (ENG INFO) process contributes to the Intelligence process with a special focus on the Intelligence preparation of the Area of Operation and the identification of Intelligence requirements. In addition, the process directly contributes to the knowledge development process. MILENG contribution to the Intelligence process is visible through the following tasks:

    a. Engineer Information collection. It covers the planning and organisation of ENG INFO collection effort. Amongst others, key infrastructures, facilities, lines of communication, terrain, potential ERW hazards, natural resources, raw materials and engineer related contractors are of primary interest.

    b. Engineer Information exploitation. It encompasses the collation, evaluation, analysis, integration, interpretation and dissemination of ENG INFO. It allows integrating into the planning process the effects of the operational environment on adversary and friendly capabilities and potential courses of action.

    c. Engineer Information memory. Maintenance of the Headquarters (HQ)' ENG INFO library and database.

19. **Support to Civil-Military Co-operation (CIMIC)**[17]**.** CIMIC enables the military to reach the desired end state by coordinating, synchronising and de-conflicting military activities with civilian actors[18], thus linking military operations with political objectives. Support to the Military Force, Civil-Military liaisons, Support to Civil Environment are underpinning the CIMIC activities which are planned and conducted on strategic level broad guidance, and operationalised at the operational and tactical levels. MILENG contribution to CIMIC is visible through the following tasks:

[16] Consequently, Member States' regulations consider their "National Infrastructure Support" as part of Logistic Support functions.
[17] See Ref P
[18] Co-ordination with EU Crisis Management instruments is outside the CIMIC perimeter.

a. Relationship facilitator. Relationship with Non-Governmental Organisations (NGOs) [19], Infrastructures and Works authorities, local economy actors[20] and local population[21].

b. Subject Matter Eperts support. Support to works related to development and aid projects in support of local Civil Authorities and support to engineer related activities of NGOs or Civilian International Organisations (IOs).

c. Complement resources and capabilities. Engineer resources and Management of Infrastructure expertise[22] are committed directly to support CIMIC activities if required.

20. **Support to Information Operations (Info Ops).** MILENG supports activities that are focusing on preserving EU-led Forces freedom of action. The "Chief Engineer" at each level advises on military engineering related activities that have an impact on Info Ops, such as environmental protection, hardening of facilities and hazardous areas. MILENG forces are also involved in direct relief operations which can support the Info Ops plan on target audiences. The MILENG forces involved in the actual MILENG support tasks need to establish relationships with a variety of civilian authorities and agencies, therefore performing Key Leader Engagement (KLE) and establishing a valuable source of information to assist in the planning of further information activities.

COMMAND AND CONTROL STRUCTURES, TASKS AND RESPONSIBILITIES

21. **General.** At each level of command, a senior engineer officer shall be appointed to serve as the MILENG advisor to the Commander. EU Commanders rely on a common HQ Manning Guide[23] for C2 structures. Staffing of MILENG branches of EU HQs is developed accordingly. However, depending on the nature of a particular operation, the relevant Commander is entitled to adapt the engineer branch and its subordination according the requirements identified.

[19] E.g.: demining activities
[20] Infrastructure Works have an urge impact on the local resources, on local economy and consequently on population.
[21] Interactions with local Authorities and land Lords are vital when considering Infrastructure Works with local labour on public or private premises.
[22] E.g. Engineering expertise for developing a water adduction network for a Farming Program.
[23] See Ref Y. It provides guidelines for the HQ activation and augmentation process, including an ORBAT for the manning.

22. **Military Strategic Level - Operation Headquarters (OHQ)/MPCC.**

a. Senior Joint Chief Engineer. The Senior Joint Chief Engineer is the advisor of the Operation Commander (OpCdr) or the Director of the MPCC (Dir MPCC) on the MILENG as a whole, guarantying the internal C2 coherency with other functions, and supporting the strategic level planning and the force requirement and generation process.

b. OHQ/MPCC - Military Engineering staff. The MILENG staff's contribution is essential for the Operational Planning Process with a special focus on the development of the Concept of Operation (CONOPS), the Provisional Statement of Requirement (PSOR) for forces and the directives for the Engineer Information process. His role is major regarding the assessment of strategic and key Infrastructures in the area of operations or missions from the planning process to the development of outsourced solutions and allocated strategic resources and funds.

23. **Operational Level - Force Headquarters (FHQ)/Mission Force Headquarters (MFHQ).**

a. Joint Force Engineer. The Joint Force Engineer is the principle advisor of the Force Commander (FCdr) or the Mission Force Commander (MFCdr) on all MILENG aspects with coordinating and technical authority over the Force MILENG capabilities and resources.

b. FHQ/MFHQ - Military Engineering staff. The MILENG staff's contribution is essential for the Operational Planning Process (OPP) on operational level with a special focus on the development of the Operation Plan (OPLAN)/Mission Plan (MPLAN), for the support to the campaign synchronisation and the joint effects management, for the planning and control of tasks assigned to the components, the management of the Engineer Information process, and coordination with actors and partners in the AOR.

24. The Joint Force Engineer and his staff are a fully-fledged branch placed normally under the C2 of the Deputy Chief of Staff for Support. As the contribution to operations can be significant, the Joint Force Engineer insures a privileged interaction as well with the Deputy Chief of Staff for Operations. Pending type and spectrum of Operation, this subordination can

be adapted[24].

25. **Tactical Level - Component Command Headquarters (CCHQs)**.

a. Component Chief Engineer. At Component Command level, the Chief Engineer[25] is the advisor of the Component Commander on the MILENG aspects, capabilities and resources allocated to the component.

b. CCHQ- Military Engineering staff. A MILENG staff at CCHQ level is required especially when two or more MILENG capabilities are assigned to the Component.

c. Chief Engineer's position within the Component HQ and MILENG staff structure depend on Co-ordination and C2 imperatives, but they must be coherent with the Component MILENG efforts to provide.

26. **Generic Military Engineering Branch.** A Joint MILENG Branch may be tailored to operation or mission necessities but shall be composed of all relevant staff elements which are deemed necessary to meet minimum C2 and functional requirements. The structure of the branch should allow the engineer staff to be represented in the various boards, working groups and cells as determined in the relevant HQ procedures.

a. Minimum requirements.

i. Primary advisor and branch chief role - ("Chief Engineer")

ii. Planning activities - (Plans and Infrastructure Branch or Plans branch)

iii. Conduct of operations - (Ops and Training Branch or Operations branch)

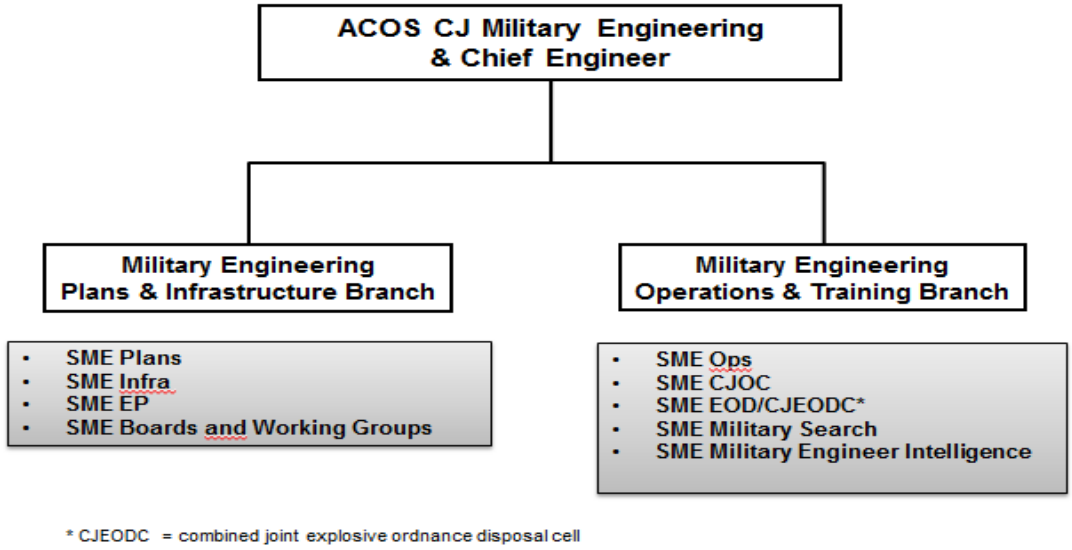
b. Additional requirements.

iv. Liaisons - (ENG LO[26]).

v. Other Subject Matter Experts[27], when required but not structurally represented elsewhere in the HQ.

c. Generic view. The following chart displays the generic C2 structure.

[24] Under the C2 of the Deputy Chief of Staff for Operations with a privileged interaction with the Deputy Chief of Staff for Support.
[25] Land Chief Engineer, Air Chief Engineer and Maritime Chief Engineer.
[26] An Engineer Liaison cell grouping for example engineer liaisons to Joint Operational Planning Group, Joint Logistics Support Group, C-IED C2 *ad hoc* Structure, another IO, and including engineer liaison from a Member States for a specific role, or from another IO.
[27] E.g. : EOD, EP, CBRN Coordination.



d. Tactical level. For a successful Operation, it is recommended that the tactical level has a MILENG staff according to the upper framework, translating operational directions and guidance into optimum support at the considered level.

CONTRIBUTION TO PLANNING AND CONDUCT OF OPERATION

27. **General remarks.**

a. Intelligence / Comprehensive preparation of the operational environment and planning. In MILENG terms, efficient use of the pre-deployment period relies heavily on the information and resources available. The timely exchange of information based upon well-defined information exchange requirements and interoperable databases of land organization, infrastructure and resources will have considerable potential to save manpower, equipment and time.

b. Preparation of the force. MILENG main effort will include the support to the establishment of:

- agreements with the HN and external contracts to cover any gap on MILENG capabilities and services not being provided by TCN

- the required infrastructure in order to support the Reception Staging Onward Movement and Integration (RSOMI) process.

c. Deployment. Early in this phase, the main effort of MILENG support will be to upgrade and maintain theatre infrastructure, especially those facilities to be used during the RSOMI process.

d. Execution. During this stage MILENG main effort will be devoted to the provision of mobility, counter mobility and survivability support, as well as the development of the infrastructure required for the sustainability of the force. Support to stabilization and reconstruction activities may be required.

e. Termination and transition. MILENG support will focus on the infrastructure repair, environmental remediation and liaison with follow-on stakeholders (national authorities, International Organizations and Non-Governmental Organizations).

f. Redeployment. MILENG main effort will be to support manoeuvre and movement until the end of the operation; support the force protection of the forces during all the stages of the rearward movement until the embarkation and the dismantling and handing over of the redundant EU infrastructure.

g. Doctrine evaluation and lessons learned. It is of importance to learn efficiently from experience and to provide validated justifications for amending doctrine and the existing way of doing things, in order to improve performance, both during the course of an operation or a mission and for subsequent operations or missions.

28. **Planning from strategic to tactical levels.**

At the strategic Level

a. EU Military Staff or Military Planning and Conduct Capability (MPCC). Military planning at the Political and Strategic Level is developed within the framework of the EUMS or MPCC and through the advanced planning, including SME inputs to the development of the Crisis Management Concept (CMC) and the Military Strategic Options (MSOs).

b. Military Planning and Conduct Capability[28] (MPCC). The MPCC is a structure within the EU Military Staff in Brussels, responsible at the strategic level for the Operations Planning and conduct of non-executive military missions, working under the political control and strategic guidance of the Political and Security Committee and under strategic foresight and oversight of the crisis management structures of the European External Action Service. The MPCC works in a parallel and coordinated way with the Civilian Planning and Conduct Capability (CPCC). The Director General of the EU Military Staff is the Director of the MPCC and assumes the functions of missions' commander for non-executive military missions.

c. An in-house MILENG Expert:

(1) is embedded in the EUMS/MPCC Planning Team assigned;

(2) participates to the Fact Finding and Information Gathering Missions;

(3) contributes engineering advice to all aspects of logistics sustainment and advanced planning.

d. OHQ. At the Military Strategic Level, the main activities and responsibilities of the Senior Joint Chief Engineer and his MILENG staff cover support to the OPP[29], the establishment of strategic liaisons and partnerships, the financial process and the preparation of conditions required for the deployment of the EU Force. Main tasks assigned are to:

(1) participate to the OPP and contribute to the development of the CONOPS, including support to the Intelligence process;

(2) contribute to the Force planning by shaping the MILENG capabilities required within the PSOR for forces;

(3) provide engineer advice to the development of the Rules of Engagement (ROE);

(4) plan and coordinate the MILENG support;

[28] See Ref F and G

[29] Pending OpCdr's decision, the Planning Process can be conducted under the Co-operative and Collaborative mode or the Parallel mode.

(5) provide recommendations to and assess the engineer plans and assignment of engineer assets of subordinate commanders;

(6) participate to the Military Strategic Information Gathering Team (MSIGT) and identify means and capabilities to generate, mount, sustain and recover forces;

(7) support the logistic planning, including participation to the Logistic Conferences;

(8) participate to budget preparation[30] in particular with regard to infrastructure expenditure;

(9) establish EP regulations

(10) contribute to FP, C-IED, CBRN Defence and participate in relevant engineer-related boards;

(11) develop MILENG plans and define minimum infrastructure standards (for EU funded projects);

(12) set priorities for the whole range of MILENG tasks and take appropriate measures to optimize engineer operability;

(13) support the preparation of arrangements with HN and IOs when MILENG is concerned;

(14) establish liaisons at strategic level with other Military Engineer actors (TCNs, HN, IOs) and Engineer counter parts;

(15) support the preparation of the deployment phase with a specific effort on key entry Infrastructures;

(16) assess infrastructure requirements of the Joint Force and contribute to their development.

e. Synchronisation between OHQ and FHQ. The OHQ Engineer planning activities might also be performed at the FHQ level. A close cooperation between OHQ and FHQ Engineer staffs is thus mandatory.

[30] See Ref T and Chapter on Financial Considerations (ATHENA mechanism).

At the Military Operational Level

f. FHQ. At the Military Operational Level, the main activities and responsibilities of the Joint Force Engineer and his MILENG staff cover support to the OPP, the establishment of theatre liaisons and partnerships, the preparation of conditions required for the reception of the Force. Main tasks assigned are:

(1) assist operational planners and other Combined Joint Branches involved in the development of the OPLAN and the associated ROE;

(2) develop the MILENG contribution to the OPLAN, including the contribution to the combined joint statement of requirements (CJSOR), theatre capabilities statement of requirements (TSCOR), the rules of engagement request (ROEREQ) and the MILENG annex to the OPLAN with the MILENG tasks priorities;

(3) participate to the OLRT, evaluate the impact of geography and existing infrastructures in the AOR;

(5) plan and optimize class IV supplies and real estate management;

(6) plan and support the preparation or emergency repair of the essential infrastructures required for the reception and staging of the Force;

(7) establish liaisons with HN, IOs "Force level" and local engineer related actors;

(8) support, if necessary initiate the preparation of arrangements (e.g. Technical Arrangements) with HN and IOs when MILENG is concerned.

g. CCHQs and units. MILENG activities have a direct impact on Air, Land and Maritime Operations and therefore Engineer staffs need to be involved in the planning process from an early stage. Following considerations are to be taken:

(1) Component level Engineer staffs contribute to the FHQ tasks in a close cooperation and coordination spirit between engineers;

(2) Component level Engineer staffs contribute at the internal planning steps of the CC HQs in the same spirit than the FHQ level;

(3) At lower levels, a decision-action cycle, based on the plan/prepare/execute steps with regular assessments, is a relevant model for feeding the planning of engineer tasks.

29. **Conduct of the Operation.**

a. EU Military Staff / MPCC. A Mission Monitoring Team (MMT) is activated for monitoring the Mission and supporting whenever necessary the OHQ. The in-house MILENG expert is usually part of this MMT and maintains a close liaison and exchange of information with the Engineers in the HQs.

b. OHQ. At the Military Strategic level, the main tasks of the Senior Joint Chief Engineer and his MILENG staff are to:

(1) control the proper execution of the OPLAN;

(2) monitor the continuous adequate level of MILENG Capabilities assigned and the management of common resources allocated;

(3) participate to the regular assessments on the Crisis development and the conduct of the Operation;

(4) provide a continuously support to the Intelligence and Targeting process;

(5) maintain regularly the strategic liaisons, including with the EUMS/MPCC;

(6) monitor the proper execution of the arrangements with partners when MILENG is concerned;

(7) support CJ8 in the reporting process to ATHENA;

(8) support the preparation of the re-deployment phase and the arrangements with a follow-on actor.

c. FHQ. At the Military Operational level, the main activities and responsibilities of the Joint Force Engineer and his MILENG staff cover the support to current operations, to future operations and campaign synchronisation, and to plans. Main tasks assigned are to:

(1) provide a continuous MILENG situation assessment, monitor the CCs engineer operations and the execution of engineer tasks to Units;

(2) support the monitoring of the Common Operational Picture and contribute to the reporting process;

(3) participate to the Joint Effect Management Process and provide a continuous flow of MILENG information to appropriate levels;

(4) participate to the drafting of Fragmentary Orders and to the Contingency Planning;

(5) maintain a pro-active co-ordination with other Joint Branches, especially for the sustainment of the Force;

(6) maintain liaisons with HN, IOs "Force level" and local "engineer related" actors;

(7) control the execution of arrangements with HN and IOs when MILENG is concerned;

(8) support the preparation of the Force re-deployment and/or the hand-over to a follow-on actor.

FINANCIAL CONSIDERATIONS

30. The European Union has established a specific financial mechanism, ATHENA[31], for management of the common costs of EU operations and missions having military or defence implications.

31. **ATHENA and the Engineer related common expenditures[32].** ATHENA is of central importance for the "Chief Engineer" and MILENG staff because it covers the financing of common engineer related expenditures. Key elements of the ATHENA decision having impact on Engineers are:

a. "HQ facilities in theatre ". Expenditure for acquisition, rental or refurbishing of required HQ facilities in theatre (rental/purchase of buildings, shelters, tents) could be commonly funded.

[31] Ref T
[32] See Ref T - Annex III

b. "Supporting the Force as a whole". When absolutely needed for the Force as a whole to fulfil its mission, other key engineer expenditures fall automatically under the common cost such as (not exhaustive list): works related to points of disembarkation, logistics roads and logistic bases, water and energy supply, static FP works, EP recovery measures, storage facilities. Medical Role 2 and 3 services and facilities approved in OPLAN are also funded in common.

c. "Other expenditures" for the forces deployed for the operation which require a specific eligibility may be requested by the OpCdr and approved by the Athena Special Committee, such as (not exhaustive) the acquisition, rental or refurbishing of premises in theatre (buildings, shelters, tents), specific equipment essential for the execution of the operation, resources linked with demining and disarmament tasks.

32. **ATHENA and the facilitation of the common Military Engineering support[33].** The ATHENA Special Committee may entrust the OpCdr to manage in common certain expenditures in relation with the Operation, while remaining the responsibility of the TCNs - Nation Borne Costs (NBC). This option allows the "Chief Engineer" on behalf of TCNs to:

a. manage in common more engineer resources (e.g. class IV supplies) and so improve their availability for the TCNs;

b. reduce the cost of engineer resources and works by a scale effect in common contracts;

c. significantly facilitate and enhance the MILENG support to the Force as a whole.

In addition, a specific project or expenditure that cannot be financed by the Athena budget could be financed by a Third party financial contribution (TPFC)[34]. That may include a project that concerns engineering.

33. **ATHENA contracting process.** OpCdrs are authorizing officers and can sign contracts on behalf of ATHENA. Procurement should be managed according to the ATHENA procurement rules approved by the ATHENA Special Committee. These rules are based on standard procedures and possible deviation in order to take into account some specificities of military operations and missions.

[33] See Ref T - article 28.
[34] See Ref T - article 30.

34. **ATHENA and EUMS/MPCC cooperation.** At strategic level, ATHENA shall associate the J8 expert as well as the Senior Joint "Chief Engineer" in order to define the reference amount of the Operation/Mission. The Senior Joint "Chief Engineer" shall also be associated whenever his field of expertise is addressed (drafting of technical specifications, occupation agreement, environmental issues, hand over/taker over of buildings, etc.).

EU COMPREHENSIVE APPROACH - INTERNATIONAL FRAMEWORK

35. **EU Comprehensive Approach.** The EU comprehensive approach covers all stages of the cycle of conflict or other external crises; through early warning and preparedness, conflict prevention, crisis response and management to early recovery, stabilisation and peace-building in order to help countries getting back on track towards sustainable long-term development.

The connection between security and development is a key underlying principle in the application of an EU comprehensive approach. To implement this principle, the European Union has a wide array of policies, tools and instruments at its disposal to respond to these challenges – spanning the diplomatic, security, defence, financial, trade, development cooperation and humanitarian aid fields. It is the world's largest trading block and, collectively, the world's biggest donor of official development assistance (ODA) and humanitarian aid.

CDSP missions and operations involving both military and civilian components are part and parcel of this comprehensive approach.

36. **International Framework.** One or several International Organisations (IOs) can be involved simultaneously or consecutively in the management of a Crisis with Military and/or Civilian instruments. For this reason, EU Military Operations/Missions are rarely conducted independently from other IOs[35].

37. **Implications for the MILENG staff.** For the "Chief Engineer" and his staff, the International Framework and the EU Comprehensive Approach are to be taken into consideration from the beginning of the operational planning process. Within limitations and guidance provided by the OpCdr, there are three kind of imperatives for the Engineers:

a. establish liaisons at all levels with any EU or IO Staffs interacting closely with the Military Engineers;

[35] E.g. : UN, NATO, AU, OSCE, Arab League.

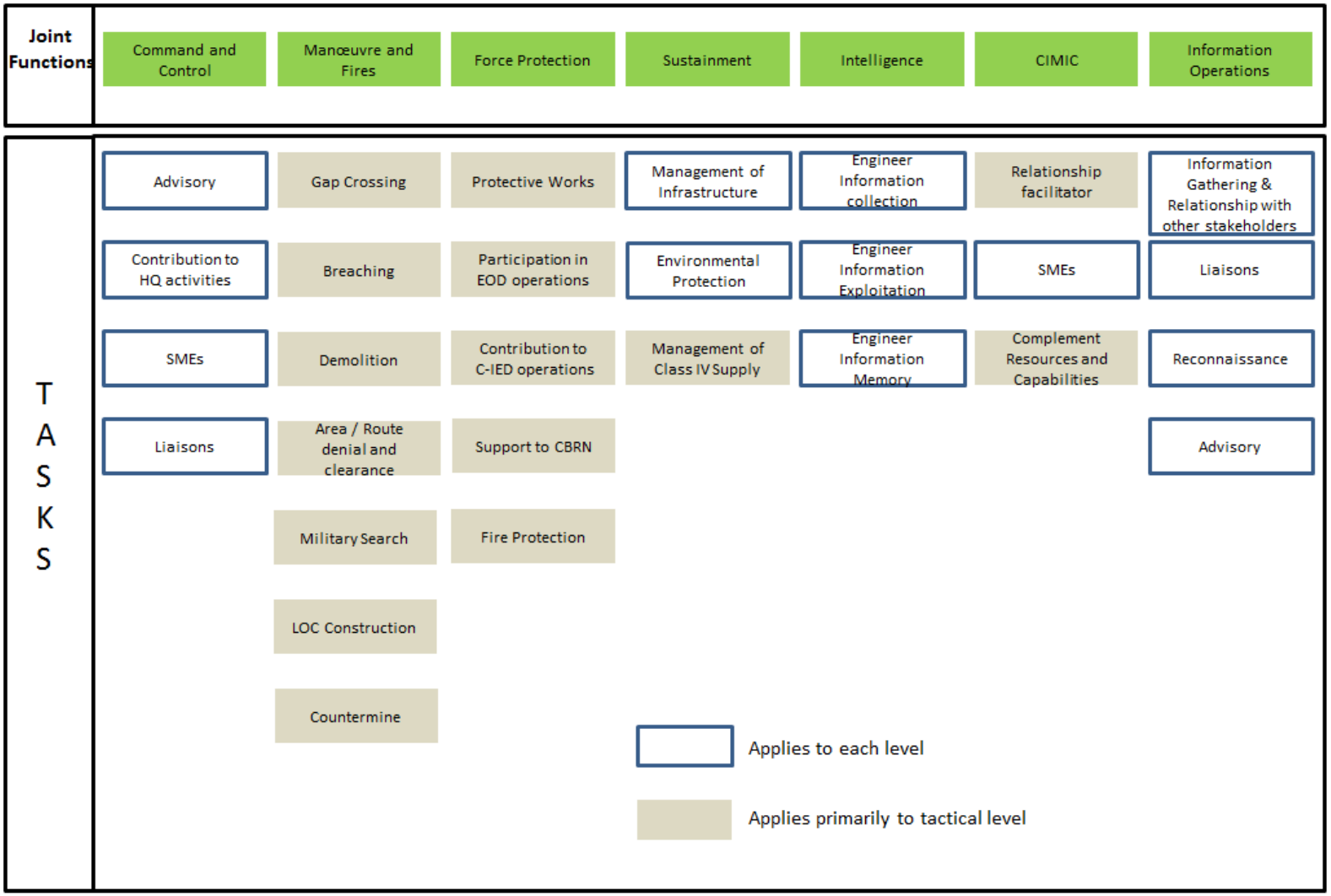
b. co-ordinate the engineer planning and activities with these EU Staffs[36] aiming at optimizing the key resources and infrastructures, and promoting synergies;

c. co-operate with these IOs Staffs with the objective to facilitate and improve the MILENG support to the EU Operation.

---

[36] E.g. : for a EU civilian CSDP Mission, the Civilian Planning and Conduct Capability (CPCC) at strategic level and the Mission Staff at mission (operational) level.

ANNEX A - OVERVIEW ON MILITARY ENGINEERING SUPPORT TO JOINT FUNCTIONS



ANNEX B– THE EU CHAINS OF COMMAND