REGIONAL DEPARTMENT OF DEFENSE RESOURCES MANAGEMENT STUDIES

THE 7th EXPLORATORY WORKHOP

"DEFENSE RESOURCES MANAGEMENT - TRENDS AND OPORTUNITIES"

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COORDINATOR: Junior lecturer **Brînduşa POPA**

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WORKSHOP COMMITTEE:

Col. Senior Lecturer Cezar VASILESCU, PhD.
Col. Military Professor Daniel SORA, PhD.
University Lecturer Maria CONSTANTINESCU, PhD.
Junior Lecturer Aura CODREANU, PhD.
Junior Lecturer Brînduşa POPA, PhD candidate

SESSION CHAIRMEN

Col. Senior Lecturer Cezar VASILESCU, PhD.
Col. Military Professor Daniel SORA, PhD.
University Lecturer Maria CONSTANTINESCU, PhD.
Junior Lecturer Aura CODREANU, PhD.
Junior Lecturer Brînduşa POPA, PhD candidate

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SECURITY RISK MANAGEMENT
NON-GOVERNMENTAL ORGANIZATION APPROACH

CPT CDR Călin AVRAM

Non-governmental organization-NGO: A legally constituted organization created by natural or legal persons that operates independently from any form of government.

Threat: Any factors (actions, circumstances, or events) which have the potential or possibility to cause harm, loss, or damage to the NGO, including its personnel, assets, and operations.

Risk: The combination of the impact and likelihood for harm, loss, or damage to NGOs from the exposure to threats.

Security risk management-SRM: A process that assists in assessing the operational context of NGOs and evaluates the risk level of undesirable events that may affect personnel, assets, and operations.

Security Risk Assessment-SRA: The process of identifying those threats which could affect personnel, assets or operations and the NGOs vulnerability to them, assessing risks to the NGO in terms of likelihood and impact, prioritizing those risks and identifying mitigations strategies and measures.

This paper uses tables and charts belonging to the InterAction organization (open source).
http://www.interaction.org/

Security is a vital responsibility of all NGO personnel; while absolute security can never be guaranteed, threats and their associated risks can be mitigated and vulnerabilities reduced once identified and assessed.

Overall responsibility for the safety and security of NGO staff rests with the host government. However, accountability rests with managers at all levels, not only with their security focal points. Security focal points must provide the technical security inputs and advice that allows management officials to make informed decisions for managing security risks. A

formalized security risk management (SRM) process is the key to accomplishing this vital function.

Security risk management therefore requires good teamwork between those who plan and direct NGO operations and those who advise on the security measures which enable them.

SECURITY RISK MANAGEMENT MODEL

Security Risk Management (SRM) is a process that assists in assessing the operational context of NGOs and evaluates the risk level of undesirable events that may affect personnel, assets, and operations. It provides guidance on the implementation of solutions in the form of specific mitigation measures, targeted at lowering the risk levels by reducing the impact and likelihood of an undesirable event.

The SRM is structured on two main phases:

- **The Preparation phase** (Security Risk Assessment)
- **The Execution phase**

In the **Preparation phase**:

- Each of the **Program, Threat, and Vulnerability Assessments** incorporates the collection of information from the situation and deduction of relevant facts, and provides the essential data required to determine risk.
- During **Risk Analysis**, determining risk levels for each specific threat scenario is made based on the deductions provided from the three assessments.
- In the **Mitigation Measures**, all available actions are analyzed and incorporated for its presentation to decision-makers. All measures presented must be logical, feasible and relevant. While certain standard lists of mitigating measures exist, creativity, and thinking outside the box are very useful techniques that should also be employed.

In the **Execution phase**:

- **Decision.**
- **Implementation** of the selected options.
- **Review and Update** of the SRA.

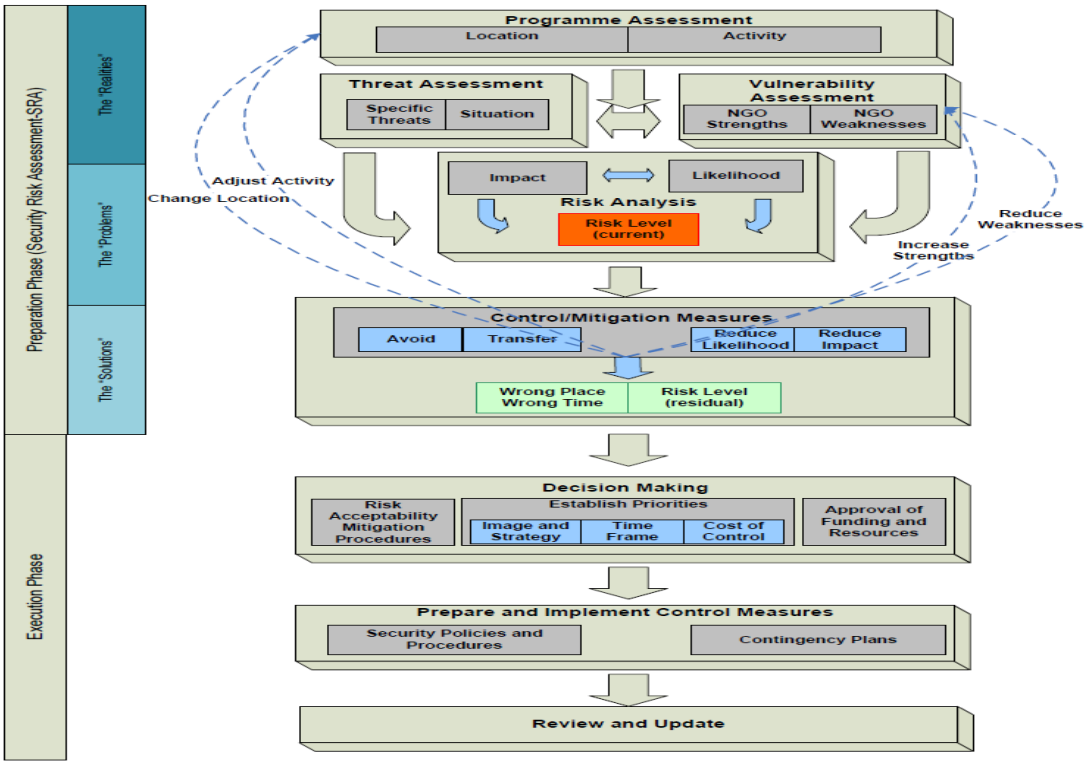

Fig.1 Security Risk Management model

PREPARATION PHASE - SECURITY RISK ASSESSMENT

Time and place (the when and where) are essential elements of all security risk assessments. When assessing the operational context (Program, Threat, and Vulnerability Assessments), clear timeframes and geographical locations must be established to set the context in which these are made.

The quick delineation of locations and timeframes will be extremely helpful in the conduct of the **Risk Analysis**, providing a **set of common elements** to integrate the three assessments and define risk levels for each specific threat. Thus, each assessment and concomitant risk analysis must begin with clear definitions of the locations and the timeframes being assessed.

Program Assessment (PA)

A program is normally an activity conducted by an NGO within a certain time frame and location.

The Program Assessment is an identification, localization, and evaluation of implementation methodology of NGO activities in a given environment. The Program Assessment should identify all of the NGO‘s operations that may be affected by threats, should assess how and why particular threats could affect programs and also identify those threats, which although present, are less likely to affect the NGO or may be irrelevant to the NGO‘s operations.

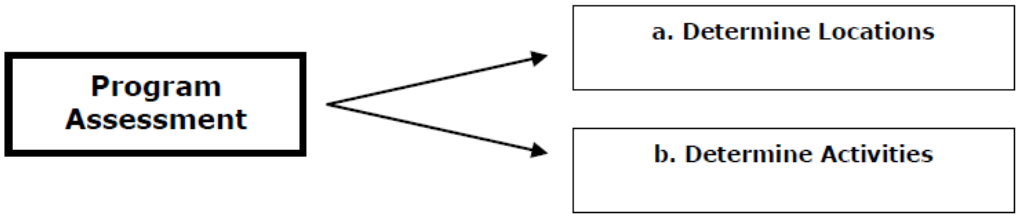

Fig.2 Steps within Program Assessment

Locations: The Program Assessment must start with the grouping of all programs and activities within specific geographical locations providing the **„WHERE”** for the assessment.

Activities: For each location, we must obtain the „operational” information on NGO activities. This will respond the basic questions of: **WHAT, WHEN, WHO, WHY, AND HOW.**

Threat Assessment (TA)

Threat Assessments do not provide an assessment of risk, but provide the information and deductions that are used within a Risk Analysis. It consists of two steps:

- Situational Analysis and
- Determination of General and Specific Threats to NGOs in the area of operations.

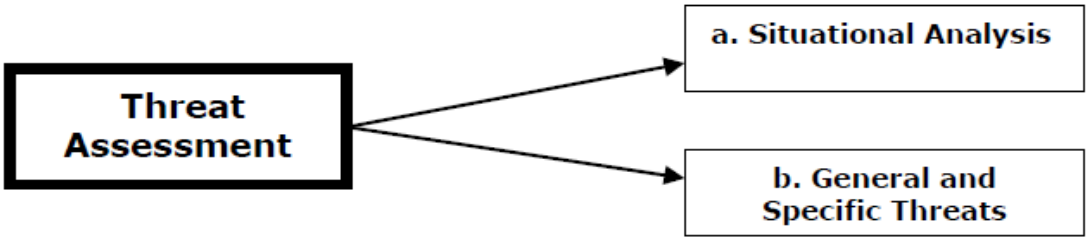

Fig.3 Steps within Threat Assessment

Situational analysis - the assessment should be relevant to the situation of the NGO locally and should therefore avoid diversions on factors which have no implications for NGO safety and security. This step is the part of the process that supports and allows the identification of general and specific threats to the NGO operation. All data collected must be relevant to safety and security of the activities which the NGO is conducting, supported as much as possible by facts and relevant deductions, and up to date.

General and Specific Threats:

- General threats: terrorist attack, crime, military conflicts, post-conflict environment, etc.
- Specific threats: threats that result from the analysis of the general threats previously identified. It's a concise description of an individual threat whose resulting risk level can be mitigated by the NGO.

Specific Threat Scenarios: For each general threat, we must identify and develop their resulting specific threat scenarios which must respond to questions of: **WHAT, HOW, WHERE, AND WHEN.**

To provide further details on their individual importance, specific threats may also be categorized into four general types:

- Perceived threats – possible but no clear information
- Actual threats – from known criminals, disgruntled individuals, weapon systems, prior attacks;
- Direct threats – those directed specifically at the NGOs;
- Indirect threats – that may affect the NGO;

In support of the threat assessment we must seek information and facts on the **HIC** of each threat (History – Intention– Capabilities).

HIC		
History	**Intention**	**Capabilities**
Historic interest	Current interest	Access to region
Historic attacks	Current surveillance	Material resources
Current interest	Documented threats	Technical skills
Current surveillance		Planning /organizational skills
Documented threats		Financial resources

Fig.4 History – Intention– Capabilities table

Vulnerability Assessment (VA)

This stage identifies the strengths and weaknesses of the NGO‘s security arrangements in the environment in which the organization conducts its activities. It consists of two steps:

- Determination of NGO strengths - all factors, including mitigation measures already set in place that may **lessen** the impact or likelihood of a threat against the organization.
- Determination of NGO weaknesses – the gaps/vulnerabilities in current security arrangements, and any other factor within the activities of the NGO that may **enhance** the impact or likelihood of a threat against the NGO.

Strengths are compared against the NGO weaknesses; the comparison between weaknesses and strengths result in a list of factors that constitute the product of the Vulnerability Assessment.

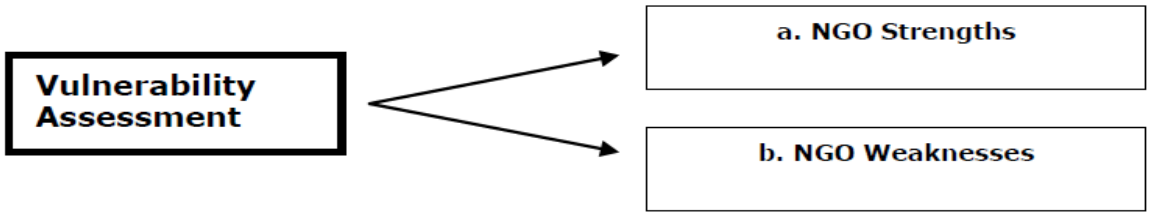

Fig.5 Steps within Vulnerability Assesment

Risk Analysis

It is a method of combining all relevant information from the assessments by location and time to identify the possible **impact** and **likelihood** of each specific threat, which as a result, define the current risk level. It is not possible to conduct a Risk Analysis until the threats, programs and vulnerabilities of the NGO‘s activities have been assessed.

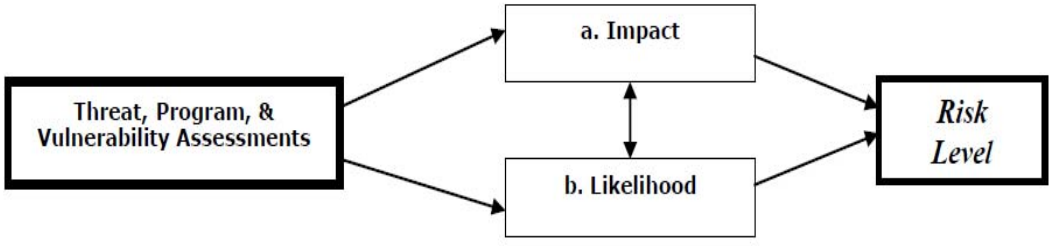

Fig.6 Steps within Risk Analysis

Impact - each specific threat scenario is analyzed, within the context of the assessments, and the expected level of impact towards operations, personnel and assets are identified and a descriptor is assigned to the threat. The expected impact may be determined from from historical records of previous incidents, or similar situations from other countries.

Descriptor	Expected impact to NGO Activities:		
	Operations	Personnel	Assets
Negligible	Minor disruptions	No injuries	No damage
Minor	Limited delays	Some minor injuries / possible stress	Possible damage or loss
Moderate	Delays	Non life threatening injuries/High stress	Some loss
Severe	Severe disruptions	Severe injuries	Significant loss
Critical	Cancellation of activities	Death and severe injuries	Major or total loss

Fig.7 Impact Descriptors

Likelihood - the use of statistics, experience, and recent history is the optimal method to determine the likelihood of a threat scenario. However, when those are unavailable, an estimate must be made.

Descriptor	Event probability	Guideline using a % scale	within a specific timeframe
Very Unlikely	Unrealistic	Less than 10% (less than 1 in 10)	every 5 + years
Unlikely	Improbable/Doubtful	Between 10 and 30%	Between 2 - 3 years
Moderately Likely	Reasonable	Between 30 to 60%	Between once a year / once a month
Likely	High	Between 60 to 90%	Once a week
Very Likely	Expected to occur	Over 90% (more than 9 in 10)	Daily

Fig. 8 Likelihood Descriptors

Risk Level

Having described all the components of the Risk Analysis, the next stage is to assign a current risk level for each specific threat by employing the **Risk Analysis Table**.

In this process, the impact and likelihood of each specific threat (identified in the previous stages) is processed trough the table resulting in the selection of the corresponding current risk level.

		IMPACT				
	RISK ANALYSIS TABLE	Negligible	Minor	Moderate	Severe	Critical
LIKELIHOOD	Very Likely	Low	Medium	High	Very High	Very High
	Likely	Low	Medium	High	High	Very High
	Moderately Likely	Very Low	Low	Medium	High	High
	Unlikely	Very Low	Low	Low	Medium	Medium
	Very Unlikely	Very Low	Very Low	Very Low	Low	Low

Fig. 9 Risk Analysis Table

The tool for this step is the **Risk Analysis Matrix**. Using as a starting point each identified threat, extract from the assessments (PA-TA-VA) the relevant pieces of information needed to fill each box, and conduct a logical risk analysis on each threat. Having completed the SRA for all identified threats, the product will consist of a list of specific threats, grouped by location and time, with a specific risk level assigned to each.

The "Realities"						*The "Problems"*			*The "Solutions"*	
Threat Assessment (TA)		Program Assessment (PA)		Vulnerability Assessment (VA)		Risk Analysis			Recommendations	
Threat	Situation	Location	Activity	Weaknesses	Strengths	Impact	Likelihood	Risk Level (current)	Mitigation Measures	Residual Risk Level (future)

Fig. 10 The Risk Analysis Matrix

Mitigation measures

The concept of mitigation measures is to act upon identified factors of the operational context to produce a favorable change in the situation enabling the effective and efficient conduct of activities while ensuring the security, safety, and well-being of staff as a high priority.

Using the SRM model, the Operational context has been clearly assessed in the Program, Threat, and Vulnerability Assessments. The NGO may act upon all factors, however acting upon the threat is difficult and sometimes beyond the NGO‘s capabilities. It is easier and more efficient to focus mitigation strategies on acting upon the factors that are under the NGO‘s control. Thus, in a good SRM exercise, most mitigation measures will be aimed at changing the NGO operational context by modifying elements of the Program or Vulnerability Assessment. This action will change the assessed risk levels (current) to the residual risk levels (future).

Strategies

Normally no single strategy will be able to cover all risks. A balanced list of strategies will usually provide the best solutions. Once the risks are identified, we determine whether the risk is acceptable.

If acceptable, no further actions are required other than to communicate and monitor the risk.

If the risk is not acceptable it must be controlled through four separate options: reduce the impact, reduce the likelihood, risk transferal, and avoidance.

Options

At this point of the process, decision-makers and security officials must determine what courses of action (or options) are possible to enable the programs while ensuring the safety and security of the organization, its staff, and its property.

When evaluating, options must be reviewed in light of the risks and the program priorities established in the Program Assessment. For the SRM mitigation, options must be feasible, funded, and include resources and timelines as far-out and detailed as possible and may include, among other measures: Security Phases; Policies, Training, and Partnerships.

Expected residual risk level

The risk level that is expected to remain present after the implementation of mitigation options is called the residual risk level. It is based on this residual risk level that the Management and Security Management Team (SMT) will be required to make a decision on acceptability, and whether and/or how NGO operations and activities will be conducted in the locations where the identified residual risk exists.

EXECUTION PHASE

The Execution part of the SRM model includes three stages: decision, implementation, and revision and update.

Decision

The decision making stage comprises three steps:

- Risk acceptability and mitigation measures
- Establishment of priorities and timeframes
- Approval of funding and resources

Risk acceptability mitigation measures

The SMT should discuss the identified risk analysis as prepared by the Security Focal Point (and Security cell wherever present). After which the SMT will evaluate the possible strategies and options to lower the current risk levels and reach residual risk levels with the purpose of enabling the implementation of program activities, then decide risk acceptability depending on the relative importance and criticality of each program.

Establishment of priorities and timeframes

Not all elements of the selected option will be achieved at the same time, and priorities must be established. Moreover, time for implementation and completion of the selected options will be critical to reduce the risk to the organization and its personnel. Temporary risk mitigation measures may be required while projects are being completed.

To support the next stage of the SRM model, a Mitigation Implementation Plan is developed as a simple checklist designed to allow the tracking of the implementation process.

Specific Threat Scenario	Current Risk Level	Recommended Measures	Reduces		Approved by (date)	Priority	Observations / Comments	Ready (date)
			I	L				
			☐	☐		-		
			☐	☐		-		
			☐	☐		-		

Fig. 11 Mitigation Measures Implementation form

Approval of funding and resources

Security-related funding requests usually have to be accompanied by a detailed security plan that includes a context analysis and risk assessment. In order to avoid significant revisions to project budgets once contracts have been signed, risk assessments may describe possible future scenarios – and future needs – should security deteriorate.

Implementation

The implementation stage may involve alterations to NGO activities by canceling or modifying some projects, whilst initiating others. It may involve the purchase of equipment, training of staff, or changes in personnel or to security phases. Decision-makers must be determined to implement the selected options as rapidly as called for.

Revision and update

We must update the SRA as needed in response to relevant changes in the operational context (including the implementation of approved mitigation measures), or as required. At a minimum, and in the absence of relevant changes in the situation, the SRA must be reviewed according to the requirements established by headquarters.

CONCLUSIONS

Good security risk management practices call for updates as often as there are relevant changes in the situation. After each safety and security related event, or when there is a significant change in the security environment, Best Practices require that such incidents be recorded and acted upon. This may result in updating or changing the SRA and incorporating previously unnoticed elements into the assessments.

A good Security Risk Assessment does not reduce the risk levels; it identifies these and assists in identifying possible solutions. Risk levels are reduced only after the mitigation measures have been implemented.

The Security Risk Management model must be used as the primary security management tool to support the safety and security decision-making process. Its effective use allows the identification and prioritization of safety and security issues within the Area of Operations (AoR).

In the determination of acceptable risk the relationship between program criticality and the risk to personnel must be considered by senior managers within a Management System. Managers must constantly strive to balance these two critical functions and are accountable for creating a culture of security.

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http://www.interaction.org/

http://www.un.org

http://ec.europa.eu/

COMMUNICATION IN MILITARY ORGANIZATIONS

CPT CDR eng. Marius BĂNICĂ

The inception of any relationship among people, even it is not only a human attribute, requires the presence of communication. Although this is a very complex process it may be defined as follows:

Communication (from Latin "*communis*", meaning *to share*) is the activity of conveying information through the exchange of thoughts, messages, or information, through speech, visuals, signals, writing, or behavior.

Communication requires a sender, a message, and a recipient, although the receiver does not need be present or aware of the sender's intent to communicate at the time of communication; thus communication can occur across vast distances in time and space. Communication requires that the communicating parties share an area of communicative commonality. The communication process is complete once the receiver has understood the message of the sender.

TYPES OF COMMUNICATION AND INFLUENCIE FACTORS

The definitions above illustrate the complexity of communication in present time, but it is unanimously accepted that it can be divided in two main categories: non-verbal and verbal communication.

Diverse forms of verbal and non-verbal ways of communicating are used: body language, eye contact, gestures, intonation, touches, and media such as pictures, graphics, sound and writing.

Non-verbal communication refers to the process of conveying meaning without words. Researches demonstrate that the main part of human communication is non-verbal. Depending on the context, including cultural and organizational aspects, 63-93% of communication is non-verbal.

Speech is also fitted with nonverbal elements known as paralanguage. These include voice lesson quality, emotion and speaking style as well as other features such as rhythm, intonation and stress.

Oral communication has as main element the spoken communication. When situation requires various visual aids or elements of non-verbal communication may be used to give the necessary meaning to the delivered message. Usually, this type of communication provides immediate feedback.

The main purpose of communication is to create a shared understanding using diverse types of shaped information. The process requires a range of skills to analyze, listen, observe, speak, question, and evaluate the meaning.

For complex processes there are a lot of factors that may affect them in a negative way so, communication does not make an exception. In this case they are generally called barriers some of them are presented below:

- physical barriers – include disturbances like background noise, poor lighting or an environment which is too hot or cold can all affect people's morale and concentration;
- organizational structure – complex system may make difficult to find the proper receiver. Inadequate information systems, lack of supervision or training, and improperly defined roles and responsibilities may also interfere;
- ambiguity of words/phrases – words sounding identically but having different meaning can convey a different meaning. Therefore the communicator must ensure that the receiver receives the same meaning;
- individual linguistic ability – inadequate explanation or misunderstood messages can also create confusion;
- presentation of information – presentation not suitable for the audience.

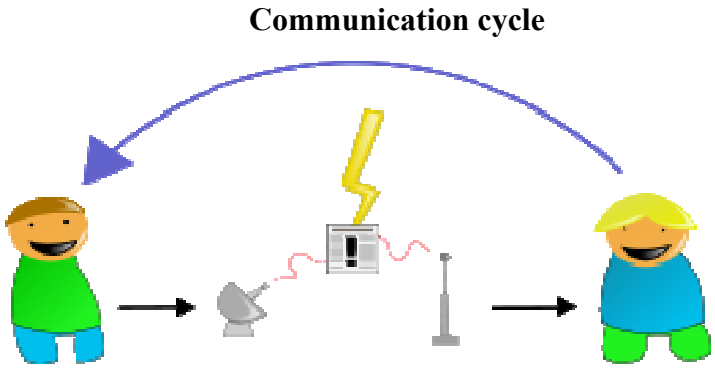

Fig. 1 Shannon and Weaver Model of Communication [6]

Claude Shannon and Warren Weaver created a model based on following elements:

1. An information source, which produces a message.
2. A transmitter, which encodes the message into signals
3. A channel, to which signals are adapted for transmission
4. A receiver, which 'decodes' (reconstructs) the message from the signal.
5. A destination, where the message arrives.

Communication is usually described along a few major dimensions: message (what type of things are communicated), source / emisor / sender / encoder (by whom), form (in which form), channel (through which medium), destination / receiver / target / decoder (to whom), and receiver.

In reality the process is more complex. The sender's personal filters and the receiver's personal filters may depend on variables such as traditions, cultures, or gender; which may affect the intended meaning of message. The presence of "communication noise" may impact negatively the reception and the decoding of content, and in consequence the speech may not achieve the desired effect.

There are many examples of noise:

- environmental noise – Noise that physically disrupts communication, such as standing next to loud speakers at a party, or the noise from a construction site next to a classroom making it difficult to hear the professor.
- semantic noise – different significance of certain words;

- organizational noise – poor structure of the message can prevent the receiver from accurate understanding;
- cultural noise – due to its complexity it may affect in different ways the quality of communication, thus it is addressed in a separate chapter.

Models of communication

This refers to the conceptual model used to explain the human communication process. The first major model for communication was created in 1949 by Claude Elwood Shannon and Warren Weaver for Bell Laboratories. Fundamentally, communication is the process of sending and receiving messages or conveying information from one part (sender) to another (receiver).

Linear Model

It is a simple model to communicate with others. It encompasses the sender encoding a message and channeling it to the receiver in the presence of noise. This model has some draw backs: it assumes that there is a clear cut beginning and end to communication. It also displays no feedback from the receiver.

- For instance; a letter, email, text message, lecture.

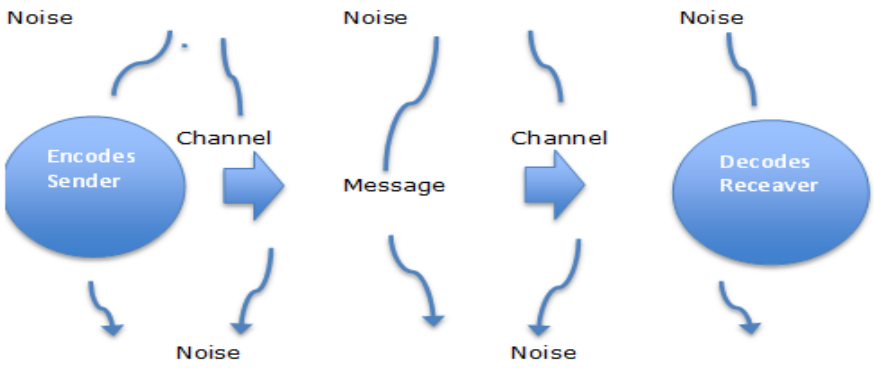

Fig. 2 Linear Model of Communication by Communications Professor Claud Mayfield at James Madison University

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Interactive Model

This model includes additionally the feedback which clearly indicates that communication is not a one way but a two way process. There is feedback but it is not simultaneous.

- For instance – instant messaging (IM). The sender sends an IM to the receiver, and then the original sender has to wait for the IM from the original receiver to react. This exemplifies the communication among traffic controllers and flying crews.

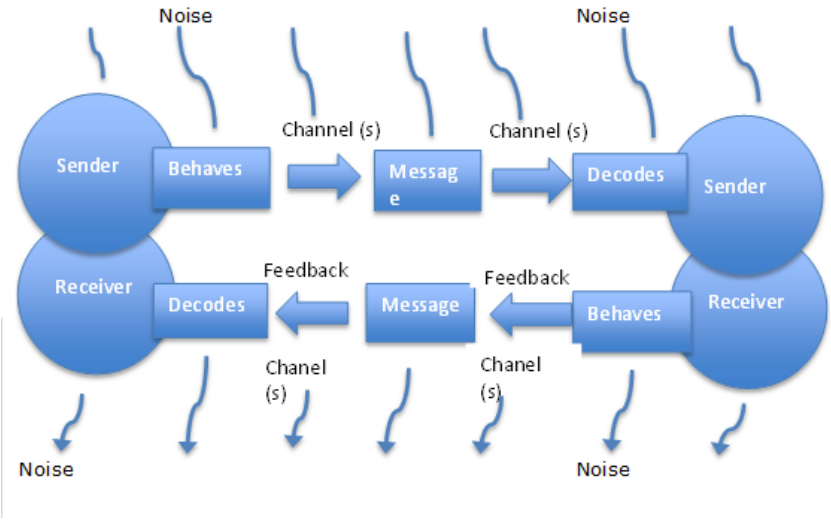

Fig. 3 Interactive Model made by the Communications Professor Cluad Mayfield at James Madison University

Transactional Model

According this mode people are connected through communication; they are engaged in transaction. Firstly, it recognizes that each of us is a sender-receiver. Then, it recognizes that communication affects all parties involved. So communication is fluid/simultaneous. This is how most conversations are like. The transactional model also contains ellipses that symbolize the communication environment (how you interpret the data that you are given). The most effective communication area is illustrated by the junction of the two ellipses, where both communicators share the same meaning of the message.

- For instance – simple talking to/listening friends. While somebody is talking the listener is constantly giving feedback on what he/she thinks, through facial expression or verbally, without necessarily stopping the speech.

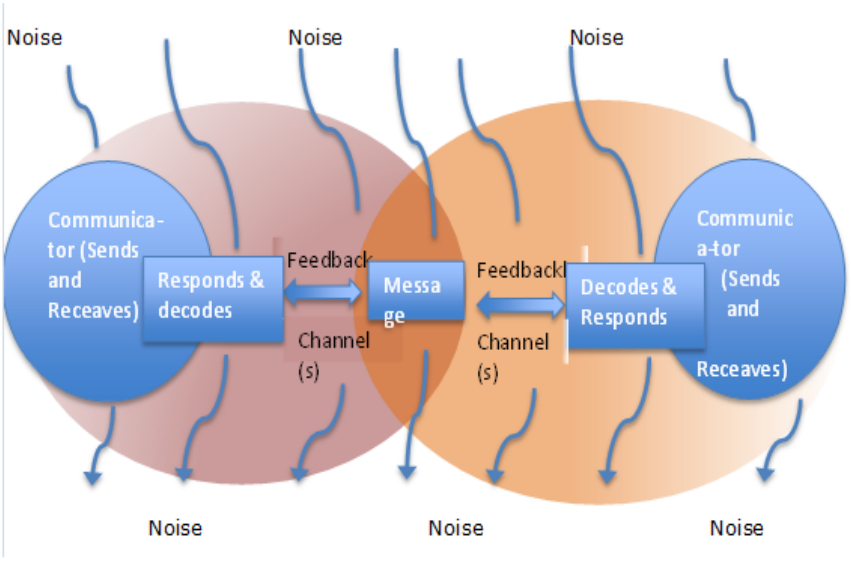

Fig. 4 Transactional Model of Communication by Communications Professor Claud Mayfield at James Madison University

CULTURAL ISSUES FOR COMMUNICATION WITHIN MULTINATIONAL GROUPS

The new current operating environment has a multinational dimension either military or civilian. Most of the operations are operations other than war (peace support, disaster relief) that bring together multinational troops with the local population. In this context, inherent cultural differences raise a significant issue regarding communication intra organizational and out of the organization. Different principles, communication styles, standards or behaviors may have a negative cultural impact on communication. The studies developed on multinational teams (MNTs) indicate that communication is one of the most critical factor affecting team efficiency and effectiveness.

When discussing on the realm of creativity multiculturalism is expected to enhance the outcome. On the other hand passing into the pragmatic area it brings problems for organization with strict and complex system of relationships.

The main characteristics of a team are interdependency and a common goal. To maintain the focus on the objectives and ultimately on the goal, communication and coordination are vital. Thus, multinational teams should be prepared and aware when communication problems arise to take timely and adequate measure to deal with.

Key Drivers

As it was stated before, multiculturalism may have a positive impact on multinational organizations even bringing into decision making processes various perspective or experiences. If these aspects are on the white side for the effectiveness of the team the issues on the dark side should be approached. Therefore a primary factor for communication is the LANGUAGE.

The pace of speaking, acronyms, slang or dialects may hamper a good communication. Even native speakers encounter understanding problems when communicating using regional accent. In some cases non-native speakers are able to receive only 50% of the information provide even they are fluent in English.

Some of the most influential key drivers on communication are depicted below:

Information Sharing

Language limitations slow down the information exchange within multinational team, the pace being affected even more if the procedures are different. Sometimes the required politeness or diplomacy when issuing orders may influence the template of the document. And the problems go even further when discussing about information sharing. Actually, this is a problem encountered at all levels in NATO.

"Because team communication is likely to be limited to topics commonly known to team members as opposed to important information held by only one team member", cultural diversity impact reveals its importance in information sharing. [1]

Cognitive Effort and stress

There were reported problems when non-native people spoke or listened for long periods of time in the second language. This activities required supplementary effort, exhausting them faster. The continuous focus on understanding the whole meaning of the information received makes even greater the cognitive effort, making possible the appearance of the stress.

Perception of Ability

Another issue raised by the language, is the perception of the non-native speakers that they are evaluated according to the second language knowledge. As a result, their competency becomes arguable, and then they will refrain from asking questions or clarifications.

Being By-Passed for Assignments

On the other hand, misunderstandings due to the language issues may conduct to the partial accomplishment of the task or not at the intended level. Many times, the superiors prefer to reassign it to another person, instead of giving additional guidance in order to improve the performance of the team member.

Adjustment Time

Common habits in different cultures such as, when and where people drink coffee or smoke, addressing of the ranks, breaks, rhythm of work, mess time, etc. may pose other problems for a multinational team

These facts may adversely affect the pace of the whole team. Sometimes, the accommodation for newcomers in a multinational environment may last months.

CULTURAL DIMENSIONS AND HOW THEY AFFECT COMMUNICATION

The number of cultural factors and their interdependencies make difficult the analysis on the cultural influence on communication in multicultural teams. As we will see, there are individual and group dimensions that have influence on communication, based on the perception of the responsibility to themselves and society.

There are acknowledged over 40 cultural and for the purpose of this paper, there will be taken into account only some of them, namely those proposed by Hofstede (1980, 2001) [2].

Individualism-Collectivism

Individualism emphasizes on member and immediate circle of interest contrasting on the group interest. On the other hand collectivism has a strict social framework, delimitating in-groups and out-groups relationships. People "expect their in-group to look out after them, and in exchange they feel they owe absolute loyalty to the in-group"[1].

Many scientists consider that individualism-collectivism the most significant cultural dimension used to clarify various facets of communication in multicultural organizations. For collectivist cultures the group prevails over the individuals, focusing on the context when dealing with issues. Individualists consider, on the other hand, that the person is the most important being able to understand others' communications. The messages sent by individualists are likely to be concise, precise and direct. Collectivists are relying on cooperation and synchronization, making clear distinction between in-group and out-group members. This is visible in multinational teams when those that are perceived as unable to understand them are classified as the out-group. Communication between in-group and out-group may be weak.

Collectivists emphasize the context within their messages, being ambiguous, indirect and implicit. Loyalty is the paramount within collectivists groups. They are using techniques of avoidance to keep the good image of the group. In contrast with individualists they are eager to communicate directly with the leader. The group harmony is very important, so the avoidance of negative answers is the better choice in many situations.

For the members of individualistic cultural being less important the affiliation to a group, they think that the dialogue is the key for the problems, and don't preclude the confrontation when necessary.

The direct communication manner of the individualist being focused on the goals, rather than saving the relationships, may be not very pleasant or even rude.

[1] (Hofstede, 1980, p. 45)

Power of distance

Hofstede defines it as "The extent to which a society accepts the fact that power in institutions is distributed unequally". [2]

Part of the cultures considers that social interactions are based on hierarchies, and the others don't think this fact is important in this context.

High power distance organizations base their communication on hierarchies, using a formal way to convey messages through well established channels. Obviously the position (rank) has influence on the information exchange. It is not rare the situation that high power distance people are hesitating to ask for supplementary guidance from their superiors, or to give the necessary feedback. Sometimes they don't argue on the decisions even these are not profitable for the organization. Conversely low power distance people are inclined to use informal, rather than formal, communication channels. Creativity seems to be the constant to solve the issues. Their approach on hierarchies and positions is opposite then high power distance cultures. In many occasions they put under discussion the decisions of the authorities.

Uncertainty Avoidance

The "Extent to which a society feels threatened by uncertain and ambiguous situations and tries to avoid these situations by providing greater career stability, establishing more formal rules, not tolerating deviant ideas and behaviors, and believing in absolute truths and the attainment of expertise"[2].

High uncertainty cultures have norms and rules very well defined just to avoid the possible disturbances in the future. On the other hand low uncertainty avoidance cultures are taking disagreement and conflict as a fact helping to progress. Hence they are tackling usually with these taking the risk.

Not prepared high uncertainty avoidance cultures may be not aware when deviation from plans occurs, being tremendously difficult for them to cope with various issues in these situations. Necessary adjustments or adaptations may require more time than for low uncertainty.

Guidance to accomplish the tasks is too detailed, preventing the inventive solutions that are so important in crisis. Furthermore limited dialogue and the over control may affect in a

[2] (Hofstede, 1980, p. 45)

negative way the shared situational awareness. Conversely, low uncertainty avoidance cultures may lead to lack of guidance, or even excess of ad-hoc solutions instead detailed planning.

Masculinity-Femininity (Achievement-Relationship)

"The extent to which the dominant values of society are 'masculine' – that is, assertiveness, the acquisition of money and things versus caring for others, the quality of life, or people".[2]

In this category we find dictatorial and military cultures or cultures where the rules are the basic way of doing something.

But for multinational military teams the main concern is given by the women role in various cultures, mainly when a woman has a number of men as subordinates. In many cases an equal positioned men has to confirm or validate her decisions or statements. This problem affects negatively her behavior impeding on a effective communication, as well as the whole communication process within the organization, questioning on authority.

Long-Short Term Orientation

"Long-term orientation refers to a culture with future-orientated values, especially perseverance and prudence, while short-term orientation refers to cultures that are driven by past and present orientated values (e.g., respect for tradition), preservation of face and fulfilling social obligations"[3].

This cultural dimension is tightly related with the perception and importance of the time for different cultures. There are two distinct orientations:

- monochronic cultures, present- and future-oriented and short-term focused;
- polychronic cultures, past- and long-term oriented.

Past-oriented cultures see past experiences as capital, fundamentally embedded with wisdom and traditions. Obviously present-oriented cultures consider current experiences as the most valuable. This is a "*carpe diem*" approach, tending to believe in luck or fate driven by

[3] (Hofstede, 2001, p. 359)

superior forces. Future and past orientated cultures take this approach as self-centered and inefficient.

Future-oriented cultures emphasize on future as being the most important. Present processes are valued only they produce benefits in the future. Of course this orientation requires a careful planning, with clear timelines to achieve viable goals. Past-orientated culture don't appreciate the value of the comprehensive planning, depicting this process as resource consuming, and difficult to be managed.

Different perception on time issues can cause miscommunication among members of these cultures because future-oriented people see schedules as firm and essential.

Cultures future orientated don't intend to predict the future but to shape it having a proactive approach. According their cultural values present and past orientated people don't agree to be the slaves of time and pragmatism.

Non-Verbal Communication

Not of less importance in multicultural organization is the non-verbal communication. Gestures, emotions or facial expression have in most of the cases the same meaning for various cultures, being mostly related with the basic behavior than the educated one.

"Emotion is a universal language". [3]

Nevertheless many varieties of non-verbal communication may be interpreted within other cultures, having various significances according the context. These include gestures, touch, postures or vocal intonations. The diversity of interpretations given to the elements of non-verbal communication requires a lot of effort to understand accurately their meaning across cultures. Additionally non-verbal communication may have an impact on whole message. This is more visible in cultures where speaking is poor in context information, but the sense of the word is predominant (US style). In eastern style of communication the relevance of non-verbal communication is high when we need to understand the meaning of the message.

For instance the members of collectivist cultures rely on aspects pertaining to distance, eye contact, voice, touches or gestures in comparison with those from individualist cultures.

Eye Contact and Duration of Verbalizations

In western type cultures encourage eye contact when communicating as a modality to show sincerity and attention. On the other hand it is well known the adversity of the Asian culture on this aspect, being considered rude. Sometimes eye gaze may signify commitment or even dominance. In Asia is habitual that the speaker focuses only on the leader disregarding the rest of the audience.

Duration of speech is also important and differently treated in cultures as those mentioned above. In Eastern societies speeches are rare but long, while the Western way of verbalization in direct connection with social status and dominance. The Asians highlight the necessity of limited emotional expression in conjunction with avoidance of self disclosure that could be negatively perceived as a lower status.

Personal Space

The limits of comfort area represent another important element of non-verbal communication during dialogues, according different cultures. Usually members of Latin communities are eager to stay close each other during conversations. Conversely Northern cultures keep some distance when dialogues occur, closeness being perceived as a sign of violation of space. The meaning depicted above may be related also using a geographical approach. Individuals from warm areas desire small distances and people from cold area use larger space.

Touch

Even more sensitive than the cultural elements already presented, touch must be taken into account seriously in multicultural teams. The significance of touch may be related with control, sense of humor, concern or rituals. Touch is treated by Southern cultures in line with the personal space, so contact may occur more often than in Northern cultures, as a part of their cold approach. The latter may see this approach as an offense.

It is also important the perception of touch between persons of the same sex or a different sex in European and Muslim cultures.

Other Non-Verbal Communication Elements

Voice and its facets, tone, pitch, pace or loudness is part of all types of dialogues. Although there are a lot of rules it is admitted that, for instance, Southern people speak louder and more often than people from Northern or even Asian cultures.

Privacy, especially for important meetings is treated differently. In European cultures it is indicated through closed doors while in Japan only paper walls are appropriate.

For intercultural communication non-verbal communication has a superior importance in comparison with verbal communication. The difference comes from the roots of both types of communication. Non-verbal type is mainly related with non educated behavior that is extremely difficult to be educated and understood. The verbal communication is strictly linked with education so it can be standardized, making it easier to be understood.

FACTORS WITH IMPACT ON COMMUNICATION IN MULTINATIONAL ORGANIZATIONS

Effectiveness is desired in all endeavors. Complex processes to achieve a community goal imply a lot of elements, but among all communication is critical. In this context effective communication become a requisite for a successful activity. To maintain an effective communication should be taken into account a sum a factors like knowledge, motivation and skills to allow a smooth and continuous process that involves all member of organization. According Wiseman, 2001, education, training and practice may affect positively the factors mentioned above. [4]

Knowledge

This factor is fundamental because it covers even the other factors and requires appropriate skills and commitment to be acquired. Furthermore it is unlimited; none of the individuals or group has it for a good. It has also a dynamic being appropriate for a particular context. But for the purpose of communication knowledge targets a more specific scope, understanding others culture and behavior to streamline organizational communication in a multinational set up.

Inadequate knowledge will lead to miscommunication, affecting adversely the performance of the organization. In addition poor knowledge can't provide the necessary solutions to adjust or adapt the communication strategy according the challenging context.

Motivation

Successful communication implies motivation as another decisive factor. In this case motivation is not a purpose but a means. A nervous behavior can't help an adequate communication, having a negative impact on understanding. If the expected potential of the communication for the overall outcome is too high may result in discouraging the individuals.

Motivation will lead the team members towards communication in a good sense, aiming the feedback.

Other benefits of a positive motivation in the context of communication may be related with an optimistic approach toward different cultures.

Skills and Attitudes

Easy to think, difficult to act or hard to react in the complex realm of interhuman relationships may be the only constants among myriad of variables such as adaptable behavior, diminished uncertainty, mutual respect or commonly agreed interrelationships. These traits are important when dealing with communication within multinational teams. "Wearing other shoes" may offer a good solution for an effective communication, meaning a thoughtful understanding of other perceptions in order to design a suitable communication format to achieve organizational goals.

None of these can replace the team leader. His or her skill to deal with the consequences of a bad communication should be used to mange miscommunication problems based on appropriate feedback.

In the same context the leader has to address the attitude to non-native or the minority within the team, considering tolerance and patience towards them.

CIVIL-MILITARY COMMUNICATION IN OPERATIONS

In present theatres of operations civilian and military are approaching inter organizational communication through different perspectives due to different cultures, quite similar with what

happens within the organization. But is still a significant difference because in military organization is a great work done to minimize this issue thorough education and practice.

For instance symbol like flags, uniforms or ranks have a clear understanding and they are use to communicate the nations, services positions or even the authority to some extent.

Risk perception is another important factor that can affect intergroup communication.

I'll give an example related this aspect.

During operations similar with that in Afghanistan civilian organization perceive that the presence of military forces are hampering their members because the trust of the local population in their intentions is downsizing, being perceived as supporters of the government, generating a risky situation.

Another significant aspect that influences the communication is the channel used to convey the message. While military organization use only official secured channels, civil organization use various ways of communication, and in many occasions only the news provided by mass media. Consequently the messages have an important degree of unreliability.

Operation Enduring Freedom brought a new communication strategy between coalition forces and Afghan population. Instead using the conventional way to show them that military forces are able to protect their way of life, it was made a step forward. They were created Provincial Reconstruction Teams, responsible to 'win the hearts and minds' of the population, thereby contributing to the reconstruction and stabilization process [5]. Besides the growing confidence of the population the members of PRTs close the circle of information receiving the feedback especially through gathering intelligence.

NGO - military communication

For current operations it is established a formal way of communication between military side and civilian side, especially through dedicated meetings. In many cases NGOs have their coordination entities but they lack in trusting each other, in many cases they have different agendas. Besides their sources of information are poor and non accurate. In addition in many cases INGOs are seeing UN or coalition missions as competitors, because gradually they take some of their activities, hampering the communication with local population. In the same line national NGOs consider INGOs as competitors.

On the other hand the communication system established within military structures, different from that one used by the civilian side is perceived as not open for NGOs, which is half right half true, usually being possible through formal channels.

However is admitted that the communication with military side works better in the remote areas than at the level of headquarters, mainly due to the direct contact with local population.

Considering the above context, could be taken into account some factors influencing poor civil-military communication in within theatres of operations.

Starting with important cultural differences it is a little understanding among them related ways of action, objectives and organizational structure (decentralized and centralized)

Going to objectives the military ones are clear and for a determined period of time while the NGOs use larger timeframe, namely decades.

National approaches become truly visible in the remote areas that are under national responsibility making possible a diffusion of rigor established at the central level, allowing a better communication. The different approaches described above unveil another significant factor that affects civil-military communication – effective formal system. Regardless great number of working groups the outcome is weak.

Another factor is the apparent competition, quick "wins" of the military being considered as obstructive by the civilians, decreasing the level of confidence.

The perception of risk is another factor. While the NGOs think that humanitarian actions performed by military reduce the distinction between both actions, making the civilians vulnerable, the military see this as a factor contributing to the better popularity among population, thus enhancing security.

A different issue is raised by the growing need of communication or the increasing number of the civilian organization involved – over 100 foreign NGOs in Afghanistan[4].

CONCLUSIONS

Communication is about an existent environment but mostly about a shaped one. A predefined well known environment is desired when communicating with a predictable audience.

[4] http://afghanistan-analyst.org/ngos/

But the most desirable situation is when the person in charge is able to shape the environment in accordance with the audience and the intended message to be received.

The characteristics of the new conflict based on asymmetric threats require an enhanced communication among all actors involved in operation in order to improve the overall security of all types of organizations.

Managing a military organization requires a certain level of communication as the decisive element that influences the efficiency, effectiveness and performance of the group when distributing the tasks.

Working in teams, an effective approach is to keep an eye on each other's performance and provide feedback if needed.

Fundamental different organizational cultures civilian and military, horizontal vs. vertical, will constitute a difficult obstacle to be passed in the near future.

National approaches on civil-military communication may be a local and temporary solution, but not be formalized.

Soldiers from different countries may bring diverse ways of communication and understanding to their interactions, which can lead to problems in multinational military operations.

Communication abilities in multinational environments involve the knowledge, motivation, and skills to interact effectively with members of other cultures.

Training, education, experience, and role models are mandatory activities to improve the communication effectiveness.

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CONSIDERATION ABOUT GROUP DECISION MAKING PROCESS

CPT CDR Marian BOBE

„Making good decisions is a crucial skill at every level"
Peter F Drucker

Nowadays, all of us are forced to make decisions each day in professional life and also in personal life. Groups, in their daily activities, often have to make decisions. Groups as decision making bodies had gain a special status in society from at least the times of the early Greek civilization that developed democratic voting structures. This special status remains intact in most societies and cultures today.

Legislatures decide which bills to pass into law; school boards decide how to structure the curricula used to teach the children; Sales teams decide how to sell better new products; Corporate boards decide which investments are warranted and which person should serve as CEO. Also individul persones are making decisions daily in private or in public sector.

Everywhere we go we heare more and more people speaking about group decision making. Aslor we are speaking more about group decision making process instead of individual decision making, but what does it mean „group decision making"?

Group decision making is a type of participatory process in which multiple individuals acting collectively, analyze problems or situations, consider and evaluate alternative courses of action, and select from among the alternatives a solution or solutions. The number of people involved in group decision-making varies greatly, but often ranges from two to seven.

Now we know which is the meaning of group decision making but some of us may ask themselves: Is it better to make a group decision instead of make an individual decision?

It seems the answer is YES. Why? Because groups are seen as superior to individuals as decision-making entities for at least two reasons. First, groups can represent a larger and more diverse set of perspectives, constituencies, etc. Thus, they tend to be seen as more fair by providing "voice" or input from a greater portion of the body for which the decision is made. However, groups are also perceived as "better" than individuals at making important decisions. The idea that "two heads are better than one" is widespread and typically accurate, based on the empirical record.

It can be argued that group produce potentially superior decisions by affecting one of the three elements of decisions:

- **Criteria**- As group membership increases there is a likelihood that more stakeholders will be represented and their interests can be incorporated into the criteria used in the decision process;
- **Cause/Effect**- By including individuals with specialized expertise, we tend to increase the likelihood that more accurate cause/effect assumptions will be used in the decision making process;
- **Alternatives**- Groups tend to develop a greater number of potential options and more creative options.

Making good decisions is one of the main leadership tasks. Part of doing this is determining the most efficient and effective means of reaching the decision. Sometimes you have to decide what to do on your own. Other times it's better to make a decision using group consensus. How do you decide which approach to use? I will try to provide the answer in the next chapter.

THE SEVEN-STEP DECISION-MAKING MODEL

Because the performance of a group involves taking into account the needs and opinions of every group member, being able to come to an equitable decision as efficiently as possible is important for the functioning of the group. There are a variety of ways to make decisions as a group; the seven-step decision-making model presented below offers an effective structure for choosing an appropriate course of action for a particular task or project.

The model is:

1. **Identify the decision to be made.** Before beginning to gather information and list alternatives, it is important for you as a group to understand clearly what you are trying to decide so you have a goal on which to focus your discussions. Potential questions to ask are:

- What are the particulars of the assigned task?
- What are we being asked to do?
- What conflict is affecting our group effectiveness?
- What barrier to effective group work are we facing?

2. **Analyse the issue under discussion**. Once you have defined your goal, the decision to be made or the problem to be overcome, examine the data and resources that you already have, and identify what additional information you may need. Ask yourselves:

- What is causing the problem?
- For whom is this a problem?
- What is wrong with the current situation?
- Why do we need to deal with this issue/decision?
- Where else can we find resources?

3. **Establish criteria.** Identify the criteria or conditions that would determine whether a chosen solution is successful. Ideally, a solution will be feasible, move the group forward, and meet the needs of every group member. You may want to rank the criteria in order of importance. Consider these questions:

- What would make a solution/decision successful?
- What issues need to be dealt with in the solution?
- What criteria will help us determine whether everyone is happy with the solution/decision?
- Are some criteria more necessary than others?

4. **Brainstorm potential solutions.** Using the resources and information collected above, brainstorm for potential solutions to the problem or decision identified in step 1. This involves collecting as many ideas as possible. At this stage, ideas should not be criticized or evaluated. Some questions to ask include:

- What are some possible solutions that would meet most of our established criteria?
- Are there any options that we may have overlooked?
- What could we do in the absence of constraints?

5. **Evaluate options and select the best one.** Once you have a list of potential solutions, you are now ready to evaluate them for the best alternative according to the criteria identified in step 3. Remember that you may be able to combine ideas to create a solution. Ideally, everyone would agree with solution (a consensus), but it's possible that not everyone will. In this case, you will need to use a different decision making methods. Additional questions to ask when evaluating alternatives are:

- What are the pros/cons for each option?
- Which option is the most realistic to accomplish for now?
- Which option is the most likely to solve the problem for the long-term?

6. **Implement the solution.** This involves identifying the resources necessary to implement the decision, as well as the potential obstacles, then taking action. Decide:

- What should be done?
- How?
- By whom?
- By when?
- In what order?

7. **Monitor and evaluate the outcome.** Based on the criteria identified in step 3, evaluate whether the decision was successful. If not, revisit step 4 to evaluate the other options or generate new ones.

Of course all seven steps of this model are important but two of them are more important than the others. I refer here to step 4 and step 5. Because of their importance, in next two chapters I will describe both of them.

TECHNIQUES OF GETTING POTENTIAL SOLUTIONS

In step 4 of the seven-step decision-making process you have to get as much ideas as possible. It is very important to make sure you don’t miss any potential solution. In order to achieve this aim you can use some techniques. Let me depict them in the following rows.

Brainstorming

Brainstorming involves group members verbally suggesting ideas or alternative courses of action. The "brainstorming session" is usually relatively unstructured. The situation at hand is described in as much detail as necessary so that group members have a complete understanding of the issue or problem. The group leader or facilitator then solicits ideas from all members of the group. Usually, the group leader or facilitator will record the ideas presented on a flip chart or marker board. The "generation of alternatives" stage is clearly differentiated from the "alternative evaluation" stage, as group members are not allowed to evaluate suggestions until all ideas have been presented. Once the ideas of the group members have been exhausted, the group members then begin the process of evaluating the utility of the different suggestions presented. Brainstorming is a useful means by which to generate alternatives, but does not offer much in the way of process for the evaluation of alternatives or the selection of a proposed course of action.

One of the difficulties with brainstorming is that despite the prohibition against judging ideas until all group members have had their say, some individuals are hesitant to propose ideas because they fear the judgment or ridicule of other group members. In recent years, some decision-making groups have utilized electronic brainstorming, which allows group members to propose alternatives by means of e-mail or another electronic means, such as an online posting board or discussion room. Members could conceivably offer their ideas anonymously, which should increase the likelihood that individuals will offer unique and creative ideas without fear of the harsh judgment of others.

Dialectical inquiry

Dialectical inquiry is a group decision-making technique that focuses on ensuring full consideration of alternatives. Essentially, it involves dividing the group into opposing sides, which debate the advantages and disadvantages of proposed solutions or decisions. A similar group decision-making method, devil's advocacy, requires that one member of the group highlight the potential problems with a proposed decision. Both of these techniques are designed to try and make sure that the group considers all possible ramifications of its decision.

Nominal group technique

The nominal group technique is a structured decision making process in which group members are required to compose a comprehensive list of their ideas or proposed alternatives in writing. The group members usually record their ideas privately. Once finished, each group member is asked, in turn, to provide one item from their list until all ideas or alternatives have been publicly recorded on a flip chart or marker board. Usually, at this stage of the process verbal exchanges are limited to requests for clarification—no evaluation or criticism of listed ideas is permitted. Once all proposals are listed publicly, the group engages in a discussion of the listed alternatives, which ends in some form of ranking or rating in order of preference. As with brainstorming, the prohibition against criticizing proposals as they are presented is designed to overcome individuals' reluctance to share their ideas. Empirical research conducted on group decision making offers some evidence that the nominal group technique succeeds in generating a greater number of decision alternatives that are of relatively high quality.

Delphi technique

The Delphi technique is a group decision-making process that can be used by decision-making groups when the individual members are in different physical locations. The technique was developed at the Rand Corporation. The individuals in the Delphi "group" are usually selected because of the specific knowledge or expertise of the problem they possess. In the Delphi technique, each group member is asked to independently provide ideas, input, and/or alternative solutions to the decision problem in successive stages. These inputs may be provided in a variety of ways, such as e-mail, fax, or online in a discussion room or electronic bulletin board. After each stage in the process, other group members ask questions and alternatives are ranked or rated in some fashion. After an indefinite number of rounds, the group eventually arrives at a consensus decision on the best course of action.

SPECIFIC GROUP DECISION MAKING STYLES

As you know, there are some different decision making styles. You don't want to make autocratic decisions when team acceptance is crucial for a successful outcome. Also you don’t want to involve your team in every decision you make, because that is an ineffective use of time

and resources. What this means is you have to adapt your leadership style to the situation and decision you are facing. Autocratic styles work some of the time, highly participative styles work at other times, and various combinations of the two work best in the times in between.

One of the principle difficulties with making decisions as a group is deciding how to make the decision! The Vroom-Yetton-Jago Decision Model provides a useful framework for identifying the best leadership style to adopt for the situation you're in.

This model was originally described by Victor Vroom and Philip Yetton in their 1973 book titled *Leadership and Decision Making*. Later in 1988, Vroom and Arthur Jago, replaced the decision tree system of the original model with an expert system based on mathematics. Hence you will see the model called Vroom-Yetton, Vroom-Jago, and Vroom-Yetton-Jago. The model here is based on the Vroom-Jago version of the model.

Understanding the model

When you have to make a decision, your style, and the degree of participation you need to get from your team, are affected by three main factors:

- **Decision Quality** – how important is it to come up with the "right" solution? The higher the quality of the decision needed, the more you should involve other people in the decision;
- **Subordinate Commitment** - how important is it that your team and others buy into the decision? When teammates need to embrace the decision you should increase the participation levels;
- **Time Constraints** – How much time do you have to make the decision? The more time you have, the more you have the luxury of including others, and of using the decision as an opportunity for teambuilding.

Specific decision making styles

The way that these factors impact on you helps you determine the best leadership and decision-making style to use. Vroom-Jago distinguishes three styles of leadership, and five different processes of decision-making that you can consider using:

Style	Process
Autocratic - you make the decision and inform others of it.	**Autocratic 1(A1)** – you use the information you already have and make the decision
	Autocratic 2 (A2) – you ask team members for specific information and once you have it, you make the decision. Here you don't necessarily tell them what the information is needed for.
Consultative – you gather information from the team and other and then make the decision.	**Consultative 1 (C1)** – you inform team members of what you doing and may individually ask opinions, however, the group is not brought together for discussion. You make the decision.
	Consultative 2 (C2) – you are responsible for making the decision, however, you get together as a group to discuss the situation, hear other perspectives, and solicit suggestions.
Collaborative – you and your team work together to reach a consensus.	**Group (G2)** – The team makes a decision together. Your role is mostly facilitative and you help the team come to a final decision that everyone agrees on.

Table 1. Vroom-Jago styles and processes

To determine which of these styles and processes is most appropriate, there is a series of yes & no questions that you ask yourself about the situation, and building a decision tree based on the responses. There are seven questions in total. These are:

1. Is the technical quality of the decision very important? Meaning, are the consequences of failure significant?

2. Does a successful outcome depend on your team members' commitment to the decision? Must there be buy-in for the solution to work?
3. Do you have sufficient information to be able to make the decision on your own?
4. Is the problem well-structured so that you can easily understand what needs to be addressed and what defines a good solution?
5. Are you reasonably sure that your team will accept your decision even if you make it yourself?
6. Are the goals of the team consistent with the goals the organization has set to define a successful solution?
7. Will there likely be conflict among the team as to which solution is best?

Use Figure 1 below to follow your answers through on the decision tree and identify the best decision process for your circumstances. Not that in some scenarios, you don't need to answer all of the questions.

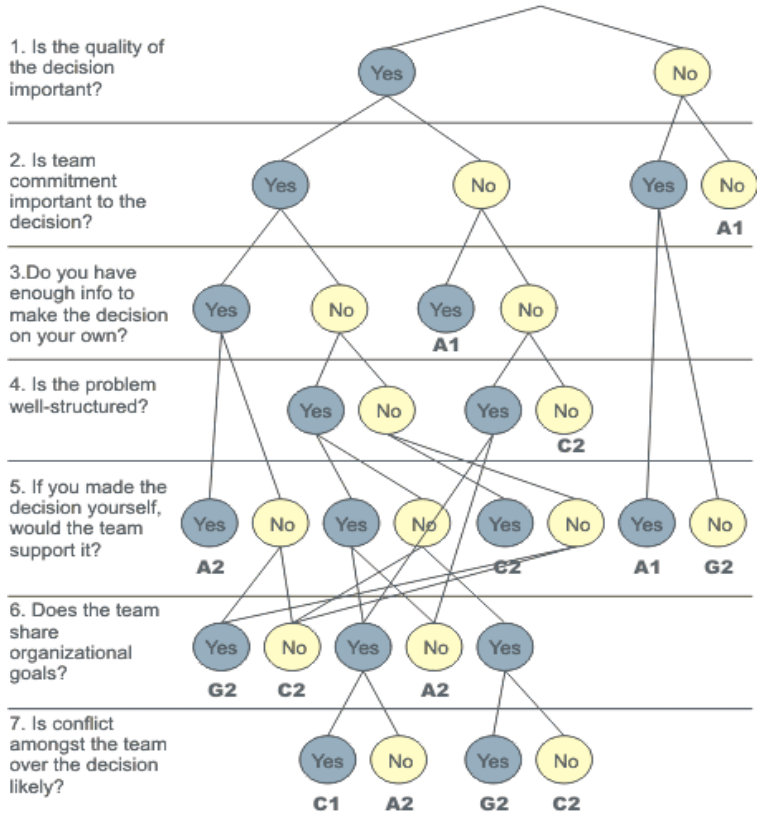

Figure 1. The Vroom – Yetton – Jago Decision Model

In general, a consultative or collaborative style is most appropriate when:

- You need information from others to solve a problem;
- The problem definition isn't clear;
- Team members' buy-in to the decision is important;
- You have enough time to manage a group decision.

An autocratic style is most efficient when:

- You have more expertise on the subject than others;
- You are confident about acting alone;
- The team will accept your decision;
- There is little time available.

CONCLUSIONS

The effectiveness of decision-making groups can be affected by a variety of factors. Thus, it is not possible to suggest that "group decision making is always better" or "group decision making is always worse" than individual decision-making. For example, due to the increased demographic diversity in the workforce, a considerable amount of research has focused on diversity's effect on the effectiveness of group functioning. In general, this research suggests that demographic diversity can sometimes have positive or negative effects, depending on the specific situation. Demographically diverse group may have to over-come social barriers and difficulties in the early stages of group formation and this may slow down the group. However, some research indicates that diverse groups, if effectively managed, tend to generate a wider variety and higher quality of decision alternatives than demographically homogeneous groups.

Despite the fact that there are many situational factors that affect the functioning of groups, research through the years does offer some general guidance about the relative strengths and weaknesses inherent in group decision making. The following section summarizes the major pros and cons of decision making in groups.

Advantages. Group decision-making, ideally, takes advantage of the diverse strengths and expertise of its members. By tapping the unique qualities of group members, it is possible that the group can generate a greater number of alternatives that are of higher quality than the

individual. If a greater number of higher quality alternatives are generated, then it is likely that the group will eventually reach a superior problem solution than the individual.

Group decision-making may also lead to a greater collective understanding of the eventual course of action chosen, since it is possible that many affected by the decision implementation actually had input into the decision. This may promote a sense of "ownership" of the decision, which is likely to contribute to a greater acceptance of the course of action selected and greater commitment on the part of the affected individuals to make the course of action successful.

Disadvantages. There are many potential disadvantages to group decision-making. Groups are generally slower to arrive at decisions than individuals, so sometimes it is difficult to utilize them in situations where decisions must be made very quickly. One of the most often cited problems is groupthink. Irving Janis, in his 1972 book *Victims of Groupthink,* defined the phenomenon as the "deterioration of mental efficiency, reality testing, and moral judgment resulting from in-group pressure." Groupthink occurs when individuals in a group feel pressure to conform to what seems to be the dominant view in the group. Dissenting views of the majority opinion are suppressed and alternative courses of action are not fully explored.

Research suggests that certain characteristics of groups contribute to groupthink. In the first place, if the group does not have an agreed upon process for developing and evaluating alternatives, it is possible that an incomplete set of alternatives will be considered and that different courses of action will not be fully explored. Many of the formal decision-making processes (e.g., nominal group technique and brain-storming) are designed, in part, to reduce the potential for groupthink by ensuring that group members offer and consider a large number of decision alternatives. Secondly, if a powerful leader dominates the group, other group members may quickly conform to the dominant view. Additionally, if the group is under stress and/or time pressure, groupthink may occur. Finally, studies suggest that highly cohesive groups are more susceptible to groupthink.

Group polarization is another potential disadvantage of group decision-making. This is the tendency of the group to converge on more extreme solutions to a problem. The "risky shift" phenomenon is an example of polarization; it occurs when the group decision is a riskier one than any of the group members would have made individually. This may result because

individuals in a group sometimes do not feel as much responsibility and accountability for the actions of the group as they would if they were making the decision alone.

Decision-making in groups is a fact of organizational life for many individuals. Because so many individuals spend at least some of their work time in decision-making groups, groups are the subjects of hundreds of research studies each year. Despite this, there is still much to learn about the development and functioning of groups. Research is likely to continue to focus on identifying processes that will make group decision-making more efficient and effective. It is also likely to examine how the internal characteristics of groups (demographic and cognitive diversity) and the external contingencies faced by groups affect their functioning.

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CONSIDERATION ABOUT POLITICAL AND MILITARY CRISIS MANAGEMENT

CPT CDR Eng. Robert BRĂDEANU

INTRODUCTION

The crisis, like, is part of human life, a human society. It is a time, a period of disruption in the evolution of society, which require viable solutions, to ensure a change or revitalization of damage processes and systems. Crisis management is a set of mechanism, procedures and activities which policy makers, authorized by law, establish and consistently implement appropriate measure to prevent and taking actions crisis prevention and control, and to remove their effects in order to control seizures and return to normality.

The scope of graduation paper is to present a unified approach about crisis management, especially in political and military field, the roles of international organisms in crisis management, and the roles of Romania in this context.

Crisis concept

In many works dealing with crisis, different authors indicate its origin the Greek words „kreinen", which for Platon disciples means "to judge", "to separate", "to discriminate", "decide". Presence of incidental historical factors make that Greek terms „krisis" to evolve and few century laters appear the latin word „crisin",in XVI century – „crisis" and in present day „crisis".

While early word had connotations that we don't understand today, some theorists go on to decide that means adopting a final conclusion on a issue in dispute, that decisions involves mediation, arbitration, deliberation between two parties in dispute so as to a transfer conflictual

to one side or another and end the conflict. This means that the crisis raises questions of continuity of organization that cannot return to a order required by a decisive choice.Therefore, crisis as a phenomenom specific organizational environment is determined by the period of incapacity of decision, while the organizational structure is compromised.

Definition of crisis are varied depending on the methodology multiple approach in general, the crisis means a threat to the existence of organizational dynamics and cause a rupture of previous balance involving at the end a disintegration of that system with impredictible consequences.

Charles Hermann describes a definition in a sociological approach where the crisis is a situation which threatens the heart of decision making unit, reduce the response time in time before the decision can be transformed in action, surprise decision unit members appearence.

The analysis of all definition about crisis leading to the development of common views on the crisis:

- rupture inner balance specific organizational environment;
- perception of crisis by the parties as a set of threats, hazards, risks;
- the relative and absolute crisis only;
- need to take important decision, limiting acces to information, the presence of an atmoshere marked by concern, very limited time availeble and stron oscilations of stress;

The emergence and manifestation of the phenomenon of crisis require decision makers to define a position in favor of maintaining or to transform this system towards equilibrium resettlement.

In all cases, the crisis is bearing risk for national or international security, needs to take imediatly an appropriate decision and implement appropriate measures to resolve it.

At the national or organizational levels strategies, the crisis is defined differently as follows:

US: an incident or a situation which involve a threat of US territories , its citizens, armed forces, US possessions or vital interests that's developed rapidly and creates important conditions such as diplomatic, economic, political or military, that determine hiring US armed forces and resources to achieve national objectives.

Denmark: a situation where the country is facing an acute tension surprising and can lead to the outbreak of war;

France: a situation where groups/individuals and/or institutions express their disagreement with the norms, rules, social values and organized to change the existing social order.

NATO: manifested situation at national or international level is characterized by the existence of any threat to the values, interests, or main global of the parties involved.

Romania: crisis is an abnormal situation, at international or national, are threatened or disturbing living conditions, health and the environment, property, political, stability, economic or social orders and values of constitutional or internal obligations of the state and for return to normally specific measures required by unified action of national systems and skill in the field. (cf. Romanian bill on National System Integrated Management of Crisis).

Types of crisis; political – military crisis features

Depending on phenomenon field in which they occur, crises are political, economical, cultural, informational, financial, religious, military and political – military. Political – military crisis arise when the systems or political actions come to standstill, when all other resources are exhausted and resort to armed forces. Usually, political – military crisis is a higher stage of internal and international politics crisis.

Depending on the space they cover, they can be: global, continental, regional (regional) in fault zones and even in areas of confluence.

Depending on the area that carries political implications of entities engaged crises and conflicts can be: national (within the borders of each state) border (between two countries that share borders), regional and global.

Depending on the quality and characteristics of the entities involved may be: ethnic, religious, inter or intra-civilization, inter-institutional, inter-social groups, professional.

Depending on the intensity, crises and conflicts can be: low intensity, medium intensity and high intensity. Inadequate crisis management can lead to a higher level of intensity and can end up in violent conflicts even war.

All crises are interrelated, their origin being the battle for resources, borders for advantageous positions in the new configuration or privileged world power and, especially, for influence. But behind these crises are big business interests, her extraordinary ability to produce, directly or through induction generators crisis and conflict situations.

All crises affecting political systems, social, economic, informational and military have, in their essence, the political origins. They come from the emergence and development of serious failures in the first flows that define relationships between system or the system components.

They are continually accentuates if immediate action is not taken. International crises have, in general, the same configuration and the same causal. All crises have experienced a period of abnormal, pre-crisis, crisis and conflict (war), recovery and rehabilitation, reconstruction and normalization.

The transition from normal to abnormal is not always noticeable in time. In fact, there is one type of this passage, as normality is not linear and variations phenomena and processes in the evolution of political, economic, social, military information and are subject to quite large themselves vary from one society to another, from one country to another, from one stage to another. Therefore, the transition from normality to abnormality does not know a critical threshold, doesn't have a clear and distinct line of separation. Abnormality may be referred very late, when the situation is already complicated. So abnormality is more than degradation normality is a state of decay, the good things mixed with the bad. It is important to have tools to establish a system for monitoring and evaluating the state of a society, a system for assessing the occurrence of the phenomenon of a reality as early crisis

Pre-crisis stage is characterized by increasing erratic movements within the system by degradation and dynamic status indicators.

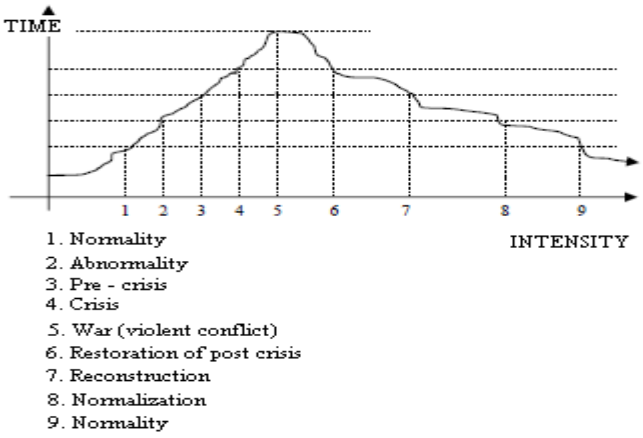

Fig. 1 Crisis curve

Concern for political-military crises is justified by the degree of risk that it presents. Politico-military crisis means usually conflicting situation caused by poor management of critical situations deep by a political power which fails to satisfy social rationality that have been developed and produced military violence. Any politico-military crisis stems from a critical social situation that puts pressure on relationships and social activities, usually related to the question of power, which leads to the problem to military violence. Usually political-military crisis constitutes an upper stage of a domestic or international political crisis.

In fact, there is no military crisis itself, but all military crises are political-military origin.

Always there is a situation or a situation where a political decision draws its substance from military malfunction resulting in a crisis in the system. Typically, political and military crises occur when systems reach an impasse or political action when all other resources are exhausted and the last resort force that could remove politics from difficulties, military force.

It marks that critical threshold after which often becomes war crisis

POLITICAL AND MILITARY CRISIS MANAGEMENT

Crisis management include all mechanism, procedures and activities that decision factors establish and put in place unitary the necessary measure to crisis control and prevent and for removal their effects, in order to return to normality.

Aspects about political and military crisis management

Crisis doesn't occur suddenly. Always there a phase transition as I shown above, from normality to crisis, which can be identified after the changes occurring at status and process indicator levels. This changes signals abnormality, pre-crisis and crisis and the end. Even doesn't exists certainly line between phases, it can be identified, analyzed, if we can establish criteria, standard and evaluation indicator.

So, the management of crisis assumes:

- notification system and process disfunctionality and finding of solution of ways of monitoring their.

- notification of crisis phenomena, still abnormality phase and pre – crisis, detailed knowledge and analyses of its.
- identified the sensible points, vulnerabilities and strengths of this phenomena and a adequate response over this.
- unification and coalition all of the anticrisis factors and this engagement to formulate and implement adequate response.

The adequate crisis answer (internal, regional, international, etc.) in according to be correction, efficient, timely, must to mandatory accomplish a few essential condition like: to be knowledgeable (requires deep investigation to understand properly the characteristics of phenomena), to be predictive, anticipatory, ante-factum not post-factum, to offer solution, to result in action, include risk taking, so on.

Crisis management must respond to some questions like: what type of crisis is it?, which are the cause that generated it?, which are their characteristics?, how large is it?, what are their effects and their implication?, which are the future evolution?, and so one. In this way, the management of crisis include a process knowledge of the political and the strategically situation and based on this to manage the crisis, and in a second to organize and developed the actions to survey, control and resolve the crisis.

a) Crisis knowledge assumes:

- data collection and information; analyzing and structuring their, make some conclusions (identified the frame, the environment and situation characteristics which generate and favors the crisis, identified the range crisis ,etc.)
- identified the parties in conflict, identified the strengths and vulnerabilities, a sustained systems value, effects evaluation, etc
- forecasting the evolution of the crisis; evaluating the possible development of the phenomenon; identified and assessment the cause which determine the evolution and continuing crisis, etc.

b) Organized actions to solve the crisis impose:

- surveillance of the crisis: data collection and information, analyze them, identified the parties who are in conflicts and their intention, action monitoring;
- resolve the crisis: actions over the crisis causes, contacting parts, organizing negotiations, establish the forces and resources which actions in different stages of

crisis, establish how to actions, engagement rules, the mandate and actions themselves;

- limit crisis spread: embargo, boycott, blockade, another sanction establish by international organisms.

ACTIONS AND PROCESSES IN POLITICAL AND MILITARY CRISIS MANAGEMENT

Politically and diplomatically actions

The purpose and objectives of political and diplomatic actions to resolve the crisis aimed at: preventing and defusing crises situation or avoid generate conflicts, awareness of the conflicting parties and the general public about the causes and especially the crisis effects, achieving a strong national and international opinion, solving using political way, avoiding violent confrontations, prevent to exceed the conflict.

UN charts consider that the main way to resolve the differences is the dialog, political dialog to be precisely. The politic dialog is a political tool, shows the interests, opinion, differences between states, searching and finding the appropriate solutions. In relations between states, the dialog is considered the simplest way, most useful easiest and most efficient to solve any issue.

The politics pressure or/and warning it is another forms ordering the parties in conflict a specific type of behavior in accepting a solution; this type of actions is not recommended because if is not managed correctly can put the basis of another crisis.

Information forms and processes

In crisis management, the informational systems – structures and actions – have an important role in evaluate and appreciation abnormality and pre- crisis situation, and in management of crisis itself; it is a powerful tools in hands of those who have the responsibility to solve the crisis. The intelligence and dedicated structures (analyze, evaluate and forecast international security environment) it's in a front line to discover and diminish seeds of conflict.

Information forms and process aimed at:

- create a diversified sources to survey permanently, with all resources (human and technical), conflict environments, instability area, networks and vital terrorism centers, organized crimes, fundamentalist structures, outlaw people.

- achieve a constant flow data and information from this area;

- optimization compartments and structures who manage the data, analyze, evaluate and forecast the intelligence;

- conquer and maintain strategic initiative in informational environment war.

Economics processes and means

The economic factor is a basic support factor, it is an important factor in a social dynamics, having a decisive influences and determinations in all environments. The crises occur, in general, due to the economic recession, the inability of economy, to generate sources of income. Indisputable solution to most of the crisis is economic development of the area, providing significant gains for the population and, on this basis, a high standard of living, which is one of the main determinants of stability and security. History told us, every major economical crisis finished with a war, so it's very important to well manage an economical issue.

Management process through economical means, actions falls into the following main streams:

-from and within nation states to address specific crisis;

-from strong states with global or regional economic interests;

-from major transnational economic concerns into their areas of interest;

- from international organizations.

National economic actions aimed generally preventive stage revival production, providing jobs, increasing wages and other measures to improve the environment social, business and optimize the labor market. There are, of course, external economic sanctions which are designed to discourage generators to end the crisis or conflict. Strong states, large transnational economic units, as well as international organizations use a variety of forms and methods of action of not missing: economic sanctions, embargo, boycott and economic blockade. Economic factor may be an element of crisis prevention, care

environments and areas conflict prone.

Military processes and forms

Actually, it doesn't exists a military management of any crisis. Manage of crisis it's always politico- military because the decision belongs and must to belong political factors.

The military component, based on a political decision and an engagement rules, need to developed and implement on a field a military strategy to manage that crisis, provide forces, means, resources and concrete methods to act in every predictable type of crisis. To manage crisis are early elaborate methods and action plans in different various forms for all predictable situation.

Some military actions, like stability military operations, focused to preventing war; it will be used before the outbreak of hostilities, in crisis situations, during and after hostilities to discourage and prevent the conflict, could resolve a potential crisis or could prevent the escalation of this, could limited the crisis and encouraged the opponents to find and negotiate a peaceful solution.

POLITICAL AND MILITARY CRISIS MANAGEMENT FROM THE POINT OF VIEW OF INTERNATIONAL ORGANIZATION (UN, EU, NATO)

The human history it is composed from a long crisis string, conflicts and wars. Usually by establishing international and regional organization, society tried to prevent conflicts, and to resolving the dispute through an institutionalized system designed to ensure a climate of security and stability. The main structures with attribution in politico-military crisis management are UN, EU, NATO, OSCE.

The UN roles in politico-military crisis management

The UN it is an organization with an universal vocation that was created after the Second World War to ensure international peace and security. After WW II, guaranteeing peace and international security has become the central task of the Organization. If the establishment Organization biggest challenge is interstate wars, this situation has changed fundamentally over

the last decades: armed conflicts between states decreased in number, but those inside states have seen a huge increase, as well as some newer phenomena such as terrorism, proliferation of weapons of mass destructions. Principal organs of the UN which have competence to act for peace guarantee, to resolve the dispute and ensure international security are: Security Council, General Meeting and in a certain things General Secretariat of UN.

UN procedures to prevent and manage instability, crisis and post-conflict situation there are in a permanent evolution and adaptability, especially 80's when they establish systems and conflict prevention device (ORCI – Office for Research and Collection of Information, ACC-UN Administrative Coordinating Committee, etc)

The main UN procedures to prevent and manage crisis are:

- early identification and management of potential area of crisis;
- the application of existing instruments in the field of disarmament, arms control and nonproliferation, and warning followed if necessary by the imposition of sanctions;
- Better coordination between operations and the achievement of peace with other work on the system, as well as contact with external elements relevant fields with non-governmental organizations and other public interest entities (e.g. science) such as to ensure both compliance with negotiated peace and other agreements between the parties;
- better refugee protection and integration, voluntary repatriation;
- prepare an experts for ad – hoc mission of humanitarian assistance and human rights;
- generated peace support operation (under UN or OSCE aegis managed directly by them), which is performed in according with the parts in conflicts where military forces is used only for self-defense and as a means of last resort (Conflict Prevention Operations – CPO's, Peace Making Operations - PMO's, Peace Keeping Operations – PKO's Peace Enforcement Operations – PEO's Peace Building Operations - PBO's Humanitarian Aid Operations - HAO's).

The EU roles in politico-military crisis management

Although originally (in 1950 by signing the Treaty of Paris ECSC European Coal and Steel Community) European construction aimed exclusively economic sphere subsequently developed in almost all areas of activity, including security. Since its inception, the EU has engaged in

conflict prevention, moreover Union itself is a project designed to ensure peace and prosperity. At EU level, there is a distinction between crisis management and conflict resolution. For the purposes of EU crisis management is the set of actions taken to prevent crisis escalation vertically by increasing violence, and horizontally through the expansion of territorially. Conflict resolution involves a series of actions undertaken in the short term to
stop a violent conflict.

In the European model of crisis management and conflict related to the security and integrity of states can identify four approaches:

- pre-conflict or post-conflict peace-building, conflict prevention and crisis by long-term structural measures;
- impose peace through coercive measures, as applied in situations such as attacks from outside, peacekeeping or intervention to protect human rights;
- maintaining peace through preventive diplomacy and preventive deployment of forces;
- restoring peace with non coercive measures, most often through diplomatic means.

For the purposes of EU conflict prevention is the essence of its external action and to achieve this objective Union uses both development assistance and long-term reconstruction and means of military and civilian crisis management in the short term in order to manage conflicts and situations pre-conflict and post-conflict.

In the field of crisis management and conflict prevention, the EU security strategy is based on European Security and Defence Policy (ESDP) and is the answer to crises and challenges, to preserve security and interests of the Member States after the Cold War.

The NATO roles in politico-military crisis management

In according with Strategic Concept of the Alliance from 1999, crisis management is fundamental security mission, and NATO forces must to be prepared as appropriate and by consensus, according to Article 7 of the Washington Treaty to contribute effectively to conflict prevention and to engage actively in crisis management, including crisis response operations (CRO s). After 1999, NATO was considered instruments for crisis management are not adapted to the risks and challenges that could face the Alliance, so in august 2001, the North - Atlantic

Council (NAC) has approved policy guidelines for the development of a single NATO System Integrated Crisis Response (NCRS). The main objective is to defend NATO and permanent freedom and security of all its members by political and military means, and ensuring peace and stability, while respecting the principles of the Charter of the UN. To this end the Alliance has developed mechanisms for consultation, crisis management agreements, military capabilities and plans for civil defense emergency.

Member States considers that a regional crisis occurring outside their borders may represent a potential threat to their security interests and for that reason NATO is involved whenever possible and should consider that action to prevent crises, manage and mitigate crises and conflicts existing stabilize post-conflict situations and to support the reconstruction of affected areas.

An increasingly important part of the NATO mission effectiveness of crisis management refers to the distinct contribution to the Alliance broader international community's efforts to preserve and restore peace and conflict prevention. In this context, NATO has offered to assist where appropriate and in accordance with its own mechanisms for peacekeeping operations and other operations under the authority of the Security Council of the United Nations or the responsibility of the Organization for Security and Cooperation in Europe (OSCE), including by resources and expertise available to NATO. In terms of NATO crisis management encompasses a series of coordinated actions or made in order to avoid a crisis, prevent escalation into armed conflict and cessation of hostilities, if any. This set of actions consists of: gathering and evaluating information, analyzing the concrete situation to be resolved, setting goals forward and options for action, implementation and analysis of one of the options reactions following actions.

In the process of crisis management, the Alliance put an emphasis on conflict prevention through activities such diplomatic initiatives, participation in negotiations, consultations, conducting inspections and monitoring, preventive deployment of military forces or civilian.

In the process of crisis management, NATO has identified five stages:

- intelligence, observation and warning indicators of potential or actual crises; assessment of the crisis and the implications for NATO's security establishment and thus its members;
- identify response options recommended to support decision-making North Atlantic Council and Defence Planning Committee;
- detailed planning and execution of decisions and directives North Atlantic Council and Defence Planning Committee;
- return to stability.

ROMANIAN'S CONTRIBUTION TO POLITICAL AND MILITARY CRISIS MANAGEMENT

According to the Romanian principle depending on causes that generate them, crises can be economic, military, political, social, etc. Supervision and crisis management is achieved in principle by actions of all persons and institutions which have powers and responsibilities: the Romanian Parliament, President of the Supreme Defence Council, Government, ministries, public authorities. Crisis situation in Romania may be generated by external and internal factors as:

-external factors:

- conduct of regional military conflict or tension generation and maintenance of close spaces Romania;
- worsening political and diplomatic relations with some countries;
- establishment of international organizations embargo measures;
- the current proliferation of revisionist trends already established borders;
- artificial feeding of ethnic tensions between Romanian citizens;
- a poor collaboration between institutions;
- attempt to create confusion and uncertainty structures competent defense, national security and public order.

action of States or international organizations to force the inclusion of Romania in their sphere of influence, therefore geostrategic position he has or multiple opportunities to be a good marketplace .

- internal factors:

- Decline of the national economy and worsening living conditions;
- Loss of state control over energy resources;
- National currency devaluation and inflation uncontrolled growth;
- Lack of firmness in law enforcement.

International security and stability can not be considered the exclusive prerogative of states and not restricted only to matters strictly related to peace or war. They become the concern of international organizations and state or non-state actors who share common values and ideals. Romania acts as an important factor while having state membership of the UN, EU, NATO and an active promoter of regional cooperation. To improve all aspects of relations with neighbors signed bilateral and trilateral agreements with them in order to create a stable quiet to ensure peace and stability in this part of Europe.

Romania has adopted and aligned international policies on sanctions and restrictive measures imposed by the UN, EU, OSCE regarding export controls for conventional arms and participated in solving major crises including terrorism campaigns.

MoND personnel are used in emergencies and only if the Interior Ministry forces and structures fail to stabilize the situation and create a very serious threat to national security and defense of the country. They work mainly in the state of siege and logistical and infrastructural support granted only MAI structures that have domestic responsibilities internal crisis management situations, maintaining and restoring public order, however, military structures occur promptly in case of calamities and disasters, participating by the means at their disposal to evacuate people, protect people, heritage values, public and
private property.

Externally, the Romanian army participating in peacekeeping operations, results and evaluations of coalition partners about the Romanian military professionalism showed in theaters is proof of the country's commitment to the international community's efforts to combat the threats and challenges of the beginning of the millennium, creating a climate of stability and security.

CASE STUDY: POLITICAL – MILITARY CRISIS IN MOLDAVIAN REPUBLIC MARCH – JULY 1992

This case study focuses on the situation in Moldavia where political – military crisis create tensions ended with a war between the armies of the Moldavian Republic and the combined armies of the self-proclaimed "Dniester Republic" and Russia. The crisis was multi-dimensional, includes territorial, ethnicity, security, ownership, national identities, pluralism, ideology, religion, power issues and undoubtedly other factors.

I choose this type of politico – military crisis, like a study case, because:

1. Trans - Dniester armed conflict has generated a deep political-military crisis likely to leads to changes in international relations system;
2. Rapidly degradation and fundamental of the institutional mechanisms for cooperation and relations between Russia on the one hand, and the EU and NATO, on the other hand, marks the beginning of a period of confrontation, with serious implications for regional security and stability;
3. Trans - Dniester conflict demonstrates without doubt that the ex-Soviet states unilaterally perceived by Russia as its primary area of interest and the decision to promote their interests by force at the detriment of its image in the world shows that the halting NATO and EU expansion eastward and maintaining total control area of the post-Soviet states is most important objectives than build partnerships with organizations mentioned above or risk of serious complications and confrontations with Moldova, Ukraine and Romania.
4. All political and military crises occurring in South East Europe taking in consideration their territorial, ethnic issue, may lead the regions countries to unforeseen conflicts.
5. Trans - Dnistria it's a problematic zone in immediately European vicinity, a risk and contemporary asymmetric threats generator, where the armaments, drugs and human been illegal traffic have an important role.
6. Learning, understand and manage this type of conflict is critical and will be the key to shaping the type of world in which we are living in the 21st Century.

A crisis overview

In the later part of the 1980s, the Soviet political landscape was changing due to the policy of perestroika undertaken by Mikhail Gorbachev, which allowed political liberalization at the regional level. Incomplete democratization allowed exclusive nationalism to become the most dynamic political doctrine. National minorities have resisted change Moldavian political class, class dominated by ethnic Russians during the Soviet period. Formalization of the majority and the introduction of mandatory Latin alphabet for writing it drew protests from speakers of other languages than Romanian. The issue of official languages of the Republic of Moldova became very thorny and was deliberately politicized. Mismatch with new policy was manifested in a more visible way in Trans - Dniester region in ethnic Slavs (Russians and Ukrainians) were the major urban areas.

In add, the Moldavian Republic's problem consists of three issues: resolving Romanian claims to Moldavian territory taken by Stalin from Romania during World War II; resolving Ukrainian claims to Moldavian territory from the left part of river which they say legally belongs to Ukraine; and pacifying a Russian army and a Russian/Slavic population that resided on the eastern side of the Dniester and which at the end of World War II found itself incorporated into Moldavia and not Ukraine.

The roots of this current crisis along the Dniester River run deep. The immediate cause, however, can be traced to the Moldavian proclamation of sovereignty and independence in 1991. The moldavianization of national life, i.e., replacement of Russian as the dominant language, and de-Sovietization aroused some fear among the Slavic [Russian/Ukrainian] minority within Moldova. This population, which formed a majority within the Trans - Dniester region, was also fearful of ethnic ties of the majority of the Moldavian population to Romania and agitation by some nationalists in Romania and Moldavia for eventual union of the two states. All the developments described above raised fears of a loss of national identity, social status, and economic security. In response to these fears, Slavic nationalists called for creation of the "Dniester Republic" and proclaimed their independence from Moldavia, even as the other states of the former Soviet Union sought to keep the lid on the Pandora's box of massive nationalistic independence movements and further frontier changes.

Trans - Dniester conflict began as a political crisis between Moldavia and the Trans - Dniester Moldavia Republic on control over Camenca, Dubasari, Grigoriopol Ribnitsa Slobozia

and Tiraspol, located on the left bank of the Dniester river and Tighina city on the banks as the same river in 1990 and theoretically ended in 1992.

Political crisis

On September 2, 1990 has been proclaimed Trans - Dniester Moldavian Republic. On 25 August 1991 the Supreme Soviet of Trans - Dniester adopted new republic's declaration of independence. On 27 August 1991 the Moldavian Parliament adopted the Declaration of Independence of the Republic of Moldavia, whose territory included the districts on the left bank. Moldavian parliament asked the government USSR "to begin negotiations with the Moldavian government on illegal occupation of Moldavian and withdraw Soviet troops from Moldavian territory"

The crisis rising gradually by involved different forms: official statements, armed attacks, provocative actions, grown military forces with the arrival of Slavic volunteers and "Cossacks" from the Don region, declaring mobilization of people, and on 2 April 1992 the fighting that erupted.

Despite continuing controversies, on 21 July 1992 a peace agreement was signed in Moscow by Presidents Yeltsin and Mircea Snegur.

Involvements of states and international organization in conflict

The states from region and international organization have been active implicated in Trans-Dniester crisis, to diminish the crisis, to managed them, using different tools from diplomatical to military.

Russia

In the pre-war period, Russia called Moldavian authorities and all parties concerned to act strictly in accordance with the norms of international law, legality, and respect for the rights of individuals and ethnic minorities. In July, Russian and Moldavian presidents meet at Moscow in an attempt to defuse the conflict, establish the sequence of steps to settle it, which included: implementing a cease-fire, creating a demarcation corridor between the forces, introducing

"neutral" peacekeeping forces, granting a "political status" to the left bank of the Dniester by the Moldavian parliament, scheduling bilateral negotiations on withdrawing Russia's 14th Army, and so one. Although these agreements were a step in the right direction, they failed.

In a 6 July Moscow meeting, the heads of state from the CIS agreed to create and deploy what they called a joint "peacemaking" force of between 2,000 and 10,000 soldiers to eastern Moldova within the next few weeks. This force, consisting of soldiers from Russia, Ukraine, Belarus, Romania and Bulgaria, would have the mission to enforce and monitor a cease-fire and keep the forces of both sides in the Dniester region separated.

In November 2003, Russia had developed a memorandum, well known as Kozak memorandum, which was in that time, the most detailed proposal for setting up an asymmetric federal Moldavian state. It also provided stationing of Russian troops on Moldavian soil for another 20 years. Major demonstrations against the Kozak memorandum took place in Chisinau on following the publication of the Russian proposals. Moldovan authorities refused to sign the memorandum without coordinating organizations. In a press conference in 2005, Moldavian President Vladimir Voronin said that the 2003 Kozak Memorandum was rejected because it was in contradiction with the constitution which stipulates Moldavian neutrality, and does not allow the stationing of any foreign troops on its territory. Moldavian and the Kozak memorandum were key topics at the OSCE ministerial meeting in Maastricht in December 2003, and the disagreement between Russia and the West has prevented the signing of a joint statement at the end of the meeting.

Even after the ceasefire, Russia continued to provide support to the separatist regime militarily, politically and economically, allowing it to survive and giving them a degree of autonomy vis-à-vis Moldova. Russian troops still stationed in Moldavian territory, despite Russia's obligations to the OSCE summits in 1999 and 2001.

Ukraine

At the beginning of conflict, expressing concerned about Ukrainians citizen, Ukraine called for a cease-fire in the Moldavian conflict over the "Dniester Republic" and offered to mediate, adding that refugees were crossing into Ukraine including recognized and supported the "Dniester Republic's" and calls for federalization of Moldova. At the Ukrainian proposal, the Moldavian and Ukrainian presidents signed a "Treaty of Good Neighborliness, Friendship and

Cooperation"; in 1993 was approved a package of draft agreements on ethnic minority rights and cooperation in education, culture, energy, transport, and agriculture between Moldavian and Ukraine, establish bilateral coordination of customs procedures and transit facilities across two countries.

In May 2005, Ukraine, led by Viktor Yushchenko, proposed a seven-point plan which states the Trans-Dniester conflict through a negotiated settlement and elections. Trans-Dniester would remain an autonomous region of Moldavia. United States and European Union expressed some level of agreement with this project.

THE RESPONSE OF THE ORGANIZATION FOR SECURITY AND COOPERATION IN EUROPE (OSCE/CSCE)

At the Helsinki Foreign Ministers' conference in 1992 , Moldavia protested against activities of insurgent forces operating on the left bank of the Dniester River; Romanian government supported them by a statement which condemning these activities. On 24 March, following the CSCE meeting in Helsinki, the foreign ministers of Romania, Moldavia, Russia, and Ukraine issued a joint statement saying they would continue their efforts to resolve the conflict in Moldavia and announced that they planned to meet again in April. None of these diplomatic moves put an end to the fighting

The parties asked the CSCE to mediate, and the CSCE decided on 4 February 1993 to send a mission to Moldova.

Under OSCE auspices, on 8 May 1997, the Moldovan President and the Transnistrian president, signed the "Memorandum on the principles of normalizations of the relations between the Republic of Moldova and Trans - Dnistria", also known as the "Primakov Memorandum", sustaining the establishment of legal and state relations, although the memorandum's provisions were interpreted differently by the governments of Moldova and Transnistria.

In July 2002, the OSCE, along with Russian and Ukrainian mediators have signed a document that contains prerequisites for the reunification of Moldova into a federation. The OSCE plan weren’t feasible because contravened the Moldavian constitution, OSCE mandate, it could be created a dangerous precedent for similar future crisis, ignored the willing of Moldavian people. In present day, OSCE has a mission of observation onsite and try to guide negotiations on conflict resolution; the last one was on 14 November 2012 on TIRASPOL.

The response of the European Union

EU show a greater willingness to engage actively in solving frozen conflicts and to send clear signals to encourage European integration aspirations for countries in its Eastern neighborhood.

European Court of Human Rights has tried and succeded to stop the unjustified detention of Ilascu group, arrested in 1992 in Tiraspol.

In according with Actions Plan (adopted in 2005 between Moldavia and EU), where Trans – Dnistrian problem has a special attention, EU continued to focuses in conflict resolution "respecting the sovereignty and territorial integrity Republic of Moldavia within its internationally recognized and ensuring respect for democracy, rule of law and human rights".

It appropriate relief, alike, will follow EU by its efforts to ensure compliance by the Kremlin Istanbul commitments on Army XIV withdrawal. Also, given the simultaneous signing an Actions Plan (2009) with the new regime in Kiev, the EU emphasizes the imperative improving cooperation along the entire Moldavian-Ukrainian border, especially on Trans - Dnistrian segment critical for preventing the illegal flow of people and goods.

Romania

Trans -Dnistrian conflict settlement policy is a priority for Romania.; although is not a part of the negotiating framework established, "5 + 2 Talks" (1997), Romania endorses without preconditions to achieve formal discussions to identify a sustainable solution, with full respect for international norms and territorial integrity, sovereignty of the Republic of Moldova. Romania as a NATO and EU member country, acting in unity of European policies.

In its policy of protecting the rights of Romanians abroad, the Romanian state will continue to support, in relation with the Republic of Moldova, promoting democracy, the market economy, the principle of good neighborliness, the fundamental rights and freedoms of citizenship, including the assertion of ethnic identity of Romanians.

The other major problem apparent in the context of the Moldavian crisis is that of how to resolve peacefully the questions of which regions belong to whom. There has been no agreement

on how to resolve the complex boundary disputes between Moldova, Ukraine, Romania, Hungary and Russia. Moreover, there appears to be very little genuine interest in the kind of political compromise that will be necessary to allow this to take place. There is considerable dialogue indicating that all sides desire some sort of settlement, but the "evidence" presented here indicates that these claims are rarely followed up by concrete actions, to include diplomatic actions, which will resolve the problems.

As a result, this crisis is no closer to being resolved than it was a year ago. The situation is in a period of stagnation where both sides seemingly have agreed to a long-term stalemate that will continue into the foreseeable future. In the meantime, lives are still being lost and emotions are becoming more piqued as patience wanes. Only when all participants are willing to put individual interests and agendas aside in favor of a collective, peaceful solution will this crisis end.

CONCLUSIONS

Although the danger of a major military confrontation disappeared after the Cold War, new risks and threats of various kinds (terrorism, economic and political subordination weak states, internal subversion and destabilization, erosion of cultural identity of the small, economically weak, major environmental risks etc.) can cause the emergence of crises. Crises of the early twenty-first century are complex in nature, mainly political and military, but economic support in the increasing disparities and multiplication asymmetric threats. They affect both developed and poor countries faced in addition, border wars, hunger, malnutrition and severe lack of jobs.

The crisis management and conflict is hampered by large economic disparities, the proliferation of economic and financial crime, the existence and persistence of totalitarian political regimes, generating crises, conflicts and terrorism.

Although Romania is a stable, generating stability and security, it is conceivable that, in certain circumstances due to unfavorable economic situation, to trigger some economic and social crisis.

Crisis management has become an important component of strategies organizations with security concerns, especially the UN, NATO, EU and OSCE. In this context, special military

actions that give content crisis management - interventions to maintain or restore peace and peace enforcement - are added political and diplomatic support for the parties involved to resolve conflicts, humanitarian assistance, support for normalization of social life, etc.

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AN APPROACH BASED ON THE PROCESS OF THE PRODUCTIVE ACTIVITY OF THE MAINTENANCE CENTER

LTC Eng. Nicolaie BUCICA

INTRODUCTION

Maintenance Centre is a structure subordinated of the army force category that is assuring planning, management, control and execution maintenance activities of military equipment and the fabrication of spare parts for big units and units from responsibility area. The unit has in his organic production structures like sections and others compartments which are attending to the accomplishment of the production tasks, such as:

- the design and technological workshop;
- the production and planning office;
- the metrology laboratory;
- the quality inspection office;
- the quality management office;
- the acquisition department.

The document that plans, executes and evaluates production activities of productive units of the maintenance centre (MC) is "The annual production program" (APP). This document is elaborated by productive units based on the hierarchical tasks received from the upper echelons, according to the skills, capacity of production and allocation of funds.

The skills of maintenance centre are given by:

- the infrastructure;

- the machineries and the existing equipment;
- the technical and engineering personnel, training and expertise of them;
- the existence of the technological documentation;
- the permits obtained from the competent structures for different activities;
- the attestation of capability for the work that is performed;
- the experience from the past.

APP is elaborated and it is sent for approval and advice to the major program director or to secondary authorizing officer.

The evaluation and monitoring of PPA execution is periodically done by analysing the realisation of the production program and the level of the main economic and financial indicators.

If we compare the activity of a civilian factory and a maintenance centre activity we will observe similarities, but also differences given by:

- the military vertical organizational structure of the MC;
- the management and the control of activity under civil law and the military rules and regulations.

The productive activity in the civilian factory always follows minimal cost and maximum efficiency.

In the MC the productive activity is carried out following the effectiveness and the efficiency to maintain functionally the complex equipment, sometimes it is unique.

THE MANAGEMENT SYSTEM OF THE ORGANIZATION

The management and functionality of an organization with performance is achieved by implementing, maintaining and continuously improving the management system of the organization. Some components of the organizational management system are as follows:

- the quality management;
- the financial management;
- the risk management;
- the environment and work health and safety management.

Using these organizational management system components allows the establishment of the organization politics and achieving the organization objectives.

Also, in the organization we can use, partially or totally, the management system elements, establishing the objectives for each management category and the way of achieving that.

The design and the implementation of a management system can be done by each organization respecting the national and international standards as follows:

- at the organizational level, by its own departments, elected by the organization management. The certification it's not externally recognized, it's internal, but can be used for activity improvement and goals achievement.
- by certified organizations. This confirms in the exterior of the organization that the requirements for the specific activity are implemented and respected.

At the MC level can be implemented, maintained and improved the organizational management system elements, facts that leads to specific objectives achievements and improving the organization activity.

THE APPROACH BASED ON THE PROCESS

The Quality Management System

Considering the fact that the main activity of the MC is the productive activity it's necessary to implement and maintain a good **quality management system(**QMS).

To help any type of organization regardless of the size or main activity to design, implement and efficiently manage the quality management system it was elaborated by the International Standardization Organization the ISO 9000 standards family. This standards family was adopted as a general European standard by the European Committee for Standardization.

Romania as part of the International Standardization Organization by ASRO - Romanian Organization for Standardization, has adopted this standards family as Romanian Standard.

Presently it was approved the 4-th edition of this standards, revised and simplified.

The implementation of the quality management system gives thrust to our clients that the

products repaired, reconditioned or fabricated are constantly done according with the specific requirements.

The continuous evaluation of the quality management system gives the opportunity to identify the degree in which the system requirements are implemented and supplies information regarding priorities and actions that are necessary to increase the organization efficiency.

The Basic Principles

The basic principles regarding the ISO 9000 family are:

- Focus on your customers;
- Provide leadership;
- Involve your people;
- Use a process approach
- Take a systems approach
- Continuous improvement;
- Get the facts before you decide;
- Work with your suppliers.

This can be used by the organization management for managing with high efficiency.

The Process Approach

For an organization to function in appropriate conditions, it must identify and manage numerous activities that interact. *An activity or a set of activities that use resources, led (driven) to allow transformation of input into output elements can be considered a process* [2]. The output from a process is often, directly, inputs into the next process.

Using the quality management system within an organization, has the advantage that, due to process approach in development are identified, managed and controlled all processes and interactions between them, ensuring a continuous monitoring and development.

Using such an approach emphasizes the importance of[2]:

- *customer focus and meeting their requirements;*
- *the need to consider the process according to the added value;*
- *obtain results on the performance and effectiveness of the process;*
- *continuous improvement of processes based on continuous measurements.*

Such a process diagram is shown in Figure 1.

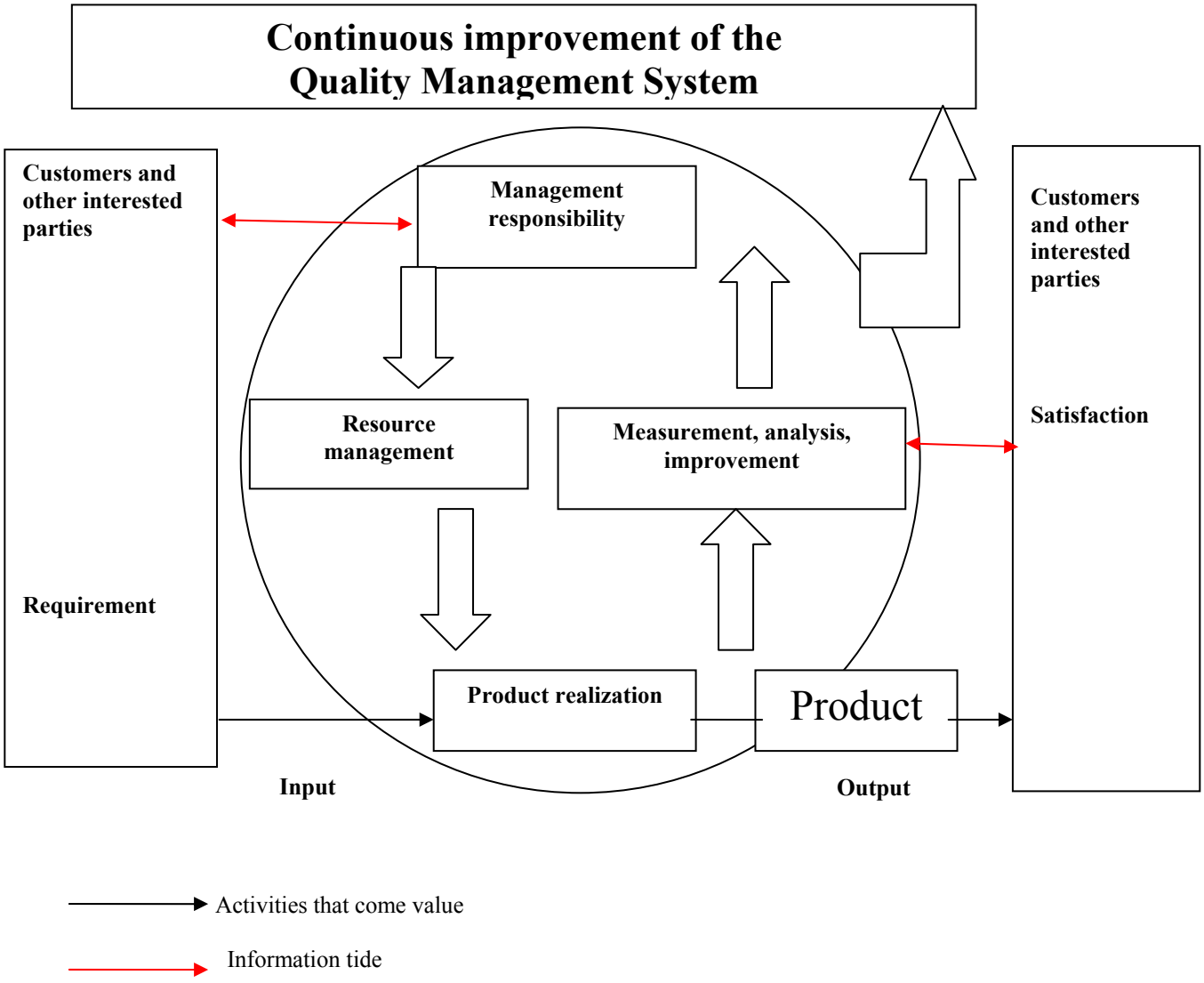

Fig. 1 Continuous improvement of the Quality Management System

Type process approach allows the associated resources to lead to expected results, if they are properly secured.

By resource we understand:

- human resources;
- financial resources;

- material resources;
- information.

Inputs can be: internal tasks or from the upper echelons (customers' requirements), financial resources, different documentations, information, equipments, and materials.

By product, at the maintenance center level we understand services (technical assistance), software (different computer programs), finished product (repair, refurbishment, fabrication) and processed materials (distilled water).

The Methodology 'Plan-Do-Check-Act' (Figure 2) applies to all processes which mean:

- setting objectives and processes necessary according to customer requirements and organizational policy

- process implementing

- monitor and measure processes and product, enterprise actions to continue improve process performance.

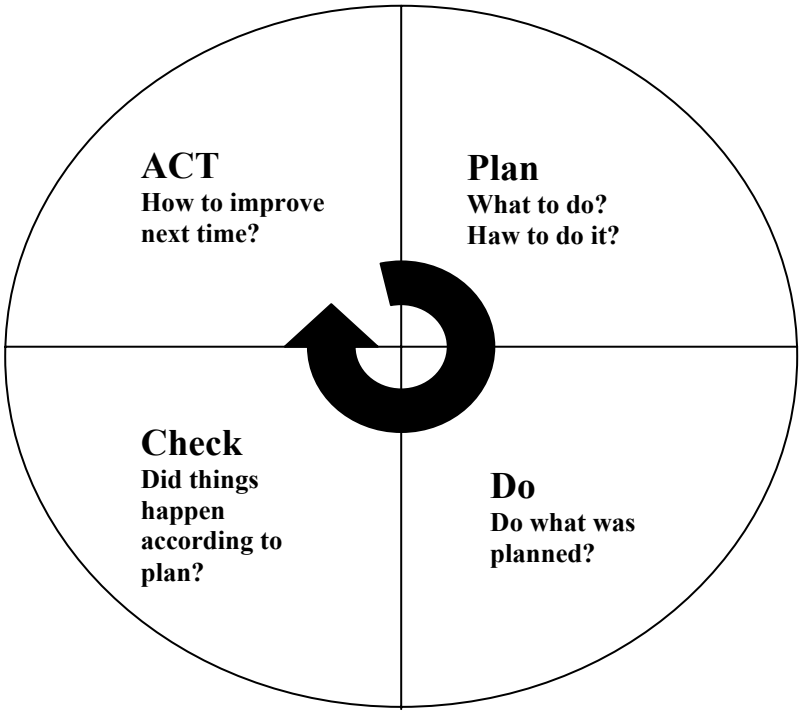

Fig. 2 The Methodology 'Plan-Do-Check-Act'

The Main Processes

The centre management establish clearly the activity objectives taking into account its capabilities and designate "*the quality*" as priority within the organisation.

For accomplishing the objectives, the structure functions as a coherent system with all the processes and the responsibilities defined.

Organizational, the maintenance centre has very well defined the data/information flux which influences the productive activity.

For the execution of the specific activities were identified the following processes:

- management;
- designing;
- planning;
- acquisition;
- product realisation;
- measuring/monitoring/control;
- internal audit.

In close interaction with the main processes mentioned are the following processes:

- controlling the documents/records;
- personnel training;
- controlling the products supplied by client;
- inspection and tests;
- service;
- controlling the process of product realisation;
- identification and traceability;
- preservation, storage and handling the product;
- controlling the measuring devices and the monitoring devices;
- controlling the nonconforming product;
- establishing the corrective actions and the corrections;
- establishing the preventive actions.

One way to approach the processes "***planning***" and "***product realisation*** " is presented below.

1. Process:	**PLANNING**
2. Objective:	•planning to realize the production for a certain period of time; following the production; calculation of the cost price.
3. Processes limit:	•beginning: preparing the production plan. •End: approving and realization the planned production.
4. Input associated processes:	• the analysis of the customer requirements; • launch in fabrication/repair; •the analysis of resources (material, financial, human); • designing.
5. Input relevant date:	• the fabrication/repair orders• the internal necessity reports• the productive found of time determined by the number of employees and the effective working time • ensuring with the personnel, the financial resources, the materials, the utilities •
6. Resources:	• the financial resources• the trained personal• the machinery and the work equipment • the infrastructure.
7. Output date:	•the" command "document •the annual production program •the monthly extract • the summary report.
8. Output associated processes:	•the price calculation •filling the "command"documents •opereiting in the production program •preparing the reports •the correction, the corrective actions, the preventive actions.
9. Monitoring:	• Chief engineer:

- monitories and verifies the month productive program if it is realized

- monitories and verifies the way corrections are applied, the corrective actions and the preventive action in the unit, with the purpose of continuing improvement of the planning process.

• Sections chiefs:

- monitor and verify compliance of the monthly production program ;

- monitor appling the correction, the corrective actions and the preventive actions which aims at continuous improvement of the product planning.

10. Effectiveness indicators: • compliance of the execution deadlines set in command and fulfilment the production program

11. Process responsible: • Chief engineer

• Sctions/workshop chiefs

1. Process: **PRODUCT REALISATION**

2. Objective: •**product/service realisation** according to the customers/users specifications

3. Processes limit: •Begin: launch in fabrication/repair;

•End: validation of the product.

4. Input associated processes: •the resources allocated

• planning the production ;

• launch in fabrication/repair;

•QMS analysis performed by the management

•the internal audit;

• the quality inspection

• designing.

5. Input relevant date: • the technical and technological documentation

•the quality plan• the montly production program.

	•the internal ”command” • the productive found of time of the section/workshop •the training level of the executives personel • the execution deadlines •the bon consumption • the general finding • finding of detail• the act of delivery / receipt in/from repair • the non-conform or absence list of pieces.
6. Resources:	• the financial resources• the trained personal• the machinery and the work equipment • the infrastructure •the logistical support (transport, logistics, materials etc).
7. Output date:	•the guarantee certificates• the quality records relating to the product • the accompanying sheets, etc.
8. Output associated processes:	•transport• handling • packaging • storage • controlling of the nonconforming product; •the QMS analysis• service• corections • the correctve actions• the preventive actions
9. Monitoring:	• Chief engineer: - monitories and verifies the monthly productive program if it is realized; - monitories and verifies the corrective actions and the preventive action if are applied in the unit, with the purpose of continuing improvement of the realization product process. • Sections chiefs: - monitor and verify compliance of the monthly production program ; - monitor the applyng of the correction, the corrective actions and the preventive actions which aims at continuous improvement of the product realization process.

10. Indicator de eficacitate: • product/service realisation according to the customers/users specifications and the planed deadlines

11. Process responsible: • Chief engineer
• Sections/workshop chiefs

The schematic represent of the "Product Realisation" is shown in Figure 3:

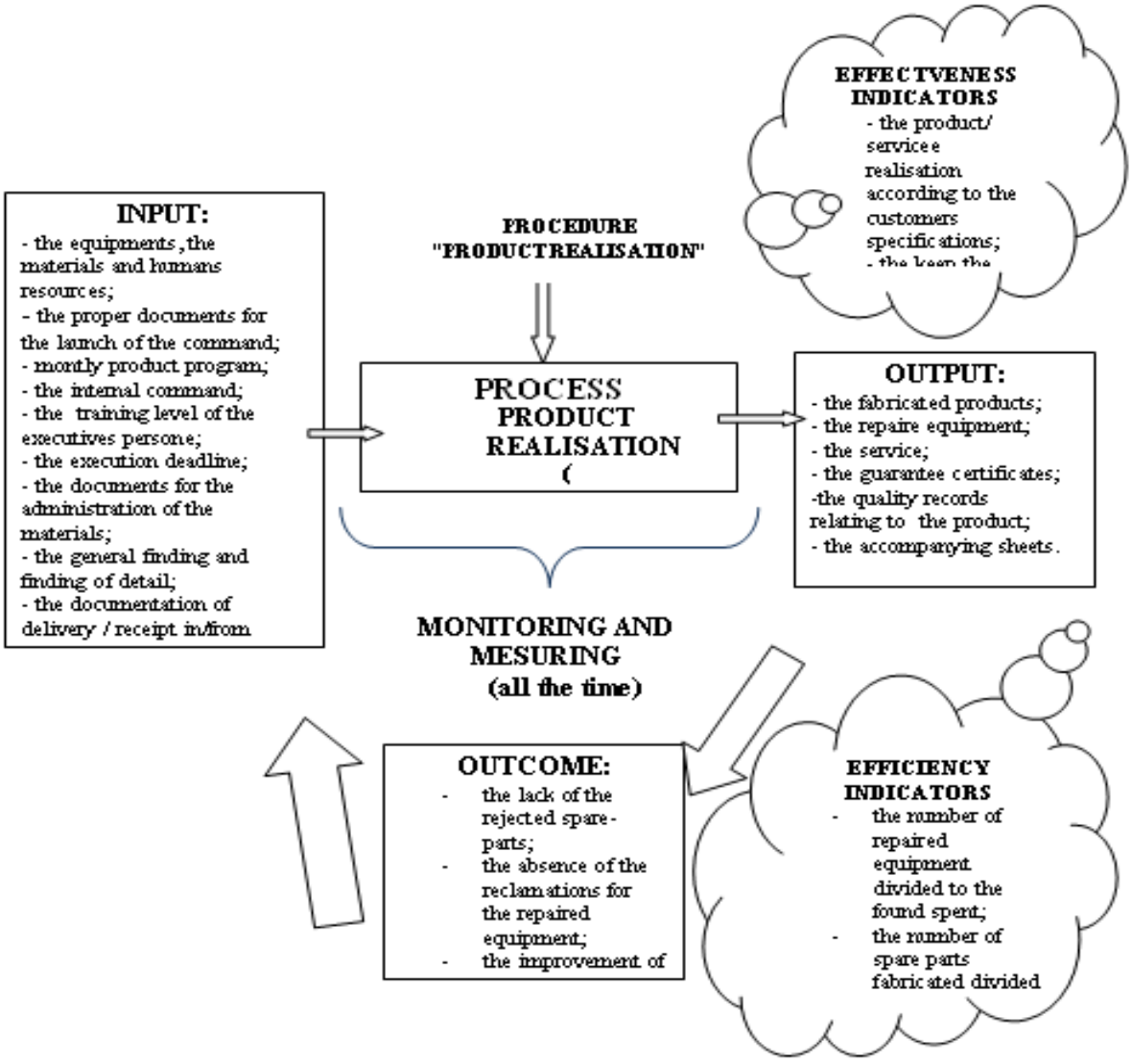

Fig.3 Product Realisation

PROBLEMS IN THE PRODUCTIVE ACTIVITIES

Although within the organization all processes are identified, documented procedures are prepared, and responsibilities are known, during the productive activity problems may arise due to improper carrying of certain tasks such as:

- budgeting and allocation of funds;
- human resource management;
- supply of spare parts and materials.

Besides these activities, it could cause problems the delivery-receipt process for the equipment in repair, modification of tasks or the occurrence of additional tasks, etc..

All this will have repercussions on organization structure, working environment, training quality, human resources, ensuring materials and parts, so on the production program and Client satisfaction.

Unit management must analyze each problem that occurs, the influence on the processes, on the specific activity and must seek solutions for problems.

Problems Due To Budgeting And Allocation Of Funds

Special problems may arise:

- If the budget is approved is under the budget of the unit,
  - the annual production program and the procurement plan must be rebuilt according to the new budget;
  - some activities will not be done according to the plan: infrastructure maintenance, investments, verification and authorization of special installations, training;
  - cannot fully provide protective equipment and work tools accessories and so on.
- If the budget is not approved by the legal term, specific activity will take place monthly, based on the funds requested / approved compared to last year budget. The supply of spare parts activity runs difficultly, without vision.
- Compared to organization requirements, the allocation of funds does not meet the demand or the necessary rhythm. Productive activity will take place with difficulties or blocked. If the funding is delivered in the fourth quarter there is a risk that the funds cannot be spent completely. Unit management will attempt to identify other sources for spare parts and materials

(central warehouse, the beneficiaries of productive activity) to accomplish the tasks and identify activities that will necessitate minimum of resources.

Problems Due To The Human Resources Management

The problems in the human resources domain are due to:

- the frequent changes in the organisational structure of the unit;
- the multiple retirement because of the aging staff;
- the lack of the engineering and technical staff;
- the fluctuation of the military personnel engaged with contract and their training quality ;
- because of the financial cries the vacant functions were blocked, especially those in the technical-engineering and the financial domain.

The unit management will try to unblock the vacant functions and to supplementary train the existing personnel and to collaborate with others MC for the realisation of some specific activities.

Problems due to the assuring of the spare parts and the materials

In the budgeting restrictions and negative rectification cases, the financial funds allocated to MC are insufficient comparing to the annual production program, this fact leads to the permanent change of its.

The financial allocation funds are not monthly distributed like on the MC requests, these are assured preponderantly to the end of the year, this fact is leading to the delay of the executions deadlines planed and to the unit's stock realisation at the end of the year.

The spare parts assured by the economical operators are of low quality and high prices, because these parts are used for old technique which is not fabricated.

The identified spare-parts in the central depots are not always corresponds with the quality requests.

The hardly and longs procedures of acquisition are slowly perform the processes/activities of the repair/fabrication.

CONCLUSIONS

Undertaking the responsibility by the unit management to implement and to maintain the QMS based on "*the process*" it is a strategic decision which permits the continuous improvement of the performances, efficiency and effectiveness of the organisation and the improvement of the customers' satisfaction. Also the organization can prove that the delivered products are according to the customers' request.

The use of QMS permits[2]:

- the identification of the processes which are participating to the realisation of the productive activity.
- estimating and monitoring of the resources
- the establish of the criteria and the methods for the operating and processes control
- the identification of the interactions and successions of the processes.
- the monitoring and the analysing of the processes

Each process is very well determined, it is documented by procedures, it exist records, there are known the inputs, the outputs and the connexion with the others processes.

For each process is established: "w*hat should do' "by who" "when" "how" "what to use"*.

The decisions are taken based on the documented analyses and the results are predicable.

By analysing very well the problems deriving from the activity progress, the unit management can take some corrective, preventive measures or corrections based on the dates, information detained.

The preventive, corrective actions or the corrections are applied in all the sections, workshops and in all the unit's compartments to the products and to the processes, beginning from the receiving of the task until the delivery of the product. Also this actions are applied in the service activity according to the causes which are generated the unconformity.

At the unit's level the approach based on the "process" allows to the management to execute a continuous and an active control of the each process and interaction between these

processes, fact that allows the operating of the productive activity in goods conditions of efficiency and effectiveness and it assures the continuous.

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NATO MUTUAL GOVERNMENT QUALITY ASSURANCE (GQA) IN ROMANIAN ARMED FORCES

LTC eng. Marius CONSTANTINESCU

INTRODUCTION

The Mutual Government Quality Assurance (GQA) is the process through which NATO Nations provide each other and NATO organisations Quality Assurance services on defence products, to establish trust that the contractual requirements relating to quality are met.

The NATO nations' ratification of STANAG 4107 created the legal framework for mutual Government Quality Assurance (GQA) activities. The ratification status, including Nations' reservations, can be viewed, by authorised users, at the NATO Standardisation Agency website https://nsa.nato.int.

Acceptance of product and/or any kind of product certification (e.g. airworthiness or seaworthiness) are not activities and responsibilities of the GQAR, therefore, they are not part of the Mutual GQA process, but compulsory/legal requirements under exclusive responsibility of the Acquirer and the Supplier.

The intent of this paper is to shortly describe the process by which the participating Nations request and provide to each other GQA activities.

The Allied Quality Assurance Publication (AQAP) 2070 is standardizing and harmonizing the GQA process.

The AQAP 2070 provides instruction detailing what is considered the minimum to fulfil Nations' commitments within STANAG 4107. Guidance is also provided to aid the application of the fulfilment of the instructions and provides some helpful examples and good practice.

GQA is not intended to replace or replicate Supplier activities, including inspection and QMS (Quality Management System) auditing. GQA is intended only to provide confidence that

the Supplier activities related to quality are performed effectively, giving confidence to the Acquirer that contractual requirements relating to quality will or have been met.

GQA is performed on those contractual requirements either posing risks to or required by the law of the acquiring Nation.

THE MUTUAL GQA PROCESS OVERVIEW

The Mutual GQA process is initiated after a contract and/or a derived subcontract is issued and a risk assessment determines that GQA is necessary.

Communication and information exchanged between Delegator (the appropriate authority of a NATO Nation or NATO Agency requesting GQA) and Delegatee (the appropriate authority of a NATO Nation performing GQA) should start as soon as possible in compliance with the applicable local contract laws and without interfering with the contract process.

The best way to the effective implementation of the Mutual GQA process is the continual exchange of information between the GQA Participants.

The GQA process is intended to provide Acquirers with confidence that their contractual requirements relating to quality will be or have been met.

Classified information shall only be exchanged in accordance with national procedures through reports and records.

Reports that may be requested in the process will include:

a) Ongoing Risk Status (The RIAC Form);

b) GQA Reports for specific activity or periodically and

c) Quality Deficiency Reports (QDR).

The GQA records shall include as a minimum:

a) The RGQA;

b) RIAC;

c) GQA Plan;

d) Results of GQA activities indicating the system; process or product verified and dates performed;

e) All activity associated with the disposition, investigation and correction of the nonconforming product e.g. QDRs, Customer Complaints and Concessions and

f) GQA Reports.

The forms listed above are designed to support the process and to standardize communication between GQA Participants. The use of the RIAC, RGQA, RGQAR and GQACR is mandated. GQA participants are strongly encouraged to use all of the other forms in order to assure coherence and continuity.

The RIAC and other GQA records shall be used by the Delegator to review, revise or adjust current RGQA requirements, as necessary, and to enhance the quality of future GQA requests and by the Delegatee to adjust GQA plans accordingly.

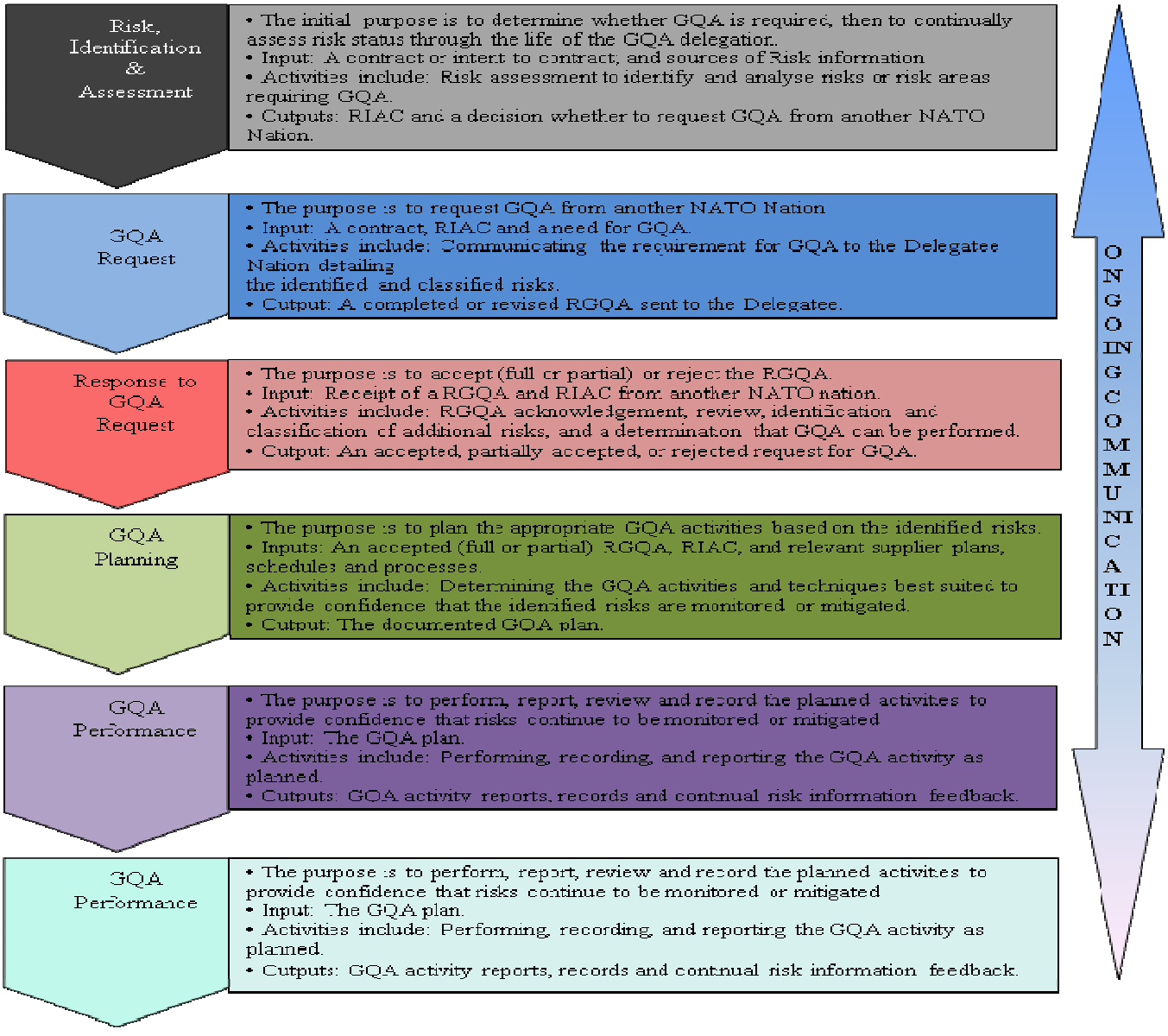

Fig.1 A chart of The Mutual GQA Process Overview

RISK ASSESMENT PROCESS

To develop the process of Mutual GQA it is necessary to assess the risk.

The Delegator shall identify risk by writing a risk statement. Risk shall be assessed to determine whether to request GQA from another Nation. Assessments shall continue throughout the life of the GQA delegation, by all GQA Participants to assure that the GQA remains aligned to the current risks to the fulfilment of the requirements relating to quality.

The Delegator shall consider whether:

a) The risk can be adequately monitored or mitigated at delivery of the supplies to the Acquirer and; if the capability to do so is available;

b) The magnitude of the identified risk warrant requesting GQA;

c) GQA can influence supplier's performance associated with the risk and risk causes.

Any decision to delegate shall be based on risk and the fact that GQA will be able to provide confidence that contractual requirements relating to quality will be met. GQA cannot influence the impact of a risk, only the likelihood of its occurrence.

The RIAC form will be issued and used to communicate the GQA related risks and their ongoing status to the GQAR.

The concept of the GQA risk identification and assessment process is illustrated in the figure below.

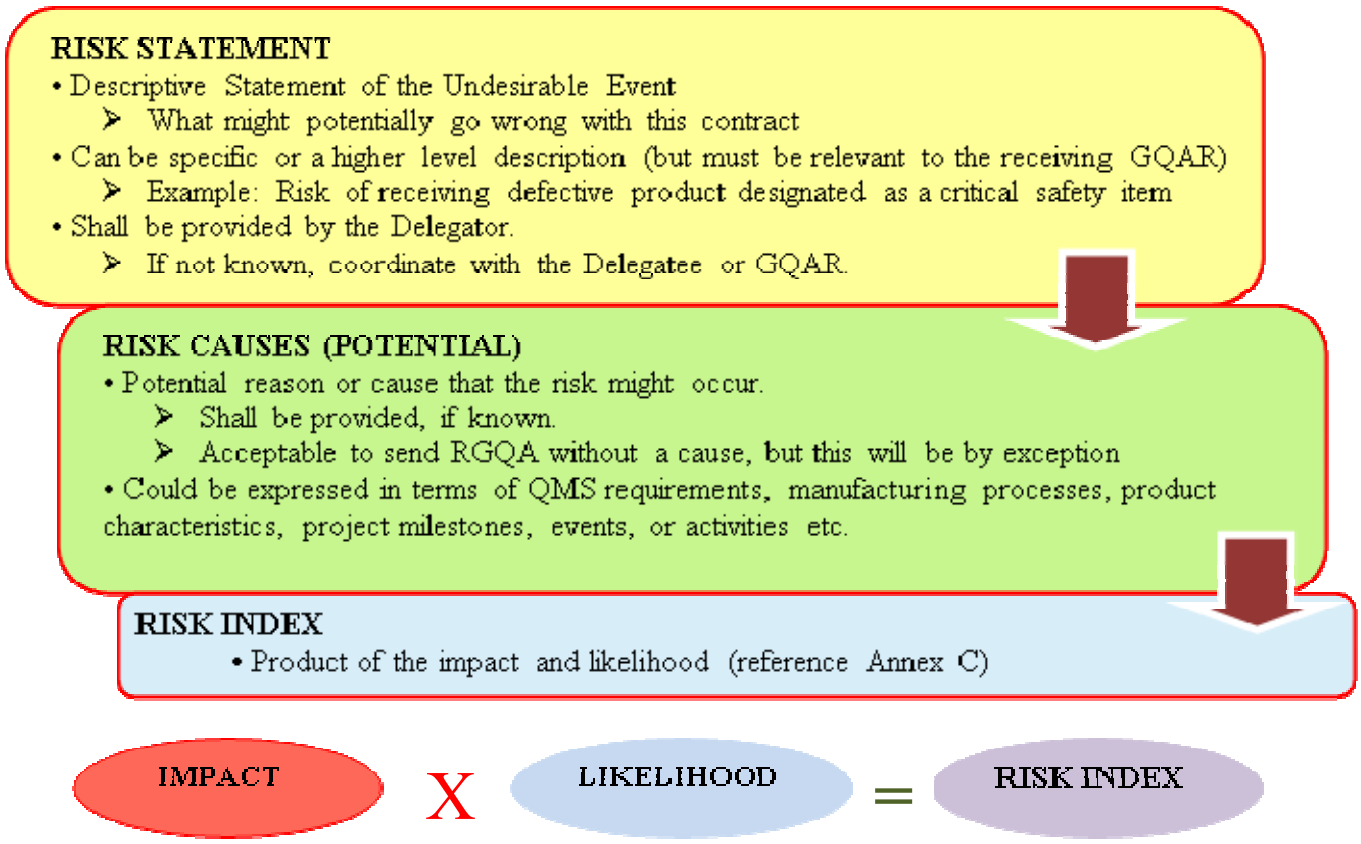

Fig. 2 Risk identification and assessment process

Identifying risks associated with a project, contractual requirements or Supplier usually requires the consolidated input of the Delegator and the Delegatee. Generally the Delegator should have greater access and insight into project and contract risks and be better placed to assess the impact of a risk occurring. The Delegatee should have greater access and insight into Supplier performance risks and is better placed to assess the likelihood of a risk occurring.

It is recognized that, in some situations, risk information may not be available to the Delegator or that the Delegator does not possess the technical expertise to identify the risks. In these situations, the lack of risk information may be, in fact, the risk to the Acquiring Nation.

As was underlined before, the Mutual GQA process becomes applicable after the Government contract and/or derived subcontract is issued and where a requirement for GQA is determined. The Delegator shall complete and transmit the RGQA and RIAC forms. The objective of these forms is to communicate all relevant information to the Delegatee with respect to the product, the risk and the Delegator requirements and expectations.

Preferably the Delegator should electronically transmit the RGQA and RIAC along with the contract and supporting information, to the appropriate National Authorities or focal points (reference STANAG 4107 Annex A).

The next concept chart illustrates how the accuracy of risk information can be improved by the input of both the GQAR and the Delegator and used in GQA planning.

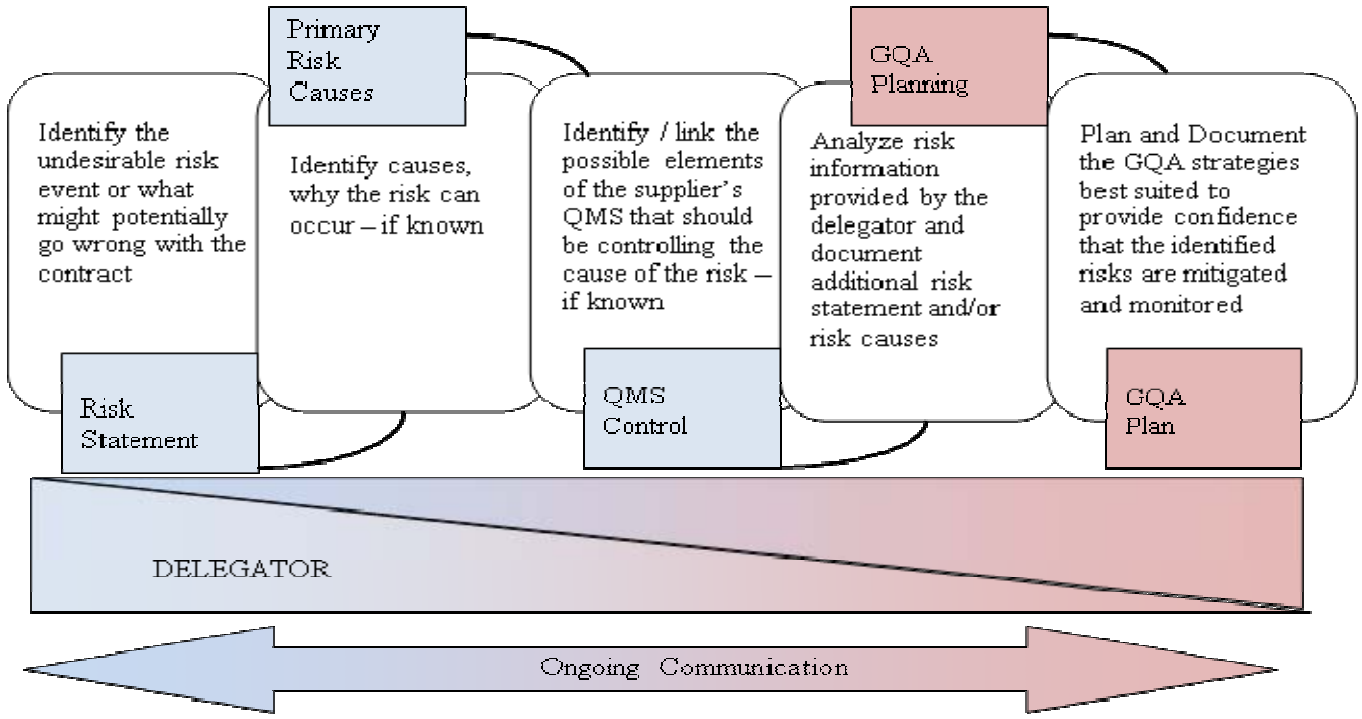

Fig.3 Improving the accuracy of risk information

In order to plan and perform risk based GQA it is important to understand the constituents of risk; their attributes; controlling processes; influences and interrelationships.

The potential sources of risk information that can be used as a memory jogger to assist in the identification of risk may be: Customer Feedback, Supplier Past Performance, Previous Risk Feedback, Pre-award Surveys, System or Process Certification, Project Office, Key or Critical Product Characteristics or Processes, Supplier Inexperience, Contract Review.

The constituents of risk are:

a) Risk Statement: risk statement describing ‘what might go wrong’ should be expressed as an event having a negative effect on the product' delivery schedule, cost and/or performance;

b) Risk Cause: Identification of the risk causes ‘Why might it go wrong?’ is necessary for GQA planning;

c) Risk assessment should take account of the impact of the risk and the likelihood of its occurrence. Assessment of each, leading to the risk index, shall take into account three levels for both impact and likelihood. High (9), Medium (4) or Low (1) (reference figure C-5);

d) Risk Impact represents how critical the consequence of the risk occurring would be, either high, medium or low;

Risk Impact	**Attribute**
HIGH (9)	The risk event could reasonably result in loss of human life or serious injury or complete failure of mission.
	Serious or permanent environmental damage.
	The loss of critical assets for example, assets critical to military operations that are not easily replaced or secret information.
	The product would not fulfil the intended purpose and cannot be satisfied by alternative means, e.g. another product or system.
	Product lead time is long, it is single source supply or procuring redundancy is prohibitively expensive.
	Lack of equipment availability would impact current military operations.
MEDIUM (4)	The risk event would result in injury or disruption of the mission.
	The product capability would be restricted.
	Non critical, but key characteristics or special requirements affected.
	Product lead time is long and procuring redundancy is expensive.
	Lack of equipment availability would impact future military operations.
	Localised or temporary environmental damage.
	Significant increase of the life cycle costs.

LOW (1)	Only non-critical, non-key characteristics or special requirements affected.
	Increased costs, within budgetary constraints
	Manageable project delays, not impacting operations
	Product appearance would be adversely affected, it is not a critical characteristic.
	Easily recoverable localised environmental impact.
	Product is widely available and not prohibitively expense so can be replaced easily.

Fig. 4 Risk Impact

e) Risk Likelihood, Risk by definition is uncertain, so needs to be rationalised by an assessment of the likelihood of its occurrence to provide a balanced criterion for GQA planning. The risk likelihood is a quantitative assessment of the how effectively the Supplier's QMS might control product delivery, cost and/or performance. It is expressed as high, medium or low.

f) Risk Likelihood attributes. The following table shows typical attributes of high, medium and low risk likelihoods.

Risk Likelihood	**Attribute**
HIGH (9)	It is highly likely to occur. A system or process is not in control. Performance data for example GQA results, current or recent experience show that the system or process will not fulfil the contractual requirements relating to quality.
	There is no evidence available of the Supplier's capability to perform the required activity.
	The uncontrolled process is used very frequently leading to increase of occurrence of the risk.
	The process is seldom used, so rarely practiced, leading to a lack of control, e.g a

	lack of experienced operators.
	The process is either new to the Supplier or very difficult to control. There is little or no evidence of past performance that could provide confidence of the process control.
MEDIUM (4)	It is probable or likely that the risk will occur. A system or process is not in complete control or performance data, for example recent GQA results, recent experience and/or the Supplier, cast doubt on the ability of the system or process to meet the contractual requirements relating to quality.
	The process is either new to the Supplier or difficult to control. There is some evidence of control but it is insufficient to provide confidence of the process control.
LOW (1)	It is unlikely that the risk will occur. The system or process is under control or performance data, current or recent GQA results or the Supplier provides evidence that the contractual requirements relating to quality will be met.

Fig. 5 Risk likelihood

g) Risk Index. The risk index is a quantitative measure of how significant a risk is and is used to prioritize GQA effort. The risk index is the product of the risk impact and likelihood. The next figure, the Risk Index Matrix, is used to illustrate the different risk index.

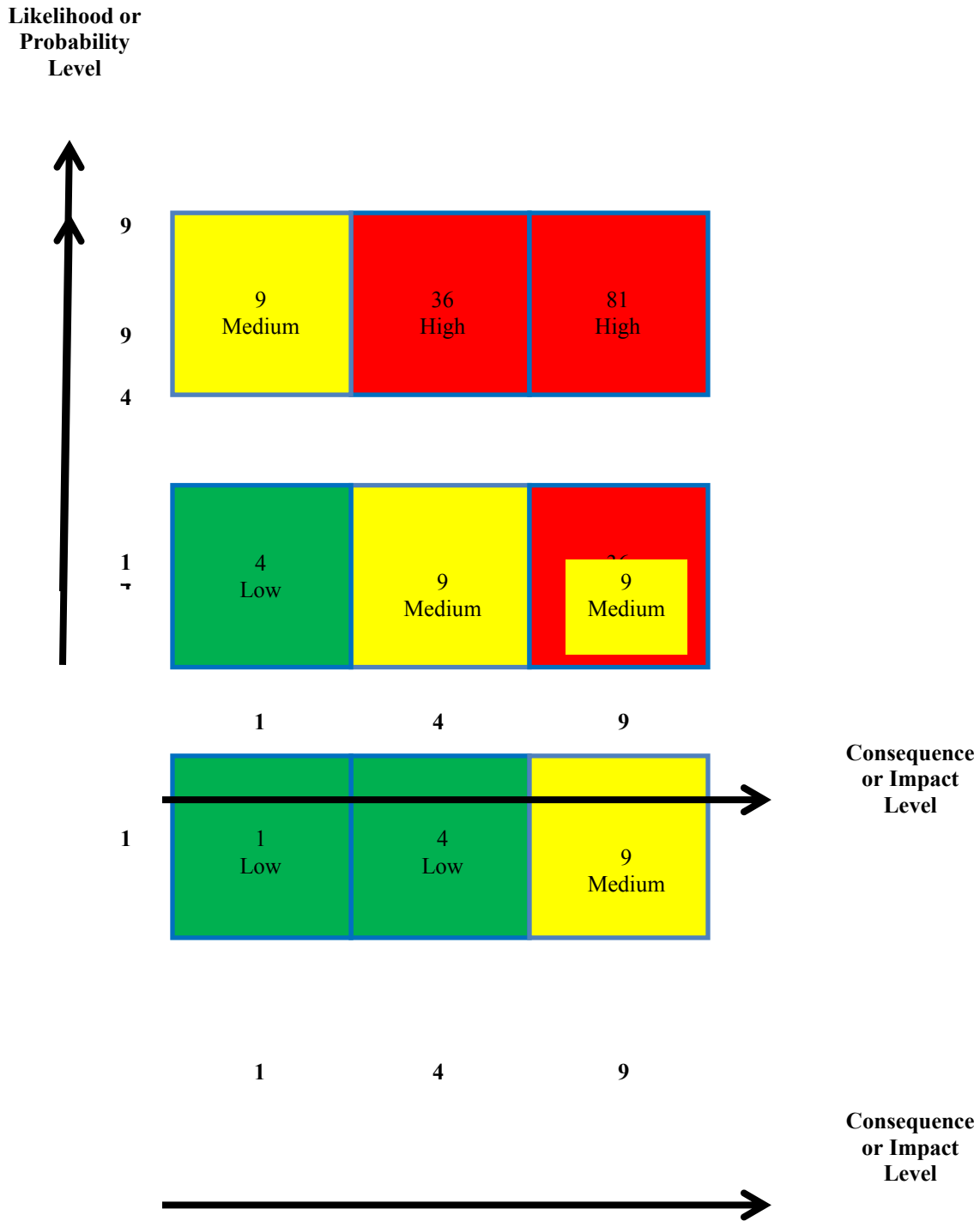

Fig. 6 Risk Index Matrix

Referring to the Risk Index Matrix, where the project or contract involves any system part, assembly or equipment where a failure will result in catastrophic or critical failure resulting

in loss of life or significant operational capability the risk impact and therefore, the risk index can never be less than 9. Examples include: Critical Safety Items (CSI), Safety to Life, Submarine 1st level, Vital Parts and Flight Safety Items.

It is essential that the Delegator and Delegatee (GQAR) conduct their own risk identification and assessment to provide a balanced view of the risks and enable the GQAR to plan GQA appropriately. Supporting comments or recommendations on the RIAC will enhance the mutual understanding of the joint risk identification and assessment.

Preferably the Delegator should electronically transmit the RGQA and RIAC along with the contract and supporting information, to the appropriate National Authorities or focal points (reference STANAG 4107 Annex A).

The focal point shall acknowledge receipt of the RGQA. The acknowledgement should be within 5 working days and preferably by return email message. The acknowledgement signifies that the RGQA has been received.

Where the GQAR possesses risk information that adds or contradicts the Delegator risk identification and/or classification they shall provide the Delegator with a revised RIAC. Accurate risk information is valuable to project or contract managers.

Based on the review of the RGQA, contract and outcomes of the joint risk identification, the GQAR determines if the RGQA can be accepted fully or in part. The GQAR shall notify the Delegator of the determination by returning the completed Response to GQA Request (RGQAR) Form. This shall be done within 20 working days of receipt of the RGQA, unless by prior agreement with the Delegator.

Where several contracts have been placed with the same Supplier, the GQAR may perform GQA using a facility wide approach where risk levels permit.

A post award GQA meeting shall be initiated at the request of the Supplier or if:

a) Communication lines or GQAR rights of access require clarification;

b) The GQAR believes that the Supplier does not have a clear understanding of the QA requirements of the contract and/or;

c) The GQAR needs to discuss supplier plans, schedules and/or;

d) The GQAR needs to discuss product specifications or standards.

Where the GQAR can only accept the RGQA in part, the GQAR shall complete the RGQAR accordingly and discuss alternatives for the requirements that cannot be accepted with

the Delegator. While issues are being resolved, the implementation of GQA on the accepted aspects of the RGQA shall not be delayed. Acceptance, in part, of a RGQA shall be on an exception basis unless reservations are posted in STANAG 4107.

If the GQAR cannot accept the RGQA, the GQAR shall complete the RGQAR accordingly, as soon as possible, explaining why the RGQA cannot be accepted. Rejection of an RGQA shall only be on an exception basis.

Once the GQAR accepts the RGQA, the GQA shall not be terminated without the coordination and concurrence of the Delegator.

CONCLUSION

The process is a very complex activity performed under provision of AQAP 2070 and STANAG 4107.

As was underlined the NATO GQA mutual activity implies a high risk of uncertainty when the Delegator and Delegatee don't have a common history. Usually the process is reactive and not proactive.

In order to standardize and harmonize the GQA process, AQAP 2070 present a clear pattern to perform the activity.

The provisions of STANAG 4107 specify that mutual GQA is performed between signing NATO countries and this represent a limitation.

The process requests qualified personnel, in wide defence areas. This could be a problem when the product is high tech or many contracts overlap in the same period of time.

The time limit for confirmation of a GQAR receiving (5 working days) and to send a RGQAR (20 working days) represent some time a too strict limitations.

Risk information is used to initiate the process and shall be continually reviewed and revised to assure that the GQA activities remain appropriate. Generally, the Delegator should have greater access and insight into project and contract risks and be better placed to assess the impact of a risk occurring. The Delegatee should have greater access and insight into Supplier performance risks and is better placed to assess the likelihood of a risk occurring. For this reasons sometime the risk index could differ, the problem being the different perspective on assessment of the components.

ACRONYMS

The following is a list of acronyms used throughout this paper:

AQAP - Allied Quality Assurance Publication

CoC - Certificate of Conformity

DFB - Delegation Feedback

FAI - First Article Inspection

GQA - Government Quality Assurance

GQACR - Government Quality Assurance Closure Report

GQAR - Government Quality Assurance Representative

QDR - Quality Deficiency Report

QMS - Quality Management System

RIAC - Risk Identification, Assessment and Communication

RGQA - Request for Government Quality Assurance

TERMS AND DEFINITIONS

The definitions of terms used in this paper are defined below:

Critical items: those items having significant effect on the product realisation and use of the product.

Delegatee: the appropriate authority of a NATO Nation performing GQA after acceptance of the RGQA.

Delegator: the appropriate authority of a NATO Nation or NATO Agency requesting GQA in a NATO supplying Nation.

Government quality assurance participants: collective term for those active in Mutual GQA.

Key characteristic: an attribute or feature whose variation has a significant effect on product fit, form, function, performance, service life or producibility that requires specific actions for the purpose of controlling variation.

Quality deficiency report: report or record initiated by Government personnel identifying nonconformity.

Risk: within the context of GQA, risk is an uncertain event or condition that has both a likelihood of occurring and a negative effect on the fulfilment of the contractual requirements relating to quality.

Risk cause: the potential reason(s) why a risk will occur, expressed in terms of a breakdown of Supplier processes or process control and linked to the contractual requirements relating to quality.

Risk impact: the consequence of an uncertain event occurring.

Risk index: the degree of importance of a risk expressed as the product of the impact and likelihood, used to prioritise GQA activities.

Risk likelihood: the degree of confidence that the risk will occur.

Risk statement: a statement of what might potentially go wrong with respect to the contractual requirements relating to quality.

Risk status: The reflection of the risk index, at a moment in time, can be increasing, decreasing or stable compared to its previous state.

Special requirements: Those requirements identified by the customer, or determined by the organisation, which have high risks to being achieved, thus requiring their inclusion in the risk management process.

Statement of GQA: a statement signed by the GQAR to attest that GQA has been performed within the provisions of STANAG 4107 and the agreed RGQA.

REFERENCES:

[1] Allied Quality Assurance Publication (AQAP) 2070
STANAG 4107.
[2] ISO 9000:2005 Quality Management Systems - Fundamentals and Vocabulary.
[3] Military Body for Certification, Accreditation and Surveillance Responsibilities

MILITARY LEADER – SOME PREREQUISITES AND FACTS

LTC Emil CRINTEA

INTRODUCTION

I chose this topic because a military leader has both the responsibility and honor to lead people or to prepare for this noble purpose. This paper starts from the from the premise that every leader is or should be honest and pragmatic, rooted in the present and opened to the future. The entire activity of a powerful military leader can and should start from respect for humans and ends with his complete fulfillment. On the other hand, most of today's senior officials are and will be the tomorrow's military leaders. My approach is to present a synthesis of ideas and concepts selected from specialized books together with some personal considerations. After highlighting the basic components of leader's personality I present some aspects regarding what a military leader must do by exemplifying with the cases of three known former military leaders. By covering this topic, I expect a real change in the conduct of our senior officials consisting in the birth of their desire to prepare thoroughly for the position of being and acting as a military leader. In the end, I would like to underline that for no other profession is lack of training so devastating than for the military one.

HOW A MILITARY LEADER MUST BE

Military leaders are required to have a commendable strength of character. A military leader can instill in his subordinates the values and ethics expected of them, by adhering to his principles at all times. With a view to all this, this chapter presents the definition for both leader and military leader, the basic components of personality such as character, attitudes, skills and authority and, finally, the power of personal example.

Definitions

According to Peter Koestenbaum, "*To be a leader means to give evidence of excellence in everything you do. A leader is a person of impeccable character, an individual totally reliable. Leaders are open minds – good listeners, flexible, perfectly aware that they themselves do not have all the answers.*"

One definition for a military leader shows that this is a kind of person that "*fulfils or not a command function, succeeds in motivating and engaging his subordinates in carrying out some tasks and missions, due to his personal qualities, training, experience, communication skills, persuasion, charisma, behavior"*[5].

There are two categories of leaders: formal leader – that person appointed in the command position formally and informal leader – that person which exerts the greatest influence in the group. For leadership both prerequisites should be met.

Every commander, in a sociological sense, is a leader because he fulfils a command function. Military leaders are also the managers of the military organizations and of the activities that take place in that structure. The status of being a leader is both a fulfillment and an aspiration, a difficult but required path to be trodden. The usage of the term "military leader" does not rule out the usage of the term "commander". Every commander must wish and be an authentic leader, a professional in the science and art of leadership.

The personality of a military leader

Personality signifies „*what is characteristic for each person and distinguishes it as conscious and free individual; the whole moral and intellectual traits that distinguish one person; how to be genuine"*[6].

Personality is defined as "*a stable element of a person's behavior, which characterizes and distinguishes it from another person. Each individual has his intellectual affective and cognitive particularities, whose organized grouping determine personality"*[7].

It is very important to mention that according to Dimitrie Gusti, it is not our exceptional features that make up our personality but their proper use.

[5] Gheorghe Arădăvoaice, *The Military Leader. Realities and Goals,* Military Publishing (2011), p. 13.
[6] *Explanatory Dictionary of Romanian Language*, Encyclopedic Universe Publishing (1998), second edition.
[7] Nornert Sillamy, *Psihology Dictionary*, Encyclopedic Universe Publishing (1996).

A military leader is a powerful personality because he turns out to be:

a) competent – with a strong professional and general culture;

b) passionate – deeply motivated and strongly attracted to what he does;

c) independent – in thinking, personal opinions and points of views;

d) originator – with a creative imagination;

e) informed – hungry for knowledge and information in various fields;

f) receptive – attentive to the ideas and solutions of people around him;

g) thoughtful – in thinking and logical judgments;

h) colloquial – good in argument, in ideas confrontation,

i) intuitive – with patience identifies the proper solution for problems solving;

j) firm decider – does not postpone, delay or evade from a decision taking;

k) responsible – assume responsibility for his actions and his subordinates actions;

l) moderate – in exercising authority, without excesses and attitudes of intolerance;

m) diplomat – polite and decent in his relations;

n) confident – in his own forces, in others' capacities and good intensions;

o) enthusiast – optimistic and hopeful;

p) credible – through the acquired consistent in affirming his professional values;

q) balanced – in front of both success and failure;

r) good team player – knows to work together with others around him;

s) proactive – does not wait the events but anticipate and prepare for confront these events;

t) entrepreneur – a man with initiatives, involves strongly in actions;

u) humane – closed to his subordinates, good comrade;

v) patriot – does facts for his country and respects the history and traditions of his people.

The character

According to Henri de Jomini, the character is above any other quality of a commander. The character is the most valuable component of human personality, its core and how to be, to feel and to react as a human. All the manifestations of a human are under the direct influence of his character. The character is expressed and proved by attitudes, conduct and facts.

There are some general considerations about character such as:

a) an upright character, a man with a beautiful soul is better appreciated than even talent;

b) character without intelligence can do much but intelligence without character has no value;
c) character is the base of rectangle and intelligence is the height of rectangle;
d) the art of leadership is a combination between strategy and character. But if we had to choose between the two aspects, we must choose character, not strategy;
e) if you have talent you can get to the top of the pyramid but only if you have character, you can stay there.

In some studies regarding performance management, there is a conclusion that people prefer character over training because if we can improve our knowledge, the character once flawed in some of its components, can be hardly corrected. According to Zig Ziglar, "The best clues about one person's character are:

a) how to behave with people who do not do any good to him;
b) how to behave with people who cannot fight back.

There are some character traits of a military leader that have a great influence on people's behavior such as: dignity, honor, assuming his responsibilities, generosity, the capacity to understand the situation of every subordinate. Without character, especially in the military domain, the outcome is only failure in peacetime, disaster in war or, in the best case, mediocrity in both situations.

The attitudes and skills

According to specialists, success in life is 90% attitude based, and only 10% skills based. If attitude defines the capacity of being, skill means the capacity of doing something. The attitude may be positive or negative. According to D. Eisenhower, it "doesn't matter what you have or what you need, but the attitude always matters. The attitudes are organized in four groups: towards self, towards others, towards work and towards world and society. Of course, these groups are not rigid but are close related, interlocking and mutually inclusive. According to the American psychologist Allport, there are over ten thousand attitudes by far.

The table below shows some comparisons between persons with positive and negative attitudes.

Table 1: People with positive and negative attitudes compared

Persons with positive attitude	Persons with negative attitude
Thinks "I can"	Thinks "I can not"
Concentrates on solutions	Dwells on issues
Looks for qualities to the others	Finds only defects to the others
Concentrates on what he has	Concentrates on what he needs
Sees the possibilities	Sees the limitations

In the area of attitudes we also may include "the seven deadly sins"[8] that must be avoided by any leader:

1. To try to be loved and not respected
2. Not to ask for help and advice from the team members
3. To waste his talent by emphasizing rules, not vocation
4. Not to promote constructive criticism
5. Not to develop the sense of responsibility into the team members
6. To treat them all the same
7. Not to inform people.

Speaking about skills, these are recognized by exceptional performance obtained in a specific activity. The most important skills for a military leader are:

a) the capacity of diagnose and the ability to forecast;
b) tact, patience and tenacity;
c) communicative skills and inclination to work with people
d) decision-making force and persuasive power;
e) discernment and sense of measure.

The authority

According to V. Groeben, "the authority is based on the personal qualities of the boss, qualities that lies on his training, experience and capacity". There are three types of authority:

1. the authority conferred by your position or rank
2. the authority of your knowledge

[8] John C. Maxwell, *Develop the leader in you*, Amaltea Publishing (1999), p. 194.

3. the authority of your personality

These are also the directions in which a military leader must act in order to obtain and hold authority, not by imposing it, nor by using coercive levers.

The following factors strongly impact leader's authority:

a) proven professional competence, taking into account that competence without authority is as useless as is authority without competence;
b) action and conduct in accordance with what the leader said;
c) the capacity of a leader to get involved and solve problems;
d) self respect and respect for the others taking into account that, according to Confucius, "who sees all flaws has no quality".

The power of personal example

According to Colin Powel "to be a model for the others is one of the most important functions of an efficient leader". Personal example is the most influent element of the whole process of leadership. The leader gives the example and the subordinates do what the leader does himself not what the leader says. According to Stephen R. Covey "the real key to influence consists in your example, in how you behave. The example you offer is generated by your character, your real personality is not what others say about you, nor the impression you want to leave". In order to exercise a positive influence, a leader has to know and to promote some specific requirements mentioned below. In each requirement the value of one's own example is emphasized:

- to refrain from saying something unpleasant or negative;
- to have patience with others;
- to distinguish between a person and his behavior;
- to do anonymous services;
- to keep your promises to others;
- to assume about others the best things;
- to try first to understand when you communicate with another person;
- to give an understanding response;
- to recognize your own mistakes, to excuse and to ask forgiveness;
- to renew attachment by the things in common with your subordinates;

- to accept the person and the situation;
- to avoid quarrels and to use dialogue;
- to identify and to wait the moments when you can learn the others;
- to agree on limits, rules and consequences;
- to use the language of logics and emotion;
- to delegate efficiently the responsibility.

WHAT A MILITARY LEADER MUST DO

Given the type of duties that military leaders have to execute, they are expected to have greater competencies in certain leadership characteristics than in others.

This chapter presents the basic requirements for military leadership and other problems in the field of military leader's duties like setting priorities, establishing rapport with subordinates, problem solving and control.

Setting priorities

According to Perry Smith "Individuals in senior command must set priorities both for themselves and organization. It has to be a close correlation between chiefs' priorities and those of the institution". In order to have success in the leadership process, the military leader must act on the basis of priorities. Any priority is determined by two elements: the value of action and its emergency. The leader's permanent priorities should be:

a) the improvement of his training and work on self – because the leader is responsible for both the successes and failures of the organization. There is the risk that those who lead organizations to forget about themselves and thus to neglect asking questions like: what articles in modern management have they read lately? Is their leadership style efficient and dynamic? These are not rhetoric questions but problems that can help the leader to evaluate himself;
b) working with subordinates – because subordinates are the greatest wealth of the organization. The latest studies say that a leader spends at least two thirds of his working time with his subordinates. If the leader does not consider this a priority, he cannot have

good results because both successes and failures are the results of human activities, of their value or ignorance;

c) team work – the leader, together with his deputy and collaborators, analyzes the tasks and problems of the organization in order to make good decisions. In our days, the essence of military life is teamwork, which means that humans with different personalities must work together;
d) the cohesion of the organization – in order to achieve and maintain the cohesion of the organization, the leader must act in the following directions: raising his subordinates' awareness of the value and real necessity of the common goals and objectives; the proper usage of the system of rewards and punishments; the prevention or the solving of any conflict which appears within the organization and so on;
e) the insurance of the supremacy of proven value – any deviation from the principle of correct evaluation for every subordinate regarding work, promotion or other incentives affects the relationships between the members of the organization and its cohesion;
f) the military organization to act as a living organism – the organization has to have prompt reactions and regeneration capacity;
g) periodic assessment of how the priorities above are established and are subject to his concerns.

Establishing rapport with subordinates

According to Stephen R. Covey "the real key to personal and interpersonal effectiveness, even more than individual skills, consists in the relationships between people and how they are addressed". Every leader is a chief for his subordinates but in the same time, he is also a subordinate for his superior. In fact, there is no leader who, in his turn, is not a subordinate to somebody. From this perspective, it is necessary to mention his conduct as a subordinate. A realistic answer to this problem was given by Phillip Meilinger who elaborated "The ten rules of good subordination":

a) do not blame your boss – your duty is to support your boss not to undermine his position. Loyalty has to manifest in a two-way manner within the chain of command;
b) do not fight with your boss – you must avoid the conflict situations and not to disclose to others what was discussed;

c) give evidence of initiative – try always to give answers not to ask questions;
d) accept the responsibility – the army, like any other organization with difficult tasks, does not act effectively if it is not made up of people who accept the risk and are willing to take responsibilities;
e) tell the truth and do not tamper with subterfuge –big mistakes are based on small things. An unhappy human reaction is to hide or to cover the mistakes before these are discovered by the others.
f) do your homework – when your boss gives you a problem to solve, you have to become an expert in this problem before trying to propose another course of action;
g) implement suggestions – when you make recommendations you must remember who will implement them. That means you must know your own forces and limits;
h) always inform your boss – the boss has to be informed about everything that happens in your organization. Generally speaking, people are reluctant to talking about their problems. As a result, what the boss finds out about your organization is heavily filtered;
i) acknowledge problems as they arise – if you meet a problem, do not hesitate and try to solve it.
j) fulfill honestly your daily tasks – this is the best way to do your job and in the same time, to do not forgive the necessities of your family. The stormy life of a military leader has a price paid by his family.

Leadership style

Every leader has a personal style in organizing, planning, deciding, controlling and evaluating. These are features that are based on his personality, training, work and life experience. There are three categories of factors which determine the leadership style:

a) factors related to leader such as his features regarding personality, skills, knowledge, system of values, trust in subordinates and so on;
b) factors related to subordinates such as the features of subordinates regarding personality, that influence leadership style;

c) factors related to the situation such as general particularities, the requirements of the environment, the type of the organization and its dimension, the nature of the problems and so on.

The imperatives of the leadership style are:

- respect and trust in subordinates;
- authentic professionalism;
- legality and respect laws;
- keeping, strengthening and development of the ethical behavior of subordinates;
- the sense of realism, the courage of making decisions;
- establishing properly the priorities, organizing and conducting activities in accordance with these priorities;
- teamwork and the preoccupation that the leading team is responsible for all they do;
- a balanced conduct, a proper behavior, honor and dignity.

The most efficient leadership style is that which produces the best results, using the available resources. According to W.J. Slim "the art of leading is the most personal thing for the simple reason that it describes you the whole".

Problem solving

The essence of the act of leading is problem solving. Great leaders know that there is a big difference between decision making and problem solving. If the decision is a choice between two ore more alternatives, problem solving represents the implementation of the decision. As a result, the approach to problem solving generates success or failure.

A great leader must know and apply the principles of problem solving. These were written by John C. Maxwell.

Some of these principles are:

a) every problem can be solved - do not think that there is a problem without a solution;
b) define clearly the problem in a written form, otherwise the symptoms may be taken for the problem itself;
c) if you have a problem to solve, divide it in small parts and solve each part;
d) make a list of people and other sources of ideas that can help you to solve the problem;
e) make a list with all the possible courses of action that you can think of;

f) overview these courses of action;
g) choose the best course of action and start the process of problem solving;
h) do not let problems to stop you from taking the right decision;
i) what you see and what you look for is determined by your success or failure.

Psychologists developed a number of techniques for problem solving for a leader in the act of leading. These are shown below as follows:

a) analyze important problems and avoid in the same time to tackle problems with deadlines and that require rapid solutions;
b) try to find the best answers for your problems but be prepared for other alternatives;
c) try a number of possible answers, both in mind and practice;
d) verify your own solutions, both in mind and practice;
e) assume that it is possible to find out proper answers for your problems but not the best;
f) help yourself to establish realistic goals, stating the problems clearly and working to find possible solutions;
g) try to generate as many solutions as possible so that you can choose between them;
h) try to think how other persons will solve these problems;
i) evaluate pros and cons to every answer you have in mind;
j) expect some failures, sometimes even many failures;
k) be aware that it is good that you try even if your plans do not succeed well;
l) be convinced that there are great chances to finally solve the problems;
m) when you block yourself, try to observe what is the cause;
n) think of some encouragements you need in order to solve the problems and use them;
o) see a difficult situation as a challenge;

In conclusion, problem solving is the core part of the leading process, in fact a principle of leading, a complex action which enlists the professional capacity of a leader, his character and managerial skills and finally determines the performances of the organization.

The Military Problem Solving Process helps leaders face complex problems in situations where information might be limited.

When using any problem solving technique, realize that they all have limitations and that the two most useful tools are brainstorming and learning all you can about the problem at hand in order to gain a deeper conceptual understanding.

Control as an attribute of leadership

According to J.W.Goethe, "to discover gaps is not sufficient if you do not propose the means of correcting". Control represents an attribute of leadership that requires intensive work capacity, experience and capability, the whole personality of a leader in knowing the state of his organization in every moment, his will to convert decisions in facts.

The requirements for effective control are:

a) principle-based – approach and solve all problems based on regulations;
b) demanding – revealing shortcomings, combat superficial, shallow attitudes;
c) objectivity – rigorous assessment of both the achievements and shortcomings;
d) prompt resolution of everything there is in place together with people who are controlled;
e) the generalization of ideas, solutions, forms and methods that have proved viable;
f) valuing the people who capable, hardworking and with best results;
g) separation of some conclusions and lessons, for both the controllers and people who are controlled.

The norms and rules in preparing and executing an effective control are:

a) to establish clearly the objectives of control;
b) to ensure an organized and efficient control;
c) to provide a realistic content control;
d) to avoid disruption of current activity of the controlled structure;
e) to know the real level of task performing and problem solving;
f) to focus control on important problems;
g) to respect the topic established for control;
h) to have a proper conduct in relationships with people controlled;
i) to focus more on what it was achieved than how was achieved the results;
j) to apply both rewards and punishments if necessary.

Beyond the technical side of control, the attitudes, vision and conduct of the controller induces a certain state of mind, influences in a specific way the quality of control and can lead to both motivation and demotivation of people controlled.

That is why, during the preparation stage and execution stage the leader must pay attention to values like: fairness, demanding, morality and human verticality of the controllers, the concern to compare the obtained results with established standards, to improve the results by optimizing the activities. Only on these coordinates, will control be beneficial for both the controllers and controlled people.

Lessons learned from famous military leaders

In this chapter three great former military readers are presented from the perspective of some remarkable facts, quotes and conclusions. It is the case of the first marshal of Romania – Alexandru AVERESCU, the two four-star generals in the Gulf War of 1991 - Norman SCHWARZKOPF, and Colin POWEL.

Norman Schwarzkopf - commander of the Coalition Forces in the Gulf War of 1991.

In Vietnam in March 1970, Schwarzkopf was involved in rescuing men of his battalion from a minefield. He had been informed that men under his command had encountered a minefield on the notorious Batangan Peninsula, he rushed to the scene in his helicopter, as was his custom while a battalion commander, in order to make his helicopter available. He found several soldiers still trapped in the minefield. Schwarzkopf urged them to retrace their steps slowly. Still, one man tripped on a mine and was severely wounded but remained conscious. As the wounded man flailed in agony, the soldiers around him feared that he would set off another mine. Schwarzkopf, also wounded by the explosion, crawled across the minefield to the wounded man and held him down so another could splint his shattered leg. One soldier stepped away to break a branch from a nearby tree to make the splint. In doing so, he too hit a mine, which killed him and the two men closest to him, and blew an arm and a leg off Schwarzkopf's artillery liaison officer. Eventually, Schwarzkopf led his surviving men to safety, by ordering the division engineers to mark the locations of the mines with shaving cream. Schwarzkopf says in his autobiography "*It Doesn't Take a Hero"* that this incident firmly cemented his reputation as an officer who would risk his life for the soldiers under his command.

Some quotes of this former United States Army general:

- “The truth of the matter is that you always know the right thing to do. The hard part is doing it."
- “The definition of a commander is competence. But that is more important, character. Transition to facts. To do what is fitting.”
- “You learn far more from negative leadership than from positive leadership. Because you learn how not to do it. And, therefore, you learn how to do it.”

Schwarzkopf told his men that they might not like some of his strict rules, but it was for their own good. He told them "When you get on that plane to go home, if the last thing you think about me is 'I hate that son of a bitch', then that is fine because you're going home alive."

Colin Powel – chairman of the Joint Chiefs of Staff during the Gulf War of 1991.

In his autobiography, Powell said he is haunted by the nightmare of the Vietnam War and felt that leadership was very ineffective. Powell served a tour in Vietnam as a military adviser, and was mildly injured when he stepped on a bamboo “punji stick”. The large infection made it difficult for him to walk, and caused his foot to swell for a short time, shortening his first tour. It was also during his Vietnam service, his second tour, that Powell was decorated for bravery. He single-handedly rescued several men from a burning helicopter, one of them being Maj. Gen. Charles Gettys, the commander of the American Division.

Some quotes of this former United States Army general:

- “A good leader does three things: (1) speaks clearly and consistently about the problems and challenges facing the organization and about possible solutions. Seeks people’s contribution and help. (2) empowers his people by giving them the authority and tools necessary to carry out their things. (3) ensures that people are interested and inspired by mission”.
- “Leadership is solving problems. The day soldiers stop bringing you their problems is the day you have stopped leading them. They have either lost confidence that you can help or concluded you do not care. Either case is a failure of leadership.”

- “Great leaders are almost always great simplifiers, who can cut through argument, debate and doubt, to offer a solution everybody can understand.”
- “The commander in the field is always right and the rear echelon is wrong, unless proved otherwise.”
- “If a leader doesn't convey passion and intensity then there will be no passion and intensity within the organization and they'll start to fall down and get depressed.”
- “In other words, don't expect to always be great. Disappointments, failures and setbacks are a normal part of the lifecycle of a unit or a company and what the leader has to do is constantly be up and say 'we have a problem, let's go and get it.”
- “You can be sure that excel as a leader when people follow you everywhere, even if only out of curiosity.”

As a military strategist, Powell has advocated an approach to military conflicts that maximizes the potential for success and minimizes casualties. A component of this approach is the use of overwhelming force, which he applied to Operation Desert Storm in 1991.

Alexandru Averescu (1859-1938) – the first marshal of Romania, is widely credited as Romania's most successful First World War commander;

He served as his country's Prime Minister for a month in February 1918. He was known as a person who was displayed a perfect balance between intelligence and character. He never sacrificed truth for style. He had both a sharp intelligence and military culture that made him a tough opponent. Those who were stupid enough to contradict him in any military or other matter ended most times ridiculous. He could also speak very well five foreign languages.

Averescu led the Second Army to victory in the Battles of Marasti and Marasesti (August 1917); his achievements, including his brief breakthrough at Mărăşti, were considered impressive by public opinion and his officers. Averescu was widely seen as the person behind a relatively successful resistance to further offensives on Moldavia (the single piece of territory still held by the Romanian state), and he was considered by many of his contemporaries to have stood in contrast to what was seen as endemic corruption and incompetence.

Personal considerations

This chapter presents some consideration regarding orders, my opinion about some military leaders I met over a period of four years and some conclusions. I have an experience as a military leader due to my current position, being commander of an ammunition depot.

Giving orders

A sensitive issue for a military leader is to give an order. We must take into account the fact that the leader does not justify his orders in front of the subordinates. On the other hand, when the leader gives an order(task) to a subordinate, he must specifies the following:

a) what to do and why to do;

b) when to realize and where to act;

c) how to do (only for complex tasks) and by when.

Specifying all the details above, it will appear that the leader justifies his order. This is the key: to give an order and specify details without justifying your order.

A good leader knows some aspects regarding details:

a) it is necessary to convince the subordinates in doing actions so that they are involved both in the decision making process and in the implementation of the decisions taken;

b) explanations are necessary but no justification is needed;

c) one that uses incentive and persuasion will succeed better than one who resorts to law and coercion;

d) it is well known that how is the order, the same is the execution.

Positive and negative aspects of our military leaders

Due to my current position as a commander of a unit for more than four years, I met some leaders, especially during controls performed in my unit. In my opinion, I can say some positive and negative aspects of these leaders such as:

Positive aspects - impeccable military outfit;

- respect for subordinates;
- promoting change;
- hard demanding.

Negative aspects - they do not use constructive criticism;

- flawed character and lack of integrity;
- the controls are focused only on shortcomings.

To be a great military leader is a difficult task. Both knowledge and experience are necessary. Regarding knowledge, we have to study a lot of aspects and not to assume that we already know many things. A leader has great responsibilities and we cannot afford to improvise and experience.

CONCLUSIONS

Taking into account all the aspects mentioned above, the following conclusions can be drawn:

1. The leader, beyond the nature and size of the organization he leads, will continue to be the central character of his organization in spite of increasing teamwork value.

2. The leader must always respect the principle "man above everything and any thing".

3. The value of a military leader is not and cannot be any lower or higher than the results of his driven organization.

4. The value of a military leader consists in what he is not in what he has, and also in what he have accomplished and fulfilled.

5. The emblem of socio-professional status for a leader will still be represented by the triad: character – professionalism – team spirit.

6. The ultimate test for any leader is what's left behind.

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NATO COMMON FUNDING – WHAT'S NEXT?

LTC Marius Cristian GANE

INTRODUCTION

The North Atlantic Treaty Organization (NATO) is an intergovermmental organization to which member countries allocate the resources neede to enable it to function on a day-to-day basis and to provide the facilities required for consultation, decision-making and the subsequent implementation of agreed policies and activities. Since NATO has only a limited number of permanent headqurtes and small standing forces, the greater part of each member country's contribution to NATO, in terms of resources, comes inderectly throgh its expenditure on its own national armed forces and on its efforts to make them interoperable with those of other members so that they can participate in multinational operations. Member countries also incur the deployment costs involved whenever they volunteer forces to participate in NATO-led operations. To accomplish its roles, NATO needs capabilities, such as military and civilian manpower, weapon systems, ammunition, airfields, transport, logistics support, command and control systems, civilian and military headquarters buildings, etc. In many cases, member nations supply these capabilities; in other cases, they must be procured.

NATO FUNDING MECHANISMS

There are the different types of funding mechanisms that are used to provide the monetary resources for the purchase of these capabilities.

The primary funding mechanisms are: National Funding, Multi-national Funding, Joint Funding, and Common Funding (CF). Often, the key to success in NATO is finding the right balance between the different funding mechanisms. The following diagram summarizes how the appropriate funding mechanism is identified:

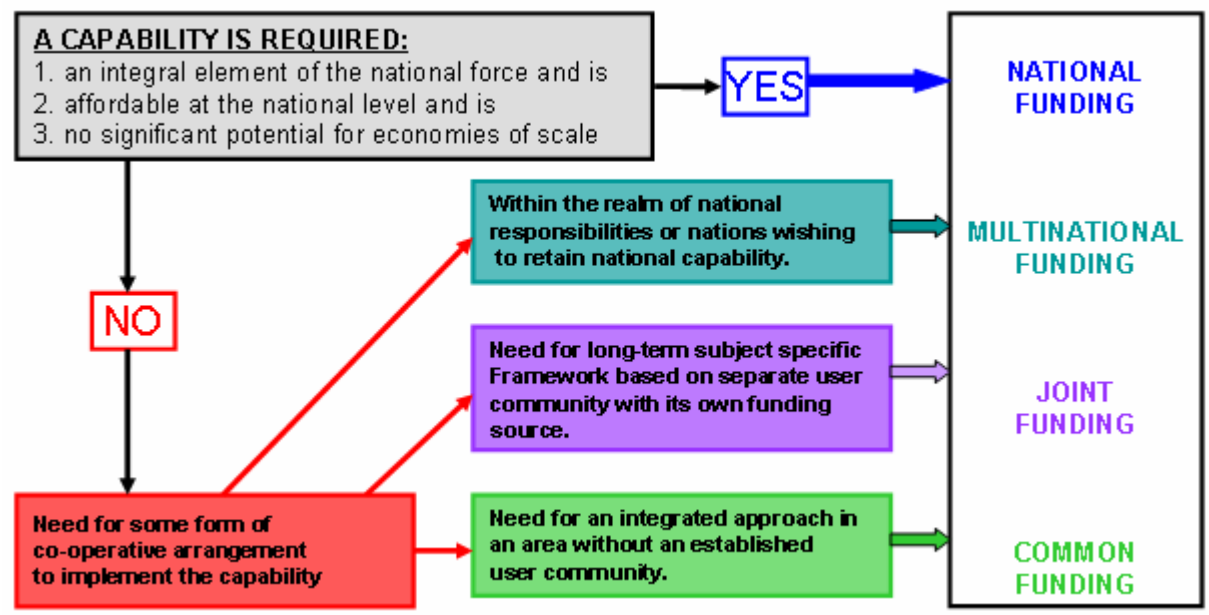

Figure 1 The balance between the different funding mechanisms

National funding

Each NATO nation allots funds for different purposes in its annual budget. A significant portion of these funds are reserved for Defence and Foreign affairs. The vast majority of these defence and foreign affairs funds are used to meet national requirements and commitments that may be unrelated to NATO. However, some of these funds are used by the nation to pay for personnel and Operations & Maintenance (O&M) and to purchase capabilities (such as weapon systems) that are committed for NATO use. In the NATO resource community, these funds are known as "National Funding". Typical examples of National Funding are the cost of weapon systems and military forces provided to NATO through the Force Planning system and the costs attributed to the lead nations of Alliance Operations and Missions (AOM) (previously called Crisis Response Operations (CRO)).

Indirect funding mechanisms

There are different types of funding mechanisms. The primary types are known as: Multinational Funding, Joint Funding, and Common Funding (CF). Other types of funding include: Contributions in Kind and Trust Funds.

Multi-national funding refers to a funding arrangement outside the NATO structures involving two or more nations. (Such funding may be for requirements identified within the

Defence Planning framework) Such structures are based on bilateral and multilateral arrangements between the concerned nations. Multi-national Funding is often used for international co-operative development projects initiated through the Defence Planning Process. Another typical use has been for co-operative procurements (such as the F16 aircraft by different European nations).

"Contribution in Kind" refers to participation by a nation in non-monetary ways. Typically, this involves the provision of facilities, capabilities, personnel, and special "knowhow", as opposed to making financial contributions.

"Trust Funds" have been used to manage voluntary contributions for a given scope. This sort of arrangement opens the way for the participation of non-NATO nations. Examples are the "Travel and Subsistence" Trust Fund within the framework of the NATO Training Mission – Iraq (NTM-I), the funding arrangements for the "Equipment support for the Afghan National Army (ANA)", called the ANA Trust Fund, the Trust Fund in support of the stand-down of the Kosovo Protection Corps (KPC), called the KPC Stand-down Trust Fund, the Trust Fund in support of non-recurring requirements for the standing-up of the Kosovo Security Force (KSF), called the KSF Stand-up Trust Fund.

Joint Funding is a special type of Multi-national Funding within the terms of an agreed NATO Charter. The participating nations identify requirements, priorities, and funding levels, and develop a formal cost sharing mechanism. NATO has visibility into these arrangements, and often provides political and financial oversight. For example, in the NATO Airborne Early Warning (NAEW) program there is a Memorandum of Understanding (MoU) that identifies the individual national cost shares and work shares. Another example is the Alliance Ground Surveillance (AGS) program. Currently there are nine Joint Funded NATO Production and Logistics Organizations (NPLO) under reserve that after NATO Agency Reform all these were integreted under the new three Agencies:

- NATO Battlefield Information, Collection and Exploitation Systems Agency (BICES);
- NATO Central Europe Pipeline Management Agency (CEPMA);
- NATO Helicopter for the 1990s (NH 90) Design, Development, Production and Logistics Management Agency (NAHEMA);
- NATO Medium Extended Air Defence System Design and Development, Production and Logistics Management Agency (NAMEADSMA);

- NATO Maintenance and Supply Agency (NAMSA);
- NATO Airborne Early Warning and Control Programme Management Agency (NAPMA);
- NATO Eurofighter 2000 and Tornado Development, Production and Logistics Management Agency (NETMA);
- NATO Alliance Ground Surveillance Management Agency (NAGSMA);
- NATO Airlift Management Agency (NAMA).

COMMON FUNDING

Definition

As explain above, the large majority of resources are national. NATO has many requirements that cannot be met through the above mentioned funding mechanisms by the member nations. These requirements include NATO Headquarters and the facilities for the Military Command Structure, NATO command and control systems, and NATO operations and exercises. To provide funds for these requirements, formal arrangements have been put in place whereby nations, collectively, provide funds to NATO. These arrangements are called Common Funding (CF). The CF structure is diverse and descentralized. CF arrangements principally include the NATO Civil and Military budgets, as well as the NATO security Investment Programme (NSIP).

Common –funded Agencies

In addition to the Joint Funded NPLOs listed above there are other five (plus one) NATO CF NPLOs agencies that manage decentralized and diverse multi-national cooperative activities, such as research, development, production and logistic support. Nations provide funds for the running of these agencies through direct contributions to NATO, in accordance with an agreed cost-sharing formula broadly calculated in relation to their ability to pay. Currently there are five (plus one) CF agencies:

- NATO Air Command and Control Management Agency (NACMA);
- NATO Consultation, Command and Control Agency (NC3A). The Agency adopts a customer funding model. For CPs and AOM NATO is the first customer contributing to the Agency budget for about a 90 % of its value.

- NATO Communications and Information Systems (CIS) Services Agency (NCSA);
- NATO Standardization Agency (NSA);
- NATO Research and Technology Agency (RTA).

In the NATO Defence Ministers meeting on 10-11 June 2010, the Ministers agreed to the proposal of the Secretary General to rationalise NATO' s Agencies structure based on a limited number of programmatic themes. At the Lisbon Summit on 19-20 November 2010, Heads of State and Government approved the consolidation and rationalisation of the functions and programmes of the NATO Agencies into three Agencies. As a result the Joint Funded NPLOs and CF NPLOs are actually integrated into the new three Agencies.

Eligibility and affordability

To attract CF, there must be a military requirement, and the required capability must be "eligible" and "affordable" for CF. Affordability refers to the ability for the NSIP within a prescribed timeline. Eligibility refers to what may be procured within the rules of CF. Affordability and eligibility are sometimes seen as tools that are used by the resource committees to keep expenditures within the limits of the annual ceilings. In the earlier Infrastructure programme, capabilities falling into certain categories were considered eligible for CF, whereas capabilities, such as weapon systems, that did not fit into the list of categories were not eligible. With the introduction of the NSIP, new rules for eligibility were established in C-M(93)38(Final). According to this document resource limitations necessitate a more selective approach to common funding than hitherto. Therefore, in principle, NATO common funding eligibility will focus on the provision of infrastructure requirements which are over and above those which could reasonably be expected to be made available from national resources.". The Resource Policy and Planning Board (RPPB) (formerly it was the Senior Resource Board (SRB)) elaborated on how this principle was to be interpreted. In practice, it is not always evident what a nation could reasonably be expected to provide; thus, eligibility under the "over and above" principle is often determined by the RPPB or the Investment Committee (IC) on a case-by-case basis. In addition to the "over and above" principle for eligibility, in the same document is states that "the guidelines will not preclude the possibility of common funding, on a case-by-case basis, of limited critical additional infrastructure – required by NATO to cater for exceptional regional risk factors or geostrategic conditions within the alliance – as identified by the Major NATO

Commanders (now Strategic Commanders), endorsed by the Military Committee (MC), and approved by the Council/Defence Planning Committee (DPC). …" Generally, any use of this provision is considered to be "non precedent setting".

There are special eligibility rules in some cases. The most typical case for special eligibility is AOM. Normally, the North Atlantic Council (NAC) establishes special funding rules for each operation. General funding policy for contingency operations (non-article 5 NATO-led operations) is defined in PO(2005)0098. The basic principle is that "costs lie where they fall." Eligibility for CF within a specific mission is found in the funding arrangements e.g. for International Security Assistance Force (ISAF). CF is provided for costs that are not attributable to a single nation. These include theatre headquarters elements, shortfalls in strategic communications, and critical strategic theatre infrastructure. In 2009 the NAC agreed to the RPPB's conclusion that there is no basis for consensus on further adaptations to the funding policy beyond what has already been agreed in PO(2005)0098. Another case where special rules for eligibility were established is the Air Command and Control area. Recognizing that air defence can be conducted only at the continental level, Canada and the United States established the North American Air Defence (NORAD) on a bilateral basis (i.e. outside of NATO). In Europe, the Supreme Allied Commander Europe (SACEUR) and the Commander of Allied Command Operations (ACO) was made responsible for air defence. Consequently, there are air command and control requirements in Europe that are not the responsibility of any one nation, but that are not clearly over and above what a nation would be expected to provide for its own sovereignty. Consequently special eligibility rules, were established.

Types of Common Funding

There are three different types of CF: the civil budget, the military budget and the NSIP. Features of CF include pre-agreed annual ceilings on the expenditures, pre-defined cost shares. Each type is managed by a committee consisting of representatives from the contributing nations and has rules and procedures governing how the funds may be used. As characteristics I mention reinforcement of NATO cohesion, complementarity for National Funding acting as a force multiplier, directly link to Alliance requirements and priorities, core of Alliance capabilities and a 'ready made' environment for the implementation of capabilities (agreed eligibility criteria, agreed cost shares and agreed financial and procedural mechanisms).

The Civil Budget (CB) is closely related with the NATO Headquarters which was established under the agreement (known as the Ottawa Accord) for International Headquarters. Other entities in NATO were established under the agreement (known as the Paris Protocol) for International Military Headquarters. There are legal differences (such as for taxes) between an International Headquarters and an International Military Headquarters. Recognizing the unique financial situation affecting NATO Headquarters, and the political (as opposed to military) role of the Headquarters, a special type of CF, known as the CB, was established to support this International Headquarters. The CB operates as an annual budget and is controlled by the Budget Committee (BC); formerly it was the Civil Budget Committee. Expenditures are implemented by the International Staff (IS) at NATO Headquarters. The funds are provided from the Foreign Affairs Budgets in the nations. The main expenditures are the salaries of the members of the IS, and the running costs of NATO Headquarters. Usually, the CB provides funding for recurring expenses, but in cases such as the new NATO Headquarters building, it may become involved with large non-recurring expenses also.

The Military Budget (MB) is the collective name for approximately 50 individual budgets. It provides funds for:

• NATO's integrated Military Command Structure (incl. civilian salaries), e.g. salaries of civilians working in the International Military Staff (IMS);

• O&M costs of NATO systems (such as NATO Satellite Communication (SATCOM);

• O&M costs (that are not directly attributable to a troop contributing nation) of AOM;

• NATO Training, Educational and Research entities.

The MB operates as an annual budget, coinciding with the calendar year and is implemented by the BC; formerly it was the Military Budget Committee.Expenditures are implemented by the Strategic Commands (SCs) and NATO Agencies. The funds are provided from the Defence Budgets in the nations. Most of its funding is used for recurring expenses.

The NATO Security Investment Programme (NSIP) has existed as a NATO programme since 1951. It was originally known as the Infrastructure programme. The name was changed in 1993 as part of the renewal of the programme. The word "infrastructure" is still used to describe the fixed installations and capabilities which are necessary for the effective deployment and operations of modern armed forces (airfields, port facilities, communications and information systems, military headquarters, fuel storage and distribution systems, etc). The NSIP consists of

a programme of capital investments in military capabilities, such as Operations, Air Defence and Strategic Infrastructure, that provides funds for the development, construction and implementation of facilities and equipment that are required by the Strategic Commanders to complete their missions (but that are not provided by the member nations) and necessary for providing, restoring and enhancing assets. The NSIP is responsible for the provision of new capabilities and major renovations, upgrades and modifications of existing ones. When the NSIP programme was renewed in 1993, the needs that NSIP meets were defined in C-M(93)38(Final)) + ADD1 stated that "In consonance with NATO's future requirements, including peacekeeping activities and "outreach", the renewed NATO common-funded infrastructure programme will be based upon NATO's overall need, presented in no particular order of importance, for:

- Intra-European Theatre and Transatlantic Mobility of NATO Immediate Reaction, Rapid Reaction, and Reinforcing Forces;
- Flexible Command and Control of Land, Air and Maritime Forces;
- Intelligence, Surveillance and Reconnaissance;
- Logistics Support and Re-Supply;
- Control of Lines of Communication (LoC);
- Training Support and Exercise Facilities;
- Nuclear Capabilities;
- Consultation.

Since it is not possible to implement NSIP projects within the window of an annual budget, the NSIP operates as a multi-annual programme rather than as a budget. Nevertheless, expenditures are requested and reported on a semi-annual basis, in order to satisfy resourcing requirements. Investments in the NSIP are authorised by the NATO member nations in the particular committee. In 2010 the former Infrastructure Committee was renamed the "Investment Committee", which is still responsible, within the guidance and direction on resource issues provided by the RPPB, for the NSIP.

While the NSIP is responsible for the provision of Alliance capabilities (within the limits of its eligibility rules), whereas the MB covers the operating and maintenance costs – the running of those capabilities.

The main NATO actors dealing Common Funding - Resource Committees

Providing capabilities requires resources. Several Committees make decisions affecting the resource community. The NAC and the MC play vital roles in resource decision making. The Resource Committee structure itself consists of the RPPB, the IC and the BC. All committee decisions require a consensus (meaning that no member nation disagrees).

North Atlantic Council (NAC) is the senior committee and principal decision-making authority in NATO. All other committees report to the NAC, either directly, or through other committees. The NAC sets the goals, planning figures and performance measures, approves resource policies, civil and military budgets and investment ceilings and reviews performance. Because of this, many resource decisions, such as the annual ceilings on contributions, must be approved by the NAC. In the past, France could decide when to participate in the funding of CPs or Stand Alone Projects (SAPs) in the NSIP. In the case France did not participate, resource decisions were made by the DPC instead of the NAC. As such, the DPC was then the senior decision making body on matters relating to the integrated military structure of the Alliance. It provided guidance to NATO Military Authorities and has overseen the force planning process, which identified NATO's military requirements and assesses the extent to which members meet those targets and provide other forces and capabilities to the Alliance. It implemented decisions taken by participating countries in relation to collective defence planning and issues related to the integrated military structure of the Alliance. It also approved goals and Ministerial Guidance for future NATO defence planning. As of 14th June 2010 the DPC was disbanded and work transferred to the NAC. Since 1st April 2009 France is fully integrated in the Military Structure of NATO and participates in all new NSIP CPs approved after that date. France doesn't participate in already authorised NSIP projects or approved CPs where it was not part of the authorisation or the approval process.

The Military Committee (MC) is at the top of the NATO Military Command Structure. NATO resources are used to meet military requirements. As such, MC establishes military requirements and priorities which serve as the basis for resource proposals. This means that it confirms the need and assigns the priority to the capability requirements identified by the SCs. The MC also develops the peacetime personnel establishment of the military structure as well as the mix and balance between the differing responsibilities and military disciplines required by the joint staff of military posts among Alliance members.

NATO Defence Manpower Committee (NDMC) is responsible to the NAC, through the MC, for the management of military and civilian manpower posts in the Military Command Structure. There is a Peacetime Establishment (PE) and a Crisis Establishment (CE) for each unit. Often, a new NSIP or AOM project will require changes to the affected PE or CE. Like other committees, the NDMC must operate within pre-approved ceilings; consequently, it is often necessary to delete posts in other units to offset the creation of new posts. Such actions require extensive co-ordination, and can have significant impacts on the implementation of NSIP projects.

Resource Policy and Planning Board (RPPB) is the senior advisory body to the NAC on the management of all NATO common-funded resources in order to obtain strategic guidance on resource issues as well as Council consideration of mid- and long-term financial/resource plans for requirements, the availability of military common-funded resources, other types of funding in support of Alliance objectives and priorities and annual budgets. It screens and endorses CP for the NAC approval and provides advice to the NAC in cases of potential imbalances between requirements and resources. The RPPB is focused on the overall management of NATO' s civil and military budgets as well as the NSIP and manpower. It has sole responsibility for resource policy, including eligibility and affordability. Therefore the RPPB integrates and provides coherence and guidance to the work of resource committees and has the authority to task them. It is the sole resource committee reporting to the NAC. The BC and the IC report to the RPPB. For the NSIP, its main function is to determine the affordability and eligibility, of CPs proposed for NSIP funding, and to recommend programming to the NAC. The RPPB also recommends to Council the annual contribution ceiling for the NSIP and MB and provides guidance regarding NSIP implementation and budget execution. NATO Office for Resources (NOR) provides the staff support to the RPPB.

The former Civil Budget Committee (CBC) and the former Military Budget Committee (MBC) were in 2010 merged into the single Budget Committee (BC). The BC is responsible to the RPPB for NATO's civil and military budgets. Nevertheless, the MB and the Civil Budget (CB) will continue to be considered strictly separately in order to ensure that there is no fungibility between the budgets. The BC has overtaken the former CBC' s and MBC' s lead budget, planning and policy role for the MB and CB and associated budgets assigned to the Committee by the NAC. It reviews and recommends civil and military budgets, which remain

distinct for Council approval and also monitors, evaluates and controls the implementation of civil and military budgets. In this capacity, the BC has an essential position in ensuring effective use of the funds provided as well as carrying out all of the duties and responsibilities assigned to a finance committee in the NATO Financial Regulations (NFRs). The BC is responsible to the NAC for the common funded MB and CB. In some cases, involving the NATO Headquarters building, the IC and the BC have common interests. For e.g. such as an NSIP-funded project for new headquarters in the Military Command Structure, the BC becomes responsible for funding the associated operations and maintenance costs (of the new headquarters). Sometimes there is an overlap in the requests for funding in the BC and in the IC, especially in the area of CIS. Consequently, it is necessary to have close co-operation between the two committees. NOR provides the staff support to the BC.

The former Infrastructure Committee was renamed in 2010 as the Investment Committee (IC) as a part of committee reform at NATO Headquarters and continues as a separate committee reporting to the RPPB. The IC is responsible to the NAC for the overall "implementation" of NSIP projects. The roles of the IC include reviewing and authorizing implementation of projects to fulfill requirements approved by Council, establishing expenditure profiles and timeframes for implementation within available funds, monitoring, evaluating and controlling the implementation of the investment projects, managing the investment programme from a financial point of view, within the contribution ceilings, analyzing eligibility and affordability issues related to implementation based on policy guidance from the RPPB and proactively alerting the RPPB to potential imbalances between requirements and resources. The NOR provides the staff support to the IC.

CONSIDERATIONS ABOUT COMMON FUNDING IN THE LIGHT OF CHICAGO DEFENCE PACKAGE

NATO Common Funding has been characterized by many as the glue of the Alliance. It is the means through which Allies ensure successful execution of operations, as well as effective development and sustainment of shared capabilities. In this way, it assists in sharing the burden, Common Funding contributes to providing security to Allies at the lowest cost. In the light of the current economic crisis, declining defence budgets, and reduction by many Allies' forces and

capabilities, the need for a closer cooperation between nations is increasing as shown by lessons learned in recent operations.

With the endorsement of the Chicago Defence Package, NATO Heads of States and Governments acknowledged that in the current times of fiscal constraints new approaches are needed to remain efficient and effective in the way the NATO business is conducted together by Allies. Whilst embracing the concept of Smart Defence, Leaders recognized that several areas of cooperation could benefit from a re-assessment. Having in mind the facts presented before I consider that there are several areas to be explored in making choices as NATO's collective capabilities, Alliance operations and missions (AOM), multinational capabilities or training and exercises.

With regard to the NATO's collective capabilities when available fund became tighter, this triggered some discussions between Allies about the priorities for spending on Infrastructure. Because divided nations opinions between those who favoured spending Common Funding on static infrastructure meant for territorial defence, and those who believed that infrastructure that assisted deployability of forces should have preference I think NATO should be able to do both, and to meet the Level of Ambition in full. For sure it is undeniable that NATO is facing with difficult choices as budgets decline even further. For Romania as for the majority of Nations Common Funding of capabilities is more efficient and brings more synergy than procuring the capability nationally. Allies could therefore explore broadening of commonly funded elements for strategic capabilities as these serve as real and indispensable force multipliers – Missile defence, Cyber defence, NATO CIS, education. At the same time NATO was not been able to spend the available funds in a controlled and adequately managed way. In recent years there were seen quite large swings from alarming overspending in 2009 to serious under spending in 2011 and 2012. This calls for a serious effort to bring the financial management under better control. Allies could for example look at some issues as tightening of the management of the NSIP, having the MTRP presented or directly approved by Ministers, further improvements of integrated resource management or greater involvement of the military authorities in capability delivery.

Secondly concerning operations and missions it is important for NATO to make the best use of the funds that Allies have available, both individually and collectively. Therefore the way Common Funding is applied to operations and missions might deserve some considerations as

well. Currently only theatre HQ elements, shortfalls in strategic communications and the repair and upgrade of strategic theatre infrastructure are commonly funded. Based on recent experiences and lessons learned from the operations in Afghanistan and Libya there is room for improvement. The funding policy of AOM should be considered by the resource committees taking into consideration few elements as broadening of common funding of in theatre headquarters, critical infrastructure, communications and collective logistic support contracts. In the same time it should be put in question if the concept of urgent operational requirement still fit for purpose or how common funding should be used for outsourcing services and reimbursement of critical theatre capabilities.

On the other hand the multinational development, procurement and sustainment of capabilities are becoming an absolute necessity for NATO members in order to maintain credibility in times of austerity. The Defence Package, that Heads of State and Government approved at their Chicago Summit, encompasses the Smart Defence and Connected Forces Initiative, that both aim to foster multinational cooperation. As Nations have only one set of forces, working closely with the EU is necessary to avoid duplication and to ensure that multinational projects in the area of Smart Defence and the EU's Pooling and Sharing are coordinated and complementary. Both initiatives aim to mitigate the negative impact of the financial crisis on capabilities and to help address the most critical capability shortfalls. The use of common funding for capabilities that are owned by a group of nations and from which the Alliance benefits as a whole is not new for NATO with AWACS as a successful example. Applying Common Funding to other multinational capabilities proved to be difficult as the discussion on AGS showed. Ad hoc solutions for ad hoc situations should be avoided where possible. On the assumption that NATO members will resort to more multinational capabilities, there seems to be merit in developing a framework that would allow some level of common funding to be applied in return for guaranteed Alliance access. In my opinion could be explored some modalities in order to increase the availability of these capabilities for NATO operations as follow:

- a framework for modalities to ensure the Alliance's use of multinational capabilities for NATO's operations;
- application of Common Funding as seed money for the initial phase of multinational projects, for feasibility studies or tendering procedures;

- a framework for the collective sharing of O&M costs for capabilities in case of deployment on operations;
- a framework for the calculation of contributions in kind in lieu of contributing financially to common-funded capabilities;
- an agreement on how Common Funding is applied in the case of participation of partners in a multinational project.

CONCLUSIONS

After the process of reviewing of common funding in 2003 which confirmed the relevance of the funding eligibility principles laid down in 1993 (such as the *over and above principle*, together with that of *cost lie where they fall* for non-Article 5 operations), post Chicago Summit period represents a great opportunity to revisit common funding approach and why not, to develop a strategy of resources derived directly from the strategic concept. The idea of this strategy could be supported by two pillars. Firstly one pillar could approach rebalancing between capabilities and activities between NSIP and the military budget in line with Alliance priorities. Since the main priorities of the Alliance include both long-term investments and support for shared activities the idea is to define an overall NSIP/military budget ceiling excluding AOM upstream of the medium-term planning process. Second pillar could be done by giving to the nations more responsibility in order to reduce the pressure on common funding on the one hand, and through active participation in multinational initiatives on the other.

In the same time the two pillar approach could take into consideration four directions

- ensuring that the Alliance's highest capability priorities are funded . For this purpose is necessary to create room for financial manoeuvre by giving up certain requirements or by shifting certain investments towards the nations. This would give the freedom to focus common funding, and thus to shorten the periods required to bring capabilities into service in the priority areas as the Lisbon package of critical capabilities or for requirements supporting the deployability of the Alliance, consistent with the new command structure;
- contributing to combat interoperability. A new balance between making investments and funding activities must be achieved. In this way *education, training and*

exercises package, particularly in the framework of the NRF, should become an Alliance priority;

- supporting force generation for the Alliance operations. To meet the recurring difficulties of force generation, flexibility in the funding of certain capabilities deployed by the nations should reduce the need for outsourcing. In addition, establishing of ceilings within AOM funding would make possible to transform the current reimbursement process into a tool that provides incentives;
- developing better governance. Following the resource reform started almost 3 years ago and the efforts made to improve financial governance some other complementary measures could be taken. The MC should systematically provide the NAC with an analysis of the risk associated with differentiated levels of resourcing. In the same time to encourage host nations to implement priority investments projects, the approval of any CP by the NAC should be assigned a final authorization deadline. After this deadline the approval process would have to be recommenced. Not least, in the same area eligibility for common funding should be based on the greatest financial commitment of a host nation, thus rewarding the most virtuous project.

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COMMON-FUNDED PROGRAMME GOVERNANCE AND MANAGEMENT

IN THE NEW ESTABLISHED

NATO COMMUNICATIONS AND INFORMATION ORGANISATION (NCIO)

LTC Gabriel HORHOGEA

INTRODUCTION

At the Lisbon Summit, Allies agreed to streamline the 14 NATO agencies into three major programmatic themes: procurement, support, and communications and information.

As part of the implementation of Agencies Reform, the NATO Communications and Information Organisation (NCIO) was established on 1 July 2012, in order to consolidate, rationalize and optimize the functions and services provided by the following Agencies and entities:

- The NATO Communication and Information System (CIS) Services Agency (NCSA) (except Deployable CIS);
- NATO Consultation, Command and Control Agency (NC3A);
- NATO Air Command and Control System Management Agency (NACMA);
- Active Layered Theatre Ballistic Missile Defence Programme Office (ALTBMD PO)
- Information Technology (IT) support functions at NATO Headquarters and from other NATO Agencies.

ORGANISATION AND OPERATION OF NCIO

NCIO comprises:

(a) an Agency Supervisory Board (ASB);

(b) an Executive body composed of a General Manager and his/her staff (the NATO Communications and Information Agency, NCIA).

Agency Supervisory Board (ASB)

The ASB takes its decisions by consensus.

The ASB is responsible for the organisational governance of the NCIA. Organisational governance is the mechanism by which NATO directs, administers and controls the NCIA and enables it to accomplish its mission, functions and tasks. It is the set of rules and best practices through which the ASB pursues the interests of NATO as a whole as well as individual or groups of NATO nations, ensuring efficiency, effectiveness, accountability and transparency of the NCIA. It will provide strategic direction and guidance to the NCIA and oversee its activities and performance. It will be responsible for:

(a) Strategic direction and guidance

(1) give strategic direction to the NCIA;

(2) approve the NCIA business model and strategic plan;

(3) take general organisational policy decisions, and decisions on organisational governance and Key Performance Indicators to enable the NCIA to carry out its mission in an effective and efficient manner.

(b) Operational direction and guidance

(1) approve all directives regarding organisational governance;

(2) provide guidance for the operation and administration of the NCIA, promoting best business practices and directing maximum use of the Shared Services environment if effectiveness and cost savings can be realised while ensuring that no disruption of services or capabilities will occur;

(3) approve the NCIA business plan and Programme of Work (POW);

(4) establish annual objectives for the NCIA General Manager;

(5) delegate authority to the NCIA General Manager to sign contracts.

(c) Adherence

(1) ensure consistency of NATO policy implementation within the NCIO;

(2) ensure the NCIO adherence to Corporate Governance principles, including transparency, integrity and accountability and the reporting requirements;

(3) ensure that all activities are undertaken with due consideration of NAC-approved NATO policies, and other directives and guidance.

(d) Organisation and Staff

(1) approve the NCIA organisation;

(2) approve the overall NCIA's personnel establishment;

(3) nominate the NCIA General Manager;

(4) approve the selection of personnel of grade A.5 and above.

(e) Reporting

(1) approve the NCIA reports;

(2) submit annual report to the NAC.

(f) Finance oversight and approval

(1) review the NCIA financial information;

(2) approve the NCIA annual Financial Plan5;

(3) approve the NCIA annual financial statements;

(g) Performance monitoring and control

(1) ensure that effective risk management measures are in place and monitor performance execution on that basis;

(2) exercise management control by comparison of the NCIA activities with applicable ASB directives;

(3) oversee the delivery of results against targets;

(4) evaluate the performance against objectives of the NCIA;

NATO Communications and Information Agency (NCIA)

Covering the entire capability life cycle, the NCIA will act as NATO's principal C3 capability deliverer and CIS service provider for the full range of its entitled requirements holders and customers. It will be, to the maximum extent feasible, the provider of IT-support to NATO business processes (to include provision of IT shared services) to NATO HQ, the NATO Command Structure and NATO Agencies (including itself). A CIS service is the successful delivery of a functionality which supports a CIS user in meeting information exchange and processing requirements. From the CIS service provider perspective, it is the product / the business output. A CIS service provider provides CIS services.

Its mission is to:

(1) deliver C3 capabilities to its requirements holders, whilst ensuring their coherence and interoperability in compliance with agreed NATO architectures,

(2) ensure provision of secure CIS services to its customers,

(3) deliver capabilities and provide services "Other than C3/CIS"8 to NATO and nations, as approved by the ASB, in order to enable NATO's Consultation, Command and Control and to facilitate, inter alia, the seamless integration of Intelligence, Surveillance, Reconnaissance, Target Acquisition functions and their associated information exchange, while continuously improving coherency, effectiveness, efficiency, and delivering cost savings.

As part of this mission, and in view of NATO's level of ambition, the NCIA must be capable of ensuring continuous CIS support to all operations in which NATO is engaged in accordance with approved C2 arrangements between SACEUR and the General Manager of the NCIA. The NATO CIS Group of the NATO Command Structure is not part of the NCIO. However, as it is part of the overall NATO CIS service provision set up, it is essential that the NCIA will collaborate effectively with the NATO CIS Group.

The NCIA will perform the following functions and tasks:

(1) work with all relevant stakeholders in order to develop NATO C3's architectures to support Senior Policy Committees' capability coherence and implement NATO technical coherence;

(2) perform central planning, technical planning, systems design and engineering, integration and configuration management, testing and technical support for assigned NATO systems or installations;

(3) operate, control and support assigned in-service NATO CIS and installations, and any other assigned in-service systems, providing appropriate systems support including hardware and software maintenance and configuration management, and ensuring the commensurate training of personnel for operations and maintenance ;

(4) manage and execute Programmes and other projects assigned to it;

(5) act as Host Nation for assigned NSIP projects as recommended by the Resource Policy and Planning Board (RPPB) and approved by the NAC, or as approved by the Investment Committee (IC);

(6) exercise ownership of assigned infrastructures and assets in support of its mission;

(7) provide Information Assurance and Cyber Defence for NATO's Communications and Information Infrastructures consistent with NATO Cyber Defence Policy, C-M(2011)0042;

(8) provide technical advice to nations participating in the NATO Force Structure when interfacing their C3 systems with those of NATO;

(9) perform studies, provide advice and support NATO bodies and other customers in the scientific, technical and operational analysis domains. Customer for NCIA is a NATO nation or group of nations (to include NATO Partner Nations when approved by the NAC) or a NATO entity (e.g. NATO Command or Agency), or other international entities when approved by the NAC, who is a budget holder, i.e. has authority to obligate and expend funds, and to sign an agreement with a provider for the delivery of a defined product or service, at an agreed costs, and within an agreed timeframe;

(10) provide shared services other than IT if so directed.

COMMON-FUNDED PROGRAMME GOVERNANCE AND MANAGEMENT

Governance of common-funded Programmes

A Common-funded Programme is a programme as defined below, funded by all NATO nations using NATO common funding, assigned to the NCIA and governed by a dedicated Steering Committee in accordance with articles 38 to 40 of NCIO Charter.

A programme funded by all NATO nations using NATO common funding (common-funded programme) and assigned to the NCIA will be programmatically governed by a dedicated Steering Committee where the NAC so decides**,** in which case such a programme is referred to as a "common-funded Programme".

A programme is a specifically defined co-operative effort to manage the development, acquisition, through life support, or operation of defence equipment or services, putting together a group of related projects and activities to be managed in a coordinated manner to obtain benefits and control not available from managing them individually, in order to meet NATO or NATO Nations requirements.

A project is a temporary endeavour undertaken to create a unique product, service or result with a defined beginning and end, usually time-constrained, and often constrained by

funding or deliverables, that meet unique goals and objectives. Generally a project is, together with other projects, part of a larger programme, which focusses on strategic delivery.

NATO Common Funding means Common Funded Budgets such as: NATO Security Investment Programme (NSIP); the NATO Military Budgets consisting of the NATO Command Structure Budget, the Alliance Operations and Missions Budget, the NATO Airborne Early Warning and Control Operations and Support Budget, and the Pensions Budget; the NATO Civil Budget; and the New NATO Headquarters Budget. These Programme and budgets are considered to be common funded in that their contribution ceilings are set by unanimous agreement of all Alliance members, although funding for individual entities within the budgets may be by less than all members of the Alliance. Common funding refers to activities where NATO nations provide the funding in accordance with agreed eligibility and cost share arrangements, but the Strategic Commands (and NATO HQ for Civil and New HQ budgets) identify the requirements and the priorities. Funding levels are agreed by the NAC on the basis of the RPPB's Medium Term Resource Plan.

The creation of a common-funded Programme shall be based on a NAC decision following a joint recommendation from the ASB, relevant Senior Policy Committees, Resource Committees and other stakeholders where appropriate. Resource Committees are: the Resource Policy and Planning Board (RPPB), the Investment Committee (IC), and the Budget Committee (BC).

NAC decision for the creation of a common-funded Programme assigned to the NCIA shall include approval and insertion of an associated Programme Annex into NCIO Charter. This Programme Annex shall in particular set forth the objectives, scope, foreseen budget and duration for that Programme, and define the role, responsibilities and reporting lines of its Steering Committee in accordance with NCIO Charter.

Steering Committees role and responsibilities

Steering Committees are responsible for programme governance and shall guide and oversee the execution of common-funded Programmes ensuring the proper achievement of the Programme's objectives and the alignment of the Programme with NATO strategic direction to include NATO Strategic Capability requirements and overall adherence with NAC approved policies and directives, and other guidance from relevant Senior Policy Committees.

Steering Committees will receive guidance and shall report directly to a designated responsible Senior Policy Committee as decided by the NAC and specified in each Programme Annex attached to NCIO Charter. Where multiple Senior Policy Committees are identified as stakeholders for a given common-funded Programme, one responsible Senior Policy Committee will be designated as lead coordinating Senior Policy Committee responsible for that Programme.

Steering Committees are responsible for providing Programme specific direction and oversight of Programme's performance, to include in particular:

(1) providing direction and guidance for continuous alignment of the Programme with NATO strategic direction to include NATO Strategic Capability requirements and overall adherence with NAC approved policies, directives and guidance from the responsible Senior Policy Committee while informing the ASB of the steps undertaken;

(2) reviewing and monitoring progress in Programme execution against Programme Plan and cost, delay and performance objectives including key Programme milestones and deliverables;

(3) providing advice to Resource Committees on NCIA project related funding requests which fall within the Steering Committees' Programme, with a view to identifying duplication, making suggestions for the acquisition approach and identifying areas where savings could be made;

(4) providing subject matter expertise dedicated to interoperability at the interfaces with other NATO, multinational or national programmes, bringing to attention of the NCIA and relevant Senior Policy Committees any inconsistencies it perceives in the orderly implementation of the Programme or in relation with other programmes;

(5) providing coordination support and guidance where a common-funded Programme represents a system of systems, some of which are the subject of collaborative effort between a group of nations or between NATO and nations;

(6) reviewing, and if applicable commenting on the General Manager annual report submission to the ASB for the portion related to progress on their Programme;

(7) endorsing the General Manager‘s proposal for the selection of the Programme Manager and where applicable Deputy Programme Manager, if any, before submission for approval by the ASB.

Steering Committees and the General Manager of the NCIA shall act together to resolve issues that would impact Programme delivery. Issues that cannot be resolved this way shall be reported respectively to the designated responsible Senior Policy Committee and the ASB to resolve.

Steering Committees shall coordinate among each other to help ensure cross-coordination and coherence across interrelated Programmes. Coordination and conflict resolution between Programmes is the primary responsibility of the General Manager of the NCIA at Programme management and execution level, working in close coordination with their respective Steering Committees. Issues that cannot be resolved this way shall be escalated to the designated responsible Senior Policy Committee and the ASB to resolve.

Steering Committees shall exercise their responsibilities in accordance with applicable rules and fully respecting the responsibilities of the Resource Committees and other Senior Committees as detailed in their NAC approved Terms of Reference.

Steering Committees detailed Terms of Reference shall be established in accordance with NCIO Charter and shall be approved by the designated responsible Senior Policy Committee following prior endorsement by the ASB.

As a rule, Steering Committees shall be disbanded as soon as the Programme has completed the mission and met the goals and objectives for which it was created. Sunset clauses shall be incorporated accordingly in Steering Committees Terms of Reference. Extension of a Steering Committee mandate shall require joint approval by the designated responsible Senior Policy Committee and the ASB following recommendation by the Steering Committee.

Programme management and execution of common-funded Programmes

The NCIA, as the executive body of the NCIO, is responsible for the management and the execution of common-funded Programmes according to programmatic directives and guidance established by the relevant Steering Committees, and in accordance with all applicable NATO financial rules and regulations.

Each common-funded Programme assigned to the NCIA will be managed by a Programme Manager.

The Programme Manager, and where applicable the Deputy Programme Manager, is selected by the General Manager, who will sign his/her contract after endorsement by the Steering Committee and approval by the ASB.

The Programme Manager is accountable to the General Manager of the NCIA for the execution, management and delivery of the Programme according to the programmatic directives and guidance established by the relevant Steering Committee.

Financial Management of common-funded Programmes

The NCIO shall be governed by the provisions of the NATO Financial Regulations, subject to such derogations there from as may be approved by the NAC upon recommendation by the Resource Policy and Planning Board.

As a rule, the NCIO shall be customer funded. Customer funding is the mechanism whereby the Agency receives its funding on the basis of an agreement with the fund provider defining the scope, the cost and the timelines of the product or service to be provided.

The ASB may decide to call distinct contributions from NATO nations (core funding) on the basis of the NAC-agreed cost shares for NATO's Military Budget to cover the funding of its independent secretariat and the direct costs of supporting ASB meetings, thus ensuring that an arms length relationship is maintained between the ASB and the Agency. Core funding means funding that is centrally provided rather than as a charge to customers.

The financial management of the NCIO shall be separate and distinct from those of other NATO entities.

The NCIO shall adopt a set of financial procedures in accordance with this Charter, the NATO Financial Regulations and other regulations promulgated by the NAC. Investment Committee and Budget Committee acquisition rules will apply to common-funded procurements.

Under the customer funded regime, the General Manager shall prepare and submit an annual Financial Plan, including a Statement of Planned Income and Expenditure and a further two year planning forecast, no later than four months before the end of the preceding financial year. Financial Plan is a document providing an overview of how the Agency intends to plan and execute its activities from a financial and resources point of view.

The Financial Plan will be elaborated on a no-profit/no-loss basis globally over the planning period.

Planned incomes shall include forecasted customer-funding income, funds otherwise made available by participating nations, miscellaneous receipts, and, where relevant, core funding.

Expected customer-funded income shall separately identify income expected from common-funded sources (Civil Budget, Military Budget, NATO Security Investment Programme, New NATO HQ Budget), from funds made available by Programme Boards, from national and multinational projects, and from providing services to nations, other NATO bodies and other authorised customers.

Planned expenditure shall include project and Programme related personnel, operation and investment costs; operating and running costs; direct and indirect overheads, capital costs, and costs in support of the ASB and its independent secretariat. Operating and running costs represents recurring expenditures related to the day-to-day functioning of the Agency (i.e. facility guarding and maintenance costs; cleaning, heating and lighting costs; transport costs; insurance). Also, operating and running costs includes operating costs break down between project and programme operating costs (i.e. recurring expenditures directly linked to specific projects or programmes) and general operating costs (i.e. recurring expenditures not directly attributable to specific projects or programmes). Overheads represents personnel-related expenditure (salaries, travel costs, office equipment) for functions that cannot be assigned to individual projects or programmes, including such functions as General Manager, Legal Adviser, Human Resource Manager and Financial Controller together with their direct supporting and secretarial staff. In addition, overheads cover general operating and running costs and – if called as advance funds – recuperation of capital investments.

The annual Financial Plan shall be approved by the ASB upon advice of its Finance Committee. The Finance Committee will monitor the execution of the Financial Plan during the year.

The approved annual Financial Plan shall be forwarded to the NATO Budget Committee for information.

The ASB may decide to call advance funds to cover capital investments against future recuperation through customer funding. These financial commitments and the related expenditures shall be separately identified in the Agency's Financial Plan.

The financial management aspects outlined in this Charter will not infringe on the way nations manage financially and legally their activities within multinational programmes or partnerships.

Customers shall be charged the direct costs of the services provided plus an overhead to cover general administrative expenditures, recuperation of capital investments, and agency operating and running costs. Charges to customers shall be subject to customer agreement prior to being incurred.

The ASB, or the General Manager where authority is delegated to him/her, shall not conclude contracts the financing of which would require contributions by a customer beyond what has been agreed by that customer for the given activity.

Customer rates (including overheads) shall be annually endorsed by the ASB for approval by the NATO Budget Committee on behalf of all customers. The review and approval process will make use of benchmarking techniques where appropriate.

Customer rates must be set in such a way as to ensure a balance between planned income and expenditure.

Security of Information in common-funded Programmes

The NCIO shall be bound by the NATO Security Policy set out in C-M(2002)49 and C-M(2002)50, including all supporting directives, supplement and amendments thereto and by such other security rules approved or authorized by the NAC as may apply to them.

The NCIO shall draw up the necessary implementing regulations in compliance with the NATO Security Policy and supporting directives. These regulations shall be endorsed by the NATO Office of Security (NOS).

The NCIO shall coordinate with the NOS investigation into cases of lost, compromised and possibly compromised classified information and provide timely reports, as required.

The NATO Office of Security (NOS) shall maintain such relationship with the NCIO and the participating nations concerned as are set forth in the current version of Appendix 1, Annex to AC/35-D/2003, and "Directive on Industrial Security". Any NATO security problem necessitating co-ordination between National Security Authorities (NSAs) / Designated Security Authorities (DSAs) of participating nations and the Communications and Information Organisation shall be referred to the NOS. NOS shall report as necessary to the ASB or the

respective Steering Committees or Programme Boards and, where appropriate to the Secretary General of NATO.

Management of Information in common-funded Programmes

The NCIO shall be bound by the NATO Information Management Policy (NIMP) as set out in C-M(2007)0118, and by the Management of Non-Classified NATO Information as set out in C-M(2002)60, including all supplements and amendments thereto and by any other rules approved or authorized by the NAC as may apply to them. Furthermore, the NCIO shall be bound by the NATO Public Disclosure Policy as set out in C-M(2008)0116.

Programme Information shall be subject to disclosure and use restrictions established by the participating nations in a Programme or Partnership in accordance with NCIO Charter and the applicable Memorandum of Understanding, Memorandum of Agreement, or other such agreement or arrangement. Programme Information represents all the information, documents and material specific to the Programme covering special technical information and/or proprietary rights, or other sensitive commercial, financial or industrial matters for use in and/or generated by the Programme.

Co-ordination and Control of common-funded Programmes

The NCIO shall be placed under the authority of the NAC. The latter may at any time raise any matter relating to its organisation or operation.

Senior Policy Committees (SPCs) are responsible for preparing top level policy in their NAC assigned areas of responsibility. Within their planning domains, SPCs ensure the linkage to and coherence within the NATO Defence Planning Process (NDPP) and translate NATO's Strategic Goals and Objectives or Capability requirements into policies, architectures and standards. Upon NAC approval, NATO staffs, Military Commands, and all NATO bodies shall conform to these policies, architectures, and standards unless granted relief by the NAC.

The NCIO shall comply with all relevant policies, architectures and standards developed by Senior Policy Committees and approved by the NAC:

(1) For all NATO common-funded capabilities, these policies, architectures, and standards are to be adopted by the NCIO and by NATO and non-NATO Nations for their interfaces with NATO capabilities;

(2) For capabilities which are not common funded, SPCs may establish recommendations to individual nations or participating nations in Programme Boards established within the NCIO related to NATO-wide interoperability and coherence.

Senior Policy Committees shall support the NCIO in conforming to NAC agreed policies, and will provide guidance accordingly. In their NAC assigned areas of responsibility they shall be responsible for assuring top level coherence of all capabilities delivered by Programmes, projects, as well as for other related activities conducted by the NCIA or by any other 'host nation'. Senior Policy Committees may, when so required, advise the NATO Resource Committees on related funding issues and will closely interact with the NCIO at the level of the ASB and through those Steering Committees for which they are responsible. Senior Policy Committees may, when so required, provide advice and make recommendations to the ASB on the Programme of Work of the NCIA in their NAC assigned areas of responsibility.

Senior Policy Committees can request the NCIO to provide data and briefings on matters of their concern. In order to ensure consistency of capability development and monitoring activities and performance of the NCIA in their NAC assigned areas of responsibility, the General Manager of the NCIA will periodically update Senior Policy Committees on the tasks being performed within the NCIO. If a Senior Policy Committee is of the opinion that the NCIO action or lack of action is not in coherence with NAC agreed policy, its first recourse is consultations with the ASB. If agreement cannot be reached, either party can then bring the issue to the attention of the NAC.

OTHER TYPES OF COMMON PROGRAMMES WITH NCIO

Multinational Programmes

A Multinational Programme is a programme as defined below, funded by two or more NATO nations using Multinational funding, assigned to the NCIA and governed by a Programme Board in accordance with articles 41 to 45 of NCIO Charter.

Multinational Funding means funding provided by two or more NATO nations, not acting within the NATO Common Funded Budgets. Multinational funding refers to arrangements by which two or more nations decide to pool their national resources to procure products or

services from the Agency. The substance of the arrangements, the funding mechanism and the levels of funding required remain within the hands of the individual nations concerned.

Multinational Programmes may only be established within the NCIO following recommendation by the ASB and approval by the NAC. Multinational Programmes will be governed and implemented through a dedicated governance structure which will consist of a Programme Board directing the execution of the Programme.

Programme Boards, for Multinational Programmes, are responsible for provision of guidance, decision-making and oversight of performance, schedule and approval of the Programme budget as well as endorsement of the operational costs of their respective Programme Office**,** comprised of direct and indirect administrative expenditure. They shall approve the General Managers' selection of its Programme Manager and shall also approve all civilian personnel working for their respective Programme Office. Programme Budget represents the funds made available to cover all costs of a Multinational Programme, including the Programme execution costs, the costs of the Agency staff assigned to the Programme Office and overheads.

Multinational Programmes constitute an integral part of the NCIO and share in the juridical personality of NATO.

A Programme Board shall be disbanded as soon as the Programme has completed the mission and met the goals and objectives for which it was created. Only if there is consensus among the participating nations in the Programme and approval of the ASB, can the mandate of the Programme Board be extended; such extension shall be reported to NAC.

Detailed rules for participation and withdrawal from a specific Multinational Programme, together with respective roles, relationships, authority and responsibilities between the NCIA and each Programme Board shall be further described in specific Programme agreements between the NCIA and the Nations involved, in accordance with this Charter, to be endorsed by the ASB and approved by NAC, and attached as an Annex to NCIO Charter.

C&I Partnerships

C&I partnerships are customer funded agreements between the NCIO, two or more NATO nations and, if mutually agreed, non-NATO nations, whereby the NCIA will provide the participating nations with technical expertise, services, or support (e.g. development of

interoperability standards, common software baseline, …) within the scope of its approved missions and activities.

The ASB shall approve the establishment of a C&I partnership in accordance with this Charter and with due consideration to its benefit to NATO and its contribution to NATO Strategic Goals and Objectives, Strategic Capabilities and agreed NATO Architectures.

C&I partnerships constitute an integral part of the NCIO and share in the juridical personality of NATO.

CONCLUSIONS

At the Lisbon Summit, Allies agreed to streamline the 14 NATO agencies into three major programmatic themes: procurement, support, and communications and information.

NCIO is the legal successor organisation to the NC3O (except for the C3 Board and its substructure and the deployable CIS functions in NCSA), the ALTBMD PMO and the NACMO.

Common funding refers to activities where NATO nations provide the funding in accordance with agreed eligibility and cost share arrangements, but the Strategic Commands (and NATO HQ for Civil and New HQ budgets) identify the requirements and the priorities. Funding levels are agreed by the NAC on the basis of the RPPB's Medium Term Resource Plan.

Common Funded Programmes are budgeted from:

- NATO Security Investment Programme (NSIP);
- NATO Military Budgets consisting of the NATO Command Structure Budget, the Alliance Operations and Missions Budget, the NATO Airborne Early Warning and Control Operations and Support Budget, and the Pensions Budget;
- NATO Civil Budget;
- NATO Headquarters Budget.

The creation of a common-funded Programme shall be based on a NAC decision following a joint recommendation from the ASB, relevant Senior Policy Committees, Resource Committees and other stakeholders where appropriate.

A common-funded Programme represents a system of systems, some of which are the subject of collaborative effort between a group of nations or between NATO and Nations.

The NCIA, as the executive body of the NCIO, is responsible for the management and the execution of common-funded Programmes according to programmatic directives and guidance established by the relevant Steering Committees, and in accordance with all applicable NATO financial rules and regulations.

Investment Committee and Budget Committee acquisition rules will apply to common-funded procurements.

Programme Information shall be subject to disclosure and use restrictions established by the participating nations in a Programme or Partnership in accordance with NCIO Charter and the applicable Memorandum of Understanding, Memorandum of Agreement, or other such agreement or arrangement.

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RISK MANAGEMENT IN MILITARY OPERATION

CPT CDR Virgil IFTODE

INTRODUCTION

Operational risk management is a decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation.[9]

All military at all levels use risk management. It applies to all missions and environments across the wide range of planning and executing operations and is fundamental in developing confident and competent leaders and units. Experience in applying risk management is critical to conserving combat power and resources and commanders must firmly ground current and future leaders in the critical skills of the five-step risk management process.

Risk is characterized both by the probability and severity of a potential loss that may result from hazards because of the presence of an enemy, an adversary, or some other hazardous condition. Perception of risk varies from person to person - what is risky or dangerous to one person may not be to another. Perception influences leaders' decisions. A publicized event such as a training accident or a relatively minor incident can increase the public's perception of risk for that particular event and sometimes to the point of making such risks unacceptable. A mistake to effectively manage the risk may make an operation too costly (politically, economically, and in terms of combat power - soldiers lives and equipment). This paper shows us the background, principles, applicability, and constraints relating to the risk management process.

Throughout the history of armed conflict, government and military leaders have tried to reckon with the effect of casualties on policy, strategy, and mission accomplishment.

[9] Air Force Instruction 90-901, Operational Risk Management, 1 April 2000

Government and military leaders consider battle losses from different perspectives. However, both must balance the following against the value of national objectives:

- Effects of casualties.
- Impact on civilians.
- Damage to the environment.
- Loss of equipment.
- Level of public reaction.

Historically, the armed forces have had more accidental losses, including fratricide (friendly fire), than losses from enemy action. These accidental losses are the same types experienced in peacetime during training exercises. These losses are not caused by the enemy or an adversary.

Army	**World War II 1942–1945**	**Korea 1950–1953**	**Vietnam 1965–1972**	**DesertShield/Storm[1] 1990–1991**
Accidents	56%	44%	54%	75%
Friendly Fire	1%	1%	1%	5%
Enemy Action	43%	55%	45%	20%
[1]These numbers include the relatively long buildup time and short period of combat action				

Fig. 1 Battle and Nonbattle Casualties

RISK MANAGEMENT IMPLEMENTATION

Principles

The principles of operational risk management are to refuse any risk that isn't necessary, to ensure that all decisions about risk are made at the right level in the chain of command, to take

calculated risks whenever the benefits are considered to be more significant than the costs, and to make use of the risk management decision-making process at every stage of planning.[10]

There are four principles associated with the management of risk. These principles, continuously applicated, are applicable before, during, and after all missions and operations.

- **Accept no unnecessary risk.**

All missions and daily routines involve risk. The most logical choices for accomplishing a mission are those that achieve all mission requirements while exposing personnel and resources to the lowest acceptable risk. Commanders alone decide what level of risk is accepted to accomplish the mission.

- **Make risk decisions at the appropriate level.**

Making risk decisions at the appropriate level establishes clear responsibility. Those responsible for the success or failure of the mission must be included in the risk decision process. The commander should address risk guidance in his commander's guidance, bases his risk guidance on his higher commander's direction and then he gives guidance on how much risk he is willing to accept and delegate. Subordinates seek the higher commander's approval to accept risks that might endanger the next higher commander's intent.

- **Accept risk when benefits outweigh the costs.**

Potential benefits should be compared to potential costs. The process of weighing risks against opportunities and benefits helps to maximize unit capability. Even high risk missions may be accepted when there is a well founded basis to believe that the sum of the benefits exceeds the sum of the costs.

- **Integrate risk management into operations and planning at all levels.**

To effectively apply risk management, commanders must dedicate time and resources to integrate risk management principles into planning and operational processes. Risk assessments of operations are most missions supportive when they are done as a normal way of conducting a mission, not an add-on process performed by people not otherwise involved.[11]

Leaders and staffs continuously identify hazards and assess both accident and tactical risks. They then develop and coordinate control measures. They determine the level of residual risk for accident hazards in order to evaluate courses of action (COAs). They integrate control

[10] http://work.chron.com/air-force-operational-risk-management-training-7135.html

[11] Air Force Instruction 90-901, Operational Risk Management, 1 April 2000

measures into staff estimates, operation plans (OPLANs), operation orders (OPORDs), and missions. Commanders assess the areas in which they might take tactical risks. They approve control measures that will reduce risks. Leaders ensure that all soldiers understand and properly execute risk controls. They continuously assess variable hazards and implement risk controls.

RISK MANAGEMENT PROCESS

This part provides the essence of the five-step risk management process. It illustrates the application of each step to military operations through the factors of METT-T (mission, enemy, terrain, troops, and time available)**.**

Risk management is the process of identifying and controlling hazards to conserve combat power and resources. The five steps of risk management are:

- Step 1. Identify hazards.
- Step 2. Assess hazards to determine risks.
- Step 3. Develop controls and make risk decisions.
- Step 4. Implement controls.
- Step 5. Supervise and evaluate.

Steps 1 and 2 are assessment steps, steps 3 through 5 are management

STEP 1. Identify Hazards

A *hazard* is an actual or potential condition where the following can occur due to exposure to the hazard:

- Injury, illness, or death of personnel;
- Damage to or loss of equipment and property;
- Mission degradation.[12]

Hazards are sources of danger or risks due to enemy or adversary presence and other conditions not due to enemy or adversary capabilities. Hazards are found in all operational environments - combat operations, stability operations, base support operations, and training present unique hazards for units involved in these kinds of missions. Hazards are identified

[12] F.M. 5-19, Composite Risk Management, august 2006

during the first four steps of the military decision-making process: *mission receipt, mission analysis, COA development*, and *COA analysis*.

The ability of unit commanders and staffs to identify hazards is key. One reality of today's missions is that the aspect of a hazard can change rapidly. Things of little risk initially can quickly become major threats due to unforeseen natural or man-made events and commanders should be aware of this possibility. Self-satisfaction to the fact that existing controls may not continue to control hazards in rapidly changing situations should be viewed as a hazard in itself.

The factors of mission - enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) - use as a standard format for identification of hazards. When applying risk management to METT-T during mission analysis, commanders and staffs should look for hazards that affect both tactical and accident risks. They must identify all hazards that may present significant risks to the mission.

STEP 2. Assess Hazards

Step 2 completes the risk assessment. Risk is the chance of hazard or bad consequences and this step examines each hazard in terms of probability and severity to determine the risk level of one or more hazardous incidents that can result from exposure to the hazard. This step is conducted during three steps of the military decision-making process: *mission analysis, COA development,* and *COA analysis.* This step is also conducted after controls are developed.

There are three substeps in this step:

- Assess the probability of the event or occurrence.
- Estimate the expected result or severity of an event or occurrence.
- Determine the specified level of risk for a given probability and severity using the standard risk assessment matrix.
- The end result is an estimate of risk from each hazard and an estimate of the overall risk to the mission caused by hazards that cannot be eliminated. Leaders must also assess the risk to civilians posed by the operation and the operations' impact on the environment.

STEP 3. Develop Controls And Make Risk Decisions

In step 2, hazards are assessed and an initial risk level is determined but in this step, controls are developed and applied. The process of developing and applying controls and

reassessing risk continues until an acceptable level of risk is achieved or until all risks are reduced to a level where benefits outweigh the potential cost.

This step is divided in two substeps: develop controls and make risk decisions. This is conducted during the COA development, COA analysis, COA comparison, and COA approval of the military decision-making process.

Develop Controls

Controls can take many forms, but normally fall into one of three basic categories:

- Educational (awareness) Controls. These controls are based on the knowledge and skills of units, organizations, or individuals. It includes their awareness of the hazard and control.
- Physical Controls. These take the form of barriers and guards or signs to warn individuals, units, or organizations that a hazard exists. Special controller or oversight personnel also fall into this category.
- Avoidance/Elimination Controls. These controls include positive action to prevent contact with an identified hazard or the total elimination of the hazard.

Make Risk Decisions

The purpose of the risk management process is to provide a basis for making individual and leadership risk decisions. A key element of the risk decision is to establish what an acceptable level of risk is. Risk or potential loss must be balanced against expectations or expected gains and risk decisions must always be made at the appropriate level of command or leadership based on the level of risk involved.

STEP 4. Implement Controls

Commanders and staffs ensure that controls are integrated into SOPs (standing operating procedures), written and verbal orders, mission briefings, and staff estimates. The critical check for this step is to ensure that controls are converted into clear, simple execution orders understood at all levels. Implementing controls includes coordination and communication with:

- Appropriate superior, adjacent, and subordinate units and those executing the mission;
- Logistics Civil Augmentation Program (LOGCAP) organizations and civilian agencies that are part of the force.

Commanders must explain how supervisors will implement controls. Examples of control implementation include:

- Conducting vehicle and aircraft silhouette drills;
- Overlays and graphics;
- Conducting rehearsals, rock drills, battle drills, and so forth;
- Conducting intensive threat and friendly vehicle identification refresher training for all antiarmor and air defense weapons crews;
- Conducting orientation for replacement personnel;
- Installing and maintaining communications links for key civilian organizations;
- Operating in convoys of four vehicles minimum;
- Carrying weapons and wearing flak jackets and helmets when outside secure compounds;
- Accident awareness, safety briefings, and warnings.

STEP 5. SUPERVISE AND EVALUATE

During mission preparation and execution, commanders must ensure that their subordinates understand how to execute risk controls. They permanently assess risks during the conduct of operations, especially during long-term missions and maintain situational awareness. They protect against self-satisfaction to ensure that risk control standards are not relaxed or violated. To gain insight into areas needing improvement, commanders must permanently evaluate their units' effectiveness in managing mission risks.

Supervise

Supervision is a form of control measure and becomes an integral part of the process. Supervision ensures subordinates understand how, when, and where controls are implemented. It also ensures that controls are implemented, monitored, and remain in place.

Must be followed factors such as tiredness, equipment serviceability/availability, and the weather and environment and the hazards they present can then be mitigated. Supervision and oversight provides commanders with the situational awareness necessary to anticipate, identify, and assess any new hazards and to develop or modify controls as necessary.

Evaluate

The evaluation process performs during all phases of the operation and serves to accomplish the following:

- Identify any hazards that were not identified as part of the initial assessment, or identify new hazards that evolved during the operation or activity;
- Assess effectiveness in supporting operational goals and objectives;
- Assess the implementation, execution, and communication of the controls;
- Assess accuracy of residual risk and effectiveness of controls in eliminating hazards and controlling risks;
- Ensure that is in accordance with the principles of risk management.

Figure shows that the risk management process continues throughout a mission as well as from mission to mission and it is integral to the military decision-making process.

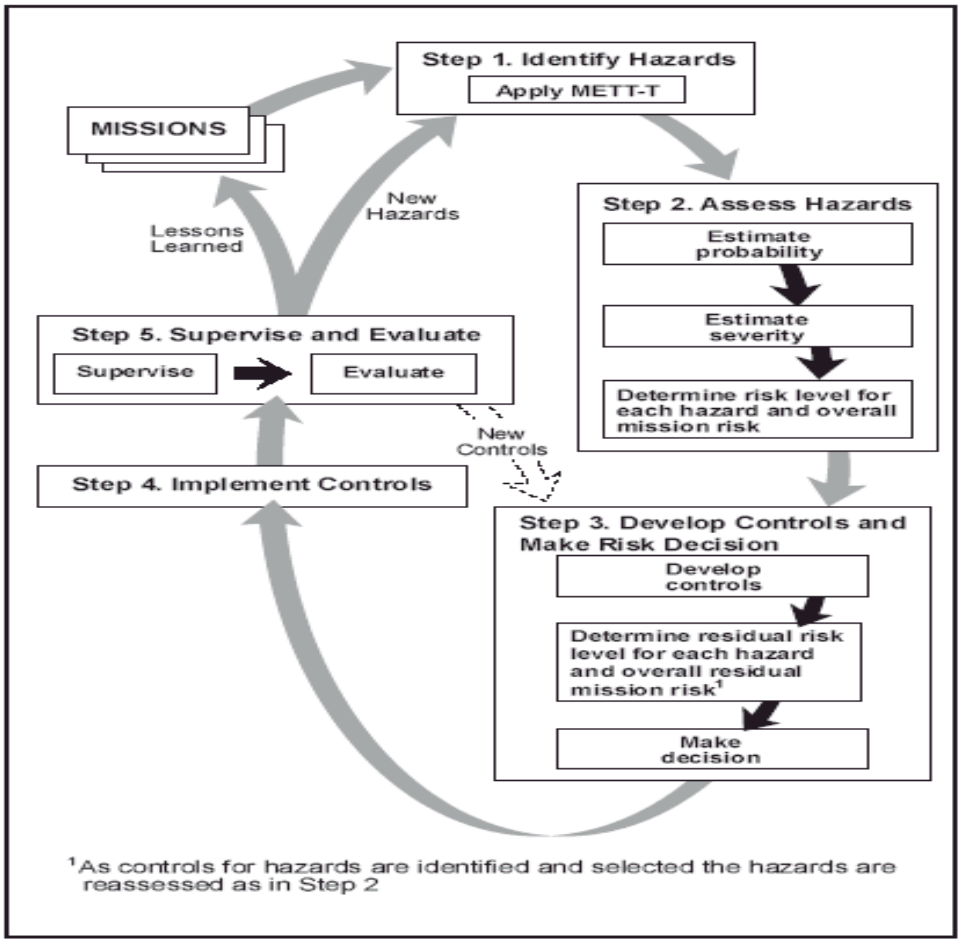

Fig. 2 Continuous Application of Risk Management

RESPONSIBILITIES

This part outlines required responsibilities and considerations necessary to effectively integrate and assess risk management within the armed forces. Commanders should adapt to these essential elementes to develop specific procedures (SOP) tailored to their circumstances, available resources, and mission.

To be successful, risk management must be underwritten by the chain of command and commanders should not expect that all missions will be accomplished with zero defects or loss. Asking such rigid standards leads to oversupervision and paralysis; it produces timid leaders, afraid to make tough decisions in crisis and unwilling to take risks necessary for success in military operations. A zero defects mindset creates conditions that will lead inevitably, in the larger sense, to failure in battle and higher casualties. Commanders are morally forced to support a subordinate's decision to accept risks that are within his commander's intent and guidance, as he understands it.

To be effective, this process must be understood and applied at every level and commanders, staff officers, leaders, and individual soldiers each contribute to the ongoing process.

One important task for all operations is minimizing risk and it is an inseparable part of every mission and a basic responsibility of commanders. Every military plan must make this a priority and commanders should prepare clear risk guidance for all training or operational deployments. Minimizing risk (eliminating unnecessary risk) is the responsibility of everyone in the chain of command. This responsibility runs from the highest commander, through his subordinate leaders, to the soldier.

The commander and his staff must be careful at tactical risks and accident risks because they use the same risk management process to manage both types. Commanders (with the assistance of their leaders and staffs) manage accident risks and determine how and where they are willing to take tactical risks.

Commanders and soldiers at all levels are responsible for managing risks by ensuring that hazards and associated risks are:

- Identified during planning, preparation, and execution of operations.
- Controlled during preparation and execution of operations.

Soldiers are responsible for executing risk controls to standards, using SOP. They must continuously assess variable hazards such as tiredness, equipment operation, and the environment and must take care of one another and make risk decisions according to the higher commander's guidance.

The following commander and staff responsibilities are recommended for risk management during operations:

Commander (Overall) ● Provide risk guidance. ● Select hazard control options. ● Make risk decision for COA. ● Enforce and evaluate controls.	Chief of Staff (XO) (Staff Supervision) ● Supervise risk management integration across entire staff. ● Ensure hazards and controls are integrated into plans and orders. ● Ensure staff monitors controls during execution.
Staff Officers (Functional Area) ● Identify hazards most likely to result in loss of combat power. ● Develop control options that address reasons for hazards. ● Integrate hazards and selected controls into functional area paragraphs, graphics, and annexes of OPORD, and monitor implementation during execution.	Safety Officer (Coordination) ● Assist commander and staff with risk management during mission planning, execution and assessment. ● Collect hazards and controls identified by staff; use to prepare risk assessment and control measures for all operations. ● Coordinate staff risk management and make recommendations to G-3/S-3.

CALL Newsletter No. 99-5, *Risk Management for Brigades and Battalions*

Fig. 3 Commander and staff responsibilities

CONCLUSIONS

The fundamental goal of risk management is to enhance mission effectiveness at all levels while preserving assets and safeguarding health and welfare.[13]

To fulfill this mission, the country gives the armed forces critical resources, including those most valuable - its sons and daughters. The armed forces use its resources to generate combat power to fight and win quickly, decisively, and with minimal losses. An important responsibility of the armed to the nation is to protect and preserve its resources - a responsibility that resides at all levels.

[13] Air Force Pamphlet 90-902 ,14 December 2000

Risk management is an effective process for preserving resources. It is not an event. It is both an art and a science. Soldiers use it to identify tactical and accident risks, which they reduce by avoiding, controlling, or eliminating hazards. The armed forces introduced the risk management process into training, the operational environments, and materiel acquisition. Since the process was introduced, the personal involvement of commanders in preventing accidents has become important factors in decreasing accidental losses.

How well risk is managed affects readiness and for this commanders need to know the current status and effectiveness of their organization's risk management program. They self-assess their unit's effectiveness in managing risk in order to get feedback for improvement and on subordinates' understanding and application of risk guidance.

Commanders assess the effectiveness of their units by reviewing how well risk management are:

- Specified in oral and written OPORDs, OPLANs, and SOPs.
- Communicated to lowest level of chain of command.
- Implemented into training and activities on and off duty.
- Fixed into force protection programs such as safety, health and antiterrorism.
- Part of after-action reviews (lessons learned).

Risk decisions are commanders' business. They must understand the importance of the risk management process in conserving combat power and resources that it is an ongoing process that continues from mission to mission and must be integral to the military decision. Don't forget, decisions are based on the next higher commander's guidance on how much risk he is willing to accept and delegate for the mission.Within the mission, commanders must know when the process begins and who has responsibility. The process is an important means to increase situational awareness.

Both commanders and staffs manage risk. Staff members continuously look for hazards associated with their areas of expertise. They then recommend controls to reduce risks. Hazards and the resulting risks may vary as circumstances change and experience is gained. Commanders and individual soldiers become the assessors for ever-changing hazards such as those associated with environment (weather; visibility; contaminated air, water, and soil), equipment readiness,

individual and unit experience, and fatigue. Commanders should advise the chain of command on risks and risk reduction measures.

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ENTERPRISE PROJECT MANAGEMENT

CDR (N) Cristinel Matei

INTRODUCTION

Project management techniques have been practised for more than 60 years on projects around the world, but until the 1990s they focused primarily on individual projects. With few exceptions, projects have been treated as organizational „anomalies" – each one was looked on as so unique that there seemed to be little value in changing organizational practices or policies to accomodate the special needs to managing them.Even giant construction and engineering firms that worked exclusively on projects simply hired good project managers for each individual project instead of developing a corporate approach to managing projects.

A dramatic change has taken place since the mid-1990s. As companies restructure to streghten their competitiveness, projects have become the focus, wheteher they are developing new products or delivering better services. Project-focused companies can't be dependent on heroes to pull off a miracle each time; the heroes get tired and there just aren't enough of them. These companies need a new paradigm. The frontier in modern project management is to take the lessons learned at the project level and apply them to the enterprise – whether the enterprise is a department or an entire corporation.

This paper explores the most current questions and practices for institutionalizing the use of project management principles – what is becoming known as E*nterprise Project Management* (EPM).

The shift to EPM requires far more than new software, training or a project management methodology. Gaining the benefits of EPM will require the cooperation of every person in the organization that touches projects. It is an enterprise-wide discipline that requires commitment from top to bottom, the most important being the full commitment from the top.

DEFINING ENTERPRISE PROJECT MANAGEMENT

In order to define the EPM we have to consider the five project success factors:

- Agreement among the project team, customer and management on the goals of the project;
- A plan that shows an overall path and clear responsibilities, which is used to measure progress during the project;
- Constant, effective communication between everyone involved in the project;
- A controlled scope;
- Management support.

When all these factors are present in a project, the likelihood of success increases. In fact, it would make excellent sense for a company to institutionalize these factors in order to achieve them consistently.

Therefore the Enterprise Project Management can be considered as the conscious integration of **processes**, **technology**, **organization structure** and **people** in order to align strategy with the execution of projects.

There are three **tiers** of management in the EPM model which represent the link between project resources and organizational strategy. At the lowest level, *Project Management* focuses on the efficient execution of selected projects. The next tier, P*rogram Management* serves to coordinate projects and the resources that all projects share – particularly the people. The highest tier, P*roject Portfolio Management* connects the selection of projects and programs to the strategic goals of the organization.

The **components** of the EPM model all work together. Standardized *Processes* are the accepted methods for managing projects and for management activities at the program and project portfolio levels. *Technology* consists of the information and telecommunication technology that enables people to follow the processes. A project management office (PMO) is an *Organization Structure* with specific responsibility for implementing and maintaining the other elements of EPM. Finally, the *People* in the model are the people who both manage and work on projects. The skills of the people must be adequate to use the technology, follow the processes and perform project work.

THE STRUCTURE OF ENTERPRISE PROJECT MANAGEMENT

A major challenge of managing an organization filled with projects is the very nature of projects themselves. Each project is unique – some are quick others stretch over years; some are routine, while others require special skills. As projects begin and end and staffing requirements go up and down, the kind of efficiency possible in managing a repetitive operation seems nearly impossible. The three tiers of EPM are a response to this challenge.

Project Management comprises the practices used to define, plan and control a single project. These practices have been described and analysed in detail in a lot of other documents, therefore the present paper will describe only the other two tiers.

Program Management

Keeping track of all current and potential projects causes confusion for many companies, particularly when they are spreading the same people across many projects. Program management respond by providing visibility and coordination across projects. It should be noted that the term *program* has two separate, commonly accepted definitions:

- The Project Management Institute's definition refers to all the projects that support a related goal – a program in this sense contains functions that extend beyond the scope of EPM, with supplier management and operations management as only two examples;
- The other commonly used definition of program is simply the oversight of multiple projects within an organization. In this case, all the projects are related because they share broad organization goals and draw on the same resources.

Using either definition, program management strives to eliminate the problems raised by many related projects with the following activities:

- *Deploying limited resources (particularly personnel) among many projects* – most people working on internal projects are spread across many projects and they also have operational duties to balance. The techniques behind resource levelling are very complex when we are spreading resources across many projects. Matching limited resources to many projects must be done based on the

priorities set by project portfolio management tier. Without this linkage a company does not really have enterprise project management;

- *Tracking relationships among projects* – when several projects are launched to support an initiative they are likely to be interdependent. Managing these kinds of relationships among projects is typically outside a project manager's control adding more complexity and risks to the project;
- *Managing projects or tasks that add value across projects* – for example selecting a supplier of equipment or services that will be used on many projects. The work associated with the selection could substantially increase the cost of any one project and the results of the selection process will benefit many projects and create consistency among projects.

Portfolio Management

Project Portfolio Management is the centralized management of processes, methods, and technologies used by project managers and project management offices to analyze and collectively manage a group of current or proposed projects based on numerous key characteristics. The objectives of Project Portfolio Management are to determine the optimal resource mix for delivery and to schedule activities to best achieve an organization's operational and financial goals — while honouring constraints imposed by customers, strategic objectives, or external real-world factors. For example, managing a portfolio of project investments requires a systematic approach to selecting, monitoring and cancelling projects. This makes portfolio management the link between the limited resources of the company and its *strategic* objectives.

In the strategic plan of an organization we will find the mission, the vision and the goals of that department, company or agency. Portfolio management balances the vision of strategic plans with the reality of limited resources. The components of portfolio management link project approval to the strategic and operational plans of the company as well as to its budgeting process.

The components of the Portfolio Management are:

- *Authority* – project portfolio management relies on a single body with the authority to initiate, cancel and continue projects. This steering group needs to make decisions, not just recommendations. They must be the same people who

determine the annual budget of the organization, because decisions to pursue projects are decisions to spend money;

- *Budgeting guidelines* - budget cycles rarely coincide with project cycles. Portfolio management contains estimating guidelines to facilitate consistency when cost and schedule estimates are difficult to forecast accurately;
- *Strategic and operational goals* – portfolio management uses strategic and operational goals to prioritize projects. A single body overseeing all projects is more efficient when it comes to making hard decisions about which project to pursue;
- *Discipline* – Portfolio management must be a proactive process. This means meeting on a regular basis and creating clear standards for proposing, approving and reviewing projects;
- *Accurate project information* – in order to choose among projects, portfolio management requires four kinds of information from all sectors of the organization: estimates for proposed projects, cost and schedule status of projects that are under way, projections of resource availability and past performance data to be used to generate future project estimates;

Project, program and portfolio management combine to align every resource on every project with the goals of the enterprise. Project execution is improved as resources are more consistently and realistically available. Management decisions to favor one project over another are based more on facts than assumptions. The next chapter will examine what enables the tiers to operate.

COMPONENTS OF ENTERPRISE PROJECT MANAGEMENT

Enterprise project management means aligning your project resources to accomplish your organizational goals as efficiently as possible. The four components of EPM are the means for reaching the goal, but they are not themselves the goal. We have to bear in mind that our organizations do not exist to fund EPM tools or processes. It works the other way around. The

tools, people, processes and organization that form EPM within a company exist to support the projects. The projects exist to support the goals of the firm.

Processes

Enterprise project management creates a framework for the company to build expertise in project management – which carries the added benefit of building better project managers. Consistent process is necessary at the program and portfolio levels for EPM to function, but the most essential processes – which have also been the most difficult to define – have been those at the project level. Despite the abundance of project management methodologies available, many companies struggle to build practical guidelines for managing projects, so we will examine this level in detail first.

All process improvement efforts begin by establishing the boundaries of the process, then move on to breaking the process down into smaller units in an attempt to improve the whole by improving the individual parts. When it comes to project management, the "Process" is the "Project Life Cycle". Therefore, the creation of consistent project management practices begins by defining the phases in the life cycle of a project, and then determine the most appropriate practices for each phase.

- *Create standard deliverables and approvals for each project phase* – just as every work package on a work breakdown structure has a deliverable and completion criteria, every phase of a project life cycle has deliverables and approval processes. The approvals constitute the boundaries between project phases. Creating a standard for the content and format of all project management deliverables (statement of work, risk log, communication plan, etc.) will make them easier to produce and easier to read. For example Status Reports (Highlights Reports) which use a standard template create consistency among all projects and is useful not only for the management to understand the report, but it also presents a unified look to customers;
- *Defining practices requires assigning responsibility and authority* – one of the most important tasks in organizing for projects is to establish the authority that will govern the projects. At the portfolio level we must know who will have the

authority to approve or cancel a project. At the program level we ask who will assign or remove people from project teams.

- *Different kinds of projects deserve different project management practice* – the differences between projects make it impossible to use a one-size-fits-all approach. There may be several different types of projects within an organization and each type will require different management standards. Before creating project management standards for each type of project, company managers will need to step back and determine how many kinds of projects exist within the organization. Here are two major factors that separate projects into different categories:
    - *Approvals* – if different types of projects have different approval processes, they will require different standards for passing their approval processes. Cost is often a factor in formalizing approvals. For instance low-cost projects usually require less oversight than large, expensive projects.
    - *Common risk factors* – projects that share certain risk factors, especially organizational or management risk factors benefit from consistent project management standards. Here are some examples: projects that serve many customers instead of a single one that is easily identified; projects with large or geographically dispersed teams;
- *Establish a consistent approach to project management* – in this chapter we noticed the ways to establish consistent project management practices, including identifying project types, setting project life cycles, defining standard deliverables and clarifying decision-making roles. This framework provides a common approach for managing every project and, most important, establishes the basis for process improvement. Project managers will know what is expected of them, and they will be able to add lessons from their projects to the project management standards.

Technology

The science of project management relies heavily on our ability to assemble and maintain accurate information. EPM has a broad scope which includes successfully managing individual projects, understanding relationships among projects and selecting and monitoring projects based on their fit with strategic goals. The following list categorizes eight common capabilities of EPM technology as they relate to the discipline of project management.

- *Project management* – from work breakdown structure to the resource-levelled project schedule, individual projects need a detailed plan that integrates cost, schedule, scope and resource constraints and can be used to measure progress against these goals. There are several software applications which can be used in this respect, the most common being Microsoft Enterprise Project Management;
- *Team communication and collaboration* – organizing project documentation, tracking issues and risks and reporting individual progress against assignments are all necessary within projects. Internet and network-based technology enables teams to consistently and efficiently share this information, whether team members share office space or are spread around the world;
- *Visibility of interproject dependencies* – when projects share personnel, or when one project is awaiting for another project to reach a key milestone, coordination of multiple projects requires visibility of their relationship. Systems that store all project information in a common database provide an integrated view of all projects;
- *Visibility of resource use across all projects* – as people are assigned to projects, we try to avoid overloading some people and under assigning others. The complexity of this problem grows when people work part-time on many projects. The capability to see availability or over allocation of personnel across many projects has become one of the driving factors for implementing EPM technology;
- *Project portfolio summary* – managers responsible for many projects benefit when they are able to see accurate summary status for all their projects;
- *Project status report* – project status consists of both hard data, such as cost performance and verbal descriptions of project events. EPM technology enables

both types of information to be merged in a consistent format so that management gets a common, reliable view of progress across all projects;

- *Cost accounting* – aligning resources and goals is pretty theoretical if we can't capture and analyse costs. Costs are typically incurred at the project level, but useful analysis includes categorizing costs that span projects. The fundamental task of recording time (labour) spent on projects is increasingly fulfilled by EPM technology;
- *Interfaces to complementary systems* – EPM doesn't cover every business process. The ability of the EPM system to interface with accounting and portfolio management systems decreases the work required to keep project accounting – particularly timekeeping for individual project team member – synchronized with the overall accounting system.

Many off-the-shelf software packages are designed for enterprise project management – both managing projects and summarizing information above the project level – and they do their job well. Choosing such a tool and implementing it successfully should follow the common wisdom of any information system implementation.

In order to gain some benefits the implementation of a new EPM technology should be treated like a project.

The building of the EPM project team needs to include the following skills and knowledge areas:

- *Users* – user involvement in system design is always a success factor. In the EPM case the users will be the project managers, team members, functional managers (in a matrix environment) and the executive who oversee and sponsor the project;
- *Sponsor* – a strong sponsor is an essential ally when it comes to convincing reluctant users that this new way is a better way;
- *Business analyst* – the team needs the ability to understand, design and communicate processes both as they currently are and as they will be. The skills to facilitate a team through this analysis are often found in a business or system analyst;
- *Project management expertise* – the team will be making decisions about the best way to manage and oversee projects, but they don't need to reinvent the wheels.

There is enough EPM and project management expertise around that the team should benefit from the common wisdom that emerged from similar experiences;

- *Tool or technology expertise* – making the most of your technology choice requires an intimate knowledge of the technology. Somebody from the project team should understand all of its capabilities and limitations;
- *IT expertise* – there are no stand-alone systems anymore. The EPM technology will operate within the existing IT infrastructure. The team must include people with the knowledge to integrate the new system's security and data interchange requirements with the existing environment.

Implementing EPM technology is challenging under best circumstances and making it a learn-as-you-go initiative dramatically increases the risks. As we can see from above the ideal team includes the experienced expert, the passionate leader and those who will live with the results on a daily business.

The main identified risks (don't forget about the unpredictable ones!) during the implementation of a new EPM technology – for which we need mitigation strategy - are:

- *Skills to perform the new processes* – without the understanding of project management theory any training on the new EPM tool is likely to be inefficient; the users will struggle with new terminology and concepts while trying to learn the technology;
- *Existing systems* – prior to EPM technology many companies used inconsistent tools for managing projects across the organization. When the new system goes live we don't want to spoil the projects managed with the old tools;
- *Aversion to change* – how many people will resist the change? Just imagine the enormous resistance generated by a minor changing in time-reporting;
- *Reorganization or change in authority* – if the switch to EPM technology enables a dramatic change in the way projects are managed, it may also precipitate changes to authority structures within the organization. Those changes may threaten some people who perceive the change as a threat to their authority;
- *Accounting system* – most companies have accounting systems in place. The existing accounting systems may be replaced as part of the new EPM technology implementation or the new technology may be required to "talk" to the old

system. Either way, accounting system has well-defined rules that won't change to accommodate the EPM system. If the plan is to integrate the accounting into the final EPM system, the start must be with accounting requirements.

There is no question that the transition to the EPM tool will cause disruption. We also know that using the tool is the best way to evaluate it. For both these reasons, using a phased deployment strategy keeps the risks smaller and the project moving ahead. There are two dimensions of phased deployment available: functionality and audience.

Phasing the functionality means asking people to use only basic features of the EPM tool during the initial rollout. That directly addresses the risks associated with reluctance to change or the skills necessary to use the tool. Keeping the initial functionality simpler will reduce the learning curve for users. Later functionality deployment will be easier as it builds on existing practices.

Phasing the audience starts with a small group for testing the tool and configuration, then rolls it out to other groups once is stable.

A pilot deployment often blends both dimensions of phased deployment. The goal of this phase is to test the viability of the product and the processes, to make sure the vision, the tool and reality sync up.

People

In our focus on the processes and technology of EPM we need to remember that the purpose of our organization is to deliver projects and those projects are delivered by people. In nearly every field, no matter what the maturity of the company's tools and processes, when difficult projects loom, management turns to its proven leaders to bring these projects home successfully.

The best projects are performed by the best people. That might seem to argue against our focus on standardized tools and processes! However, when we examine these challenging projects that are delivered successfully, we find that the best project leaders consistently use the best practices. In fact, successful project leaders are usually the greatest advocates for institutionalizing the project management discipline because that has been the source of their own effectiveness.

The best people use the best practices. The tools and processes represent the practices we want our project leaders to use, so "imposing" these practices through the EPM initiative is the best way to develop the project leaders of the future. Training is certainly part of the answer because we want people to able to understand and use best practices of the company. But beyond classroom training our people will improve their project management ability through experience using the EPM tools and methods.

Organization

An undeniable reality of organizational behavior is entropy: this means that, if left themselves, policies and processes will decompose and return to their natural state. The last component of EPM model establishes the continued support of the standards, practices and technology that define project management for the organization. This role is increasingly known as the **project office**. The two factors that govern a project office role are *responsibility* and *authority*.

The most common models for the project office are: Center of Excellence, Project Support Office, Project Management Office, Program Management Office and Accountable Project Office. Depending on their needs the organizations can decide which kind of model they want to adopt.

The possible project office resposibilities are:

- *Maintaining project management standards* – documenting, promoting, and updating the best practices for project management;
- *Maintaining project history;*
- *Organizing training – many project offices share this responsibility with a functional training department;*
- *Mentoring and consulting support* – project office personnel will participate in planning sessions, phase reviews, risk assesment using their expertise for supporting the project managers;
- *Schedule analysis and budget analysis* – perhaps the most common role of a project office is that of supplying planning analysts to assist project managers; these analysts help to build and maintain the detailed project cost and schedule information;

- *Enterprise Project Management technology* – if the company chooses to implement EPM technology, every form of project office will participate in this to some respect;
- *Multiproject coordination;*
- *Project oversight;*
- *Making project management decisions;*
- *Supervising project managers in their project responsibilities;*
- *Career growth for project managers;*
- *Supply project managers to the organization;*
- *Participate in Project Portfolio Management.*

In Annex 1 is easy to observe in a matrix the spectrum of project office incarnation and their associated responsibilities.

CONCLUSIONS

Superior-performing organizations have uncovered the mystery as to what it takes to consistently excel at delivering projects on time, under budget, and at desired quality levels. These few steps can make a significant and positive impact on organizations' customer satisfaction, market share, and bottom line when properly executed.

To effect successful change, an organization must at least:

- Conduct an organization project management assessment;
- Establish a program management organization infrastructure;
- Develop and implement enterprise project management processes;
- Implement a portfolio management methodology;
- Select and implement appropriate information technology.

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CHANGE MANAGEMENT CONSIDERATIONS ON NATO AGENCIES REFORM

LTC Radu Marius NARIȚA

INTRODUCTION

According to a generally accepted definition[14], change management represents an approach to transitioning organizations, teams or individuals from a current situation to a desired future situation. It is an organizational process aimed at helping change stakeholders to accept and embrace changes in their business environment.

In the history of change design, it was Kurt Lewin in 1947 that first presented a model, the three-step change model: unfreezing, transforming (changing), and refreezing. Over the years this model maintained its integrity, through several iterations, while different names have been used to describe the three steps. Three-Step model of change has become obsolete in the last two decades and new variants have appeared. For instance, in 1995 John Kotter published his Eight-Step Model in the Harvard Business Review. According to Kotter, 70% of all major change efforts in organizations fail and the reason of such failures is the missing of holistic approach required to see the change through.

By following the Eight-Step Process[15] organizations can avoid failure and become adept at change:

1. Establish a sense of urgency;
2. Create the guiding coalition;
3. Develop a vision and strategy;
4. Communicate the change vision;
5. Empower broadbased action;
6. Generate short-term wins;

[14] http://en.wikipedia.org/wiki/Change_management

[15] http://www.kotterinternational.com/our-principles/changesteps

7. Consolidate gains and produce more change;
8. Anchor new approaches in the culture.

Each approach, as well as any other derivate, has its pros and cons, however no framework is "best" in all situations.

While each private or public sector organization needs to consider the best way to approach change based on their particular cultural and stakeholder perspectives, factors common to successful change management involve[16]:

- Planning - develop and document objectives to be achieved by the change and necessary;
- Defining governance - establish appropriate organizational structures, roles, and responsibilities for the change that engage stakeholders and support the change effort.
- Committed leadership - ongoing commitment at the top and across the organization to guide organizational behavior, and lead by example;
- Informed stakeholders - encouraging stakeholder participation and commitment to the change, by employing open and consultative communication approaches to create awareness and understanding of the change throughout the organization.
- Aligned workforce - identify the human impacts of the change, and develop plans to align the workforce to support the changing organization.

NATO AGENCIES IN THE SCOPE OF REFORM

Agencies constitute an essential part of NATO, as a vital mechanism for collective procurement and sustaining capabilities. They operate under North Atlantic Council-approved charters and are executive bodies of their respective NATO procurement, logistics or service organizations.

They are established to fulfill collective needs of some or all Allies in the field of procurement, logistics and other forms of services, support or cooperation in any field.

[16] Change Management Best Practices Guide, *Five (5) key factors common to success in managing organizational change.* Queensland government.

Although NATO organizations and agencies are autonomous, they are required to follow the terms set out in their charters. They benefit from NATO's tax-exempt status and primarily serve the Alliance and its member states.

AGENCIES BEFORE REFORM

The Agencies reform is part of an ongoing NATO reform process, which is also focusing on the military command structure.

At the Lisbon Summit in November 2010, NATO Heads of State and Government agreed to reform the 14 existing NATO Agencies, located in seven member states.

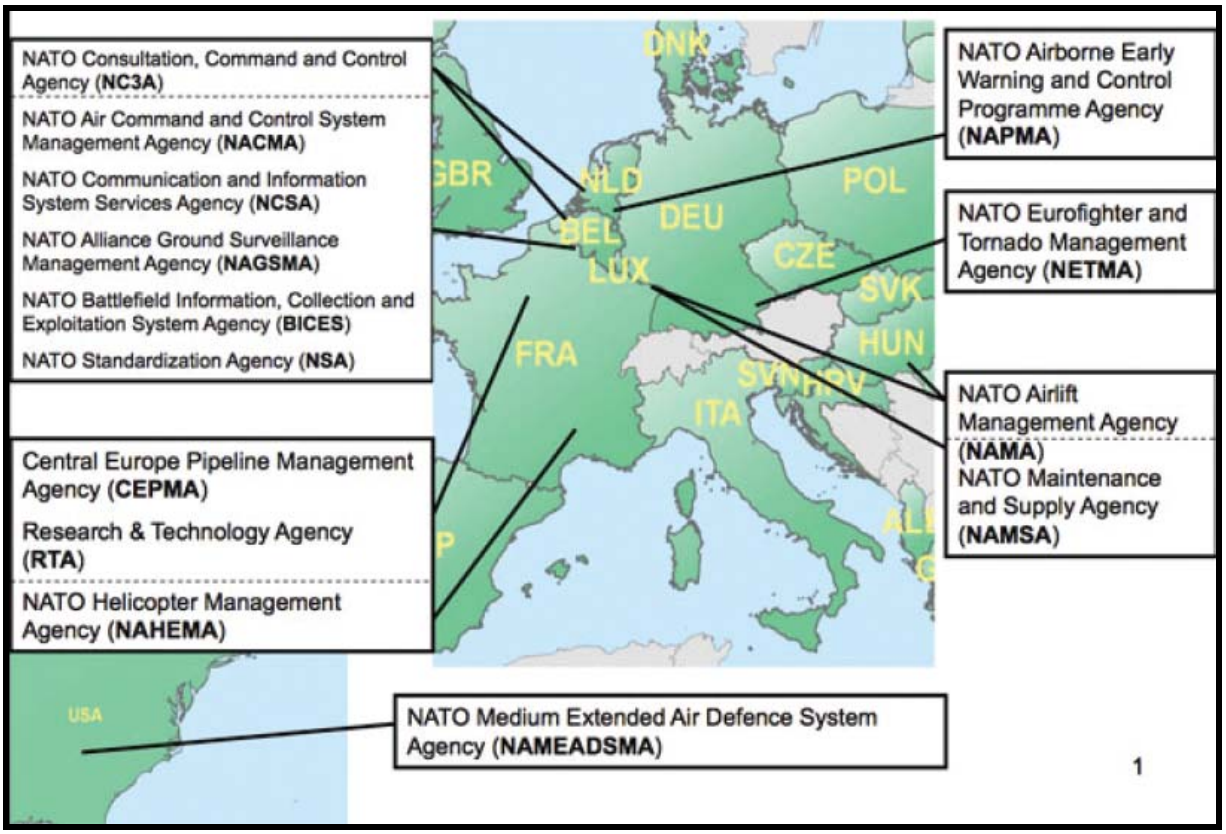

Fig. 1 NATO Agencies before reform [17]

MAIN MISSIONS

One may find below a table containing the 14 NATO Agencies as well as their full names and missions before the reform start.

[17] www.nato.int/nato.../20110630_110630-nato-agencies-old.pdf

Table 1 containing the 14 NATO Agencies

CEPMA	Central Europe Pipeline Management Agency	Ensures that the NATO Pipeline System in Central and Western Europe (CEPS) can meet the needs of participating Nations and is immediately operational in time of crisis and war, using its pipelines, depots, installations, entry and delivery points
NACMA	NATO Air Command and Control System Management Agency	Is a global Air Command and Control (Air C2) system procurement and implementing body. Provides central planning, system engineering, implementation, configuration of management and overall system integrity for NATO Air Command & Control System (ACCS)
NAHEMA	NATO Helicopter for the 1990s Design, Development, Production and Logistics Management Agency	Assumes management and execution of the NH90 programme on behalf of participating Nations, during the design & development, production and in-service support phases.
NAMEADSMA	NATO Medium Extended Air Defense System Management Agency	Executes the cooperative programme for an air defense missile system with anti-tactical ballistic missile defense capability (MEADS)
RTA	Research and Technology Agency	Promotes defense co-operative research and information exchange to meet the military needs of the Alliance and to maintain a technological lead for NATO and NATO Nations

NAMA	NATO Airlift Management Agency	Executes the Airlift Management Program, which consists in the cooperative effort to acquire, manage and support C-17 transport aircraft owned by the NATO Airlift Management Organization.
NAMSA	NATO Maintenance and Supply Agency	Provides logistics support to NATO or its member states, individually or collectively. Its mission is to maximize the effectiveness of logistics support to armed forces of NATO states and to minimize costs.
NAPMA	NATO AEW&C (Airborne Early Warning & Control) Program Management Agency	To plan, develop, acquire, integrate, and deliver new capabilities and improve the existing fleet. Support the sustainment of the NATO AEW&C capabilities, based on decisions of the NAPMO Nations
NC3A	NATO Consultation, Command and Control Agency	Plan, integrate, design, Ensure technical support and configuration control for NATO C3 systems. Support of NATO's operations.
NCSA	NATO CIS Service Agency	Ensures provision of secure end-to-end CIS services required for NATO C3. Acts as Service Provision Authority, operating and maintaining assigned NATO CIS; providing CIS training; and conducting specialized O&M procurement in support of assigned systems
NETMA	NATO Eurofighter and Tornado Management Agency	Procures and provides in-service support for Tornado and Eurofighter engines and system upgrades

NSA	NATO Standardization Agency	Coordinates standardization efforts within NATO, supports Military Committee standardization efforts and administers all existing standardization agreements (STANAGs) and Allied Publications (APs).
NAGSMA	NATO Alliance Ground Surveillance Management Agency	Execution of NATO-owned and -operated AGS core capability.
NURC	NATO Undersea Research Centre	Delivers innovative and field-tested maritime science and technology solutions to implement NATO's Strategic Concept. Seeks to become a world leader in shaping cost effective, autonomous and adaptive multi-platform capabilities for NATO's maritime assets.

DRIVERS AND AIMS FOR THE CHANGE PROCESS. NEW BODIES AND SERVICES

Many NATO nations have dramatically reduced their defense capabilities over the past twenty years. During the '80s, Allies were urged to maintain defense spending at 3 % of GDP. As many nations failed to do so, that target was reduced to 2 % in the 2000s. Even that target is being missed and now the average defense spending of a European NATO member is less than 1.7 percent of GDP. And cutting continues. The US defense budget, which once accounted for roughly half of the defense budget of all NATO members, has now reached roughly 75 percent.

In 2010, at the Lisbon Summit, NATO leaders endorsed a new Strategic Concept, according to which the Alliance will "engage in a process of reform, to streamline structures, improve working methods and maximize effectiveness and efficiency" [18] in the delivery of capabilities and services, and ultimately bring savings. Actually, Allies agreed to regroup the agencies into three major programmatic themes: procurement, support and communications & information.

[18] http://www.nato.int/cps/en/natolive/topics_68230.htm/ NATO Reform.

Functions performed by 14 NATO Agencies in the past will be amalgamated into three new agencies: Communications and Information (C&I) Agency, Support Agency and Procurement Agency. Additionally, by merging the NATO Undersea Research Centre (NURC) and the Research and Technology Organization (RTO), will be created the NATO Science and Technology Organization (STO). The current NATO Standardization Agency will continue until the 2014 when will probably be subject to review.

NATO COMMUNICATIONS AND INFORMATION AGENCY

NCI Agency - NATO Communications and Information Agency, will have a headquarter in Brussels (as will the very small staff which will design the new NATO Procurement Agency) and will provide IT services, procurement and support to NATO in a number of domain such as Command & Control, Tactical & Strategic Communications and Cyber Defense. The Agency is led by a General Manager and overseen by a governing Agency Supervisory Board.

The new Agency is the result of the merger of:

- NATO Consultation, Command and Control Agency (NC3A);
- NATO ACCS Management Agency (NACMA);
- NATO Communication and Information Systems Services Agency (NCSA);
- ALTBMD Programme Office

and elements of NATO HQ ICTM (Information Communications and Technology Management).

C&I Agency will in particular be capable of ensuring continuous CIS support to all operations in which NATO is engaged.

NATO SUPPORT AGENCY

As part of the implementation of Agencies Reform, as directed by Heads of State and Government at the Lisbon Summit, the NATO Support Organization was established, in order to rationalize and consolidate the functions and services provided by the following Agencies: The NATO Maintenance and Supply Agency (NAMSA), the NATO Airlift Management Agency (NAMA) and the Central Europe Pipeline Management Agency (CEPMA).

The NATO Support Organization is comprised of:

(a) an Agency Supervisory Board composed of a representative of each NATO nation;

Each nation shall have decision-making authority. The Agency Supervisory Board shall oversee the operation of the NATO Support Agency. It will provide strategic direction and guidance to the NATO Support Agency and oversee its activities and performance.

(b) an Executive Body, called the "NATO Support Agency", composed of a General Manager and Agency staff, including Programme Offices, when so established.

NATO PROCUREMENT ORGANIZATION

Several of NATO's agencies are procurement organizations, such as NATO Helicopter Management Agency (which makes the NH-90 helicopter) and the NATO Eurofighter & Tornado Management Agency (which oversees production of Eurofighter). Their customer is not the NATO Secretary General, North Atlantic Council, or Military Committee. Their customers are the national armament directors who decided to cooperate with each other and fund these agencies in order to develop military capability. For this reason, the decision by some nations to insist that NATO should conduct a more diligent analysis before trying to form a single integrated procurement agency is considered a positive development.

With the aim of providing a framework for end-to-end management of multinational armaments acquisition programmes (Smart Defense projects, new major programmes or elements of existing procurement programmes), a NATO Procurement organization is also to be created.

Procurement Organization will draw from the experience of current multinational agencies, such as:

- Eurofighter and Tornado Management Agency (NETMA);
- Helicopter Management Agency (NAHEMA);
- Alliance Ground Surveillance Management Agency (NAGSMA);
- Medium Extended Air Defense System Management Agency (NAMEADSMA);
- Airborne Early Warning Programme Management Agency (NAPMA),

that will continue to exist until the Agency's mission is fulfilled or participating nations decide to integrate into the new Organization.

Shared Services

Forty plus years ago, the concept of shared services did not exist in NATO. It appear after the November 2010 Lisbon Summit when high level NATO representatives publicly stated that reform involving sharing of services across both the agencies and the international staff and international military staff will generate financial savings and simplify business operations [19].

The goal is to consolidate and rationalize services to achieve effectiveness, efficiency, and savings to the greatest extent possible, with the objective of progressively increasing the sharing of services within NATO. The scope was to create a Shared Services environment among NATO Agencies, NATO HQ and other organizational units in the following areas: Finance and Accounting, General Procurement, Human Resources, General Information Technology and Facilities.

In 2011 Defense Ministers decided to establish an Office of Shared Services (OSS), initially located at NATO HQ and direct Agencies, other organizational units, and NATO HQ to use this Shared Services environment to maximize effectiveness and cost savings.

FINAL TRANSITION MEASURES

In accordance with the Implementation Plan for NATO Agencies Reform, the Provisional Agency Supervisory Boards (PASBs) for the future Support Agency and Communications & Information (C&I) Agency have been established on 2011.

These two Boards played a key role in the preparation of the future governance of the Support and the C&I Agency, providing strategic direction and guidance to the Agencies and overseeing their activities and performance.

At the beginning of July 2012, the first milestone in the reform process was reached. The new organizations were established taking over the functions and responsibilities of former NATO bodies. At that time new organizations designs and charters have been finalized and before entering the next transition steps, so called functioning "As is, where is" has been achieved.

[19] Marshall Billingslea, Major General Gary Winterberger, USAF (Ret.) - *NATO Agency Reform, Done Right*

The NATO Agencies reform will be completed in three major phases [20] between July 2012 and end-2014:

- **Consolidation, until the end of 2012.** Former elements are merged under a single responsibility and executive functions are consolidated. A new executive management structure shall be established (streamlined and reduced). Support services shall merge gradually (e.g. human Resources, finance etc.) from the constituent entities;
- **Rationalization, in 2013**, where some support structures are to be closed down. This will represent the core of the changes. This is where former agencies will be merged into a single, effective organization;
- **Optimization, in 2014**, where the final goals for effectiveness, efficiency and cost savings are achieved (up to 20% savings expected).

In order to ensure the continuity of services, especially support to NATO operations, which represents a key priority, during the transition process, the following transition measures must be taken:

a. All rights and obligations of former NATO agencies to be transferred to and assumed by the new ones under the same terms and conditions. This transfer includes all governing instruments of the existing organizations, such as directives, policies or other regulations, unless rescinded or superseded;

b. The ownership of all assets (including intellectual property rights) and infrastructure from the affected Organizations will be transferred to and assumed by the new agencies.

Commercial contracts, in the unlikely event that a contract would either be terminated or equitably adjusted based on NATO's reorganization, the cause for the legal dispute/potential damages is not to be seen as a responsibility attributed to the relevant customer's behavior or performance with respect to his contractual obligations.

Regarding personnel contracts, the new Agencies should seek to avoid any of costs generated by termination of personnel contracts. As long as a suitable lead time for evolution is

[20] http://www.nato.int/cps/en/natolive/topics_66470.htm?selectedLocale=en
http://www.ncia.nato.int/About/Pages/Organization.aspx

afforded, the new Agencies may target natural attrition (including resignation, retirement, and expiration of definite duration contracts) and other current processes, such as use of internal transfers, as the preferred methodologies for solving the situation.

CONCLUSIONS

"Adapt or die" is probably the most important lesson from the public and private sector for international organizations confronting significant change. The reform of NATO Agencies may be considered as one of the biggest change to this organization that struggle to adapt to the economic and financial environment.

While considering the reform process driven by the economic and financial crisis, the main goal of change management is to enhance efficiency and effectiveness in delivering capabilities and services, to achieve greater synergy between similar functions and to finally generate savings. Furthermore, such savings from the consolidation of the agencies and sharing services may be reprogrammed into enhancing NATO´s capability.

By this reform, agencies will be organized along 3 major programmatic themes: Procurement, Support and Communications & Information. The transition from 14 independent agencies to only three constitutes both challenges and opportunities for all 28 member states as well as for the former agencies employees. This is especially the case of the rationalization phase planned for 2013, where some structures are to be closed down. From this point of view, approaching the acquisition reform at the same time may be not only the opportunity to satisfy more rapidly the urgent operational requirements, but also the rescue boat to be prepared to protect against unwanted waves.

Anyway, this rationalization should be extended as much as possible to the level of Weapon Systems, Partnerships Committees and other similar bodies within reformed agencies, in order to identify potentially duplicated structures delivering the same type of services to NATO member countries. Probably by involving IBAN in this area a worthy catalyst may be created.

According to the public statements, NATO Agencies reform is an example of top-down approach to organizational change. Considering the simplest three-step change model – unfreezing, transforming (changing), and refreezing, one may conclude that things are very simple and road map to the end a simply formality, that is not truth. As the agencies consolidate

and rationalize functions in the future, the final results must confirm the decision to reform. However, it will take long time to assess and obtain such confirmation.

While some are yet to be materialized, at least a few key change management elements may be easily identified as being properly addressed to ensure success of the agencies reform:

a) Clear strategy and goals, ensuring that leaders, employees and stakeholders understand the process:

In light of P.R. statement and documents resulted from the NATO Summits organized after 2010, even without being directly involved in change process, any person understood that was going to be a big change with respect to NATO Agencies: it will remain only three instead of 14. The motivation-message was also crystal clear: it is necessary to generate savings.

b) Leadership commitment:

Starting with NATO Heads of State and Government that have taken the ownership and accountability and continuing with NATO Secretary General, none of them ever made a step back when it came to Agencies Reform. It was and still is a fully consensus support in this area.

c) Stakeholder engagement, to create awareness and understanding of the change throughout the organization:

We recall that stakeholder means everyone that have an interest, especially people directly involved and affected by the change. Even though until mid 2012 people working for NATO agencies were not directly affected, thanks to "as is, where is " first step of reform, these stakeholders are now aware of the process. Each web-page of reformed agencies notifies the reader about the fulfillment of phase due at 1st of July 2012. Even advertising footnotes were included in electronic mail after 1st of July 2012 in order to inform the stakeholders about the change, reminding them, if yet necessary, that reform goes on even though not everybody was fully informed about all details.

Putting together the former fourteen agencies under their respective future umbrella represented by the newly formed agencies, was the easiest way to begin cutting of duplicated high level executives intended by NATO Agencies Reform process. During the current consolidation phase that started at July 2012, while working "as is, where is ", each former structure and of course each of their employee have the chance to prove once more their utility.

Former Agencies and their employees will not work independently anymore and consequently will have the chance to better understand each other work and, why not, even compete for ensuring a place in the future NATO Agencies.

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CONSIDERATIONS ON RISK MANAGEMENT IN JOINT MILITARY ACTIONS

CPT CDR Marius PETRE

"Sizing up opponents to determine victory, assessing dangers and distances is the proper course of action for military leaders."

Sun Tzu, ***The Art of War,*** "Terrain"

INTRODUCTION

The fundamental concept in the development of risk management is that of risk itself. As a first step by reducing risk, one must understand what risk is. Risk, as a noun in this context, is defined as the "exposure to possible loss or injury (The Merriam Webster Dictionary, 1994)."

Once risks have been identified, they must then be assessed as to their potential severity of impact (generally a negative impact, such as damage or loss) and to the probability of occurrence. These quantities can be either simple to measure, in the case of the value of a lost building, or impossible to know for sure in the case of the probability of an unlikely event occurring. Therefore, in the assessment process it is critical to make the best educated decisions in order to properly prioritize the implementation of the risk management plan.

The military services define risk similarly while emphasizing intrinsically military aspects such as the role of 'adversaries' and 'personnel.' As an example the US Air Force definition is "an expression of consequences in terms of the probability of an event occurring, the severity of the event and the exposure of personnel or resources to potential loss or harm.

In military operations there are three levels of risk:

- the first being “low” risk operations where normal caution, supervision, and safety procedures should ensure a successful and safe mission.
- the second risk level is “medium” or “caution.” There is probable occurrence of minor, non-life threatening personnel injuries and equipment damage. These operations have a remote possibility that severe injury or death will occur. These operations need complete unit involvement.
- in “high” risk it is probable that severe personnel injuries, death, and major equipment damage will occur. There is a remote chance that mass casualties or death, plus complete destruction of equipment will occur.

WHAT IS RISK MANAGEMENT

All military operations to include training has inherent risks.The risk management is a tool that helps leaders make sound logical decisions and fratricide avoidance. Risk management enables leaders at all levels to manage risk.

Risk management is the identification, assessment, and prioritization of risks (defined in ISO 31000 as *the effect of uncertainty on objectives*, whether positive or negative) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risks can come from uncertainty in financial markets, project failures (at any phase in design, development, production, or sustainment life-cycles), legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attack from an adversary, or events of uncertain or unpredictable root-cause.

Since the mid-1990s risk management has undergone a dramatic expansion in its reach and significance, being transformed from an aspect of management control to become a benchmark of good governance for banks, hospitals, schools, charities, and many other organizations. Numerous standards for risk management practice have been produced by a variety of transnational organizations. While these many designs and blueprints are accompanied by ideals of enterprise, value production, and good governance, it is argued that the rise of risk management has also coincided with an intensification of auditing and control processes. The legalization and bureaucratization of organizational life has increased because risk management has created new demands for proof and evidence of action. In turn, these demands have

generated new risks to reputation. In short, this important book traces the rise of the managerial concept of risk and the different logics and values which underpin it, showing that it has much less to do with real dangers and opportunities than might be thought, and more to do with organizational accountability and legitimacy.

In ideal risk management, a prioritization process is followed whereby the risks with the greatest loss (or impact) and the greatest probability of occurring are handled first, and risks with lower probability of occurrence and lower loss are handled in descending order. In practice the process of assessing overall risk can be difficult, and balancing resources used to mitigate between risks with a high probability of occurrence but lower loss versus a risk with high loss but lower probability of occurrence can often be mishandled.

Intangible risk management identifies a new type of a risk that has a 100% probability of occurring but is ignored by the organization due to a lack of identification ability. For example, when deficient knowledge is applied to a situation, knowledge risk materializes. Relationship risk appears when ineffective collaboration occurs. Process-engagement risk may be an issue when ineffective operational procedures are applied. These risks directly reduce the productivity of knowledge workers, decrease cost effectiveness, profitability, service, quality, reputation, brand value, and earnings quality. Intangible risk management allows risk management to create immediate value from the identification and reduction of risks that reduce productivity.

Risk management also faces difficulties in allocating resources. This is the idea of opportunity cost. Resources spent on risk management could have been spent on more profitable activities. Again, ideal risk management minimizes spending (or manpower or other resources) and also minimizes the negative effects of risks.

This paper elaborates on the risk management for the dynamic and time-sensitive environment and conditions of the joint military actions.

OVERVIEW ON RISK MANAGEMENT IN JOINT MILITARY ACTIONS

Risk management for the military actions – we have all heard about it and write it off as just some of that "safety stuff." (i.e *"Risk Management is integrated into the military decision-making process."* FM 101-5, *Staff Organization and Operations*/Annex J - Risk Management). Risk management is impossible to eliminate risk, hut it can be minimized.

Once risks have been identified, they must then be assessed as to their potential severity of impact (generally a negative impact, such as damage or loss) and to the probability of occurrence during the joint military actions. These quantities can be either simple to measure, in the case of the value of a lost asset, or impossible to know for sure in the case of the probability of an unlikely event occurring. Therefore, in the assessment process it is critical to make the best educated decisions in order to properly prioritize the implementation of the risk management plan which can take into considerations some factors such us integrated/aggregated risk management, making right decisions and accepting a certain level of risk.

Joint military actions are inherently complex, dynamic, dangerous, and, by nature, involve the acceptance of risk. This however relies on the ability to properly encompass all the risks and weigh them against the operation goals and objectives. *Risk* is the expression of the likelihood and impact of an event to the achievement of an organization's objectives. Risk management is a systematic approach of identifying, assessing, understanding, acting on, and communicating risk issues. Risk information is usually collected at the lower levels of organizational structure, while situation assessment, risk analysis, and predictions, influencing decision-making are commonly performed at higher levels. Thus, the need for proper risk aggregation into an overall global risk measure(s) and systemic communication and propagation are essential for overcoming information overload of decision-makers.

Factors that make risk management in joint military operations especially difficult include fundamental risk management differences between coalition partners, time-sensitivity, surprise, dynamism, isolation of the events, and understanding the causality chain (action-reaction-effects and consequences). During the last two decades, risk identification and assessment have been widely studied in many domains – military operations included.

The risk management process is not some strange concept that a desk jockey devised while thinking of bullets to put on his support form. It is a deliberate process which allows commanders to categorize, process, and mitigate risks in **any type of joint operations.** Fratricide is also a generally overlooked, and yet significant, hazard. Formalized risk management is merely taking this generally unconscious process and bringing it into the conscious portion of the brain. The desired result is that leaders understand the risk involved with each operation they undertake and reduce the risk to an acceptable level where the benefit of mission accomplishment outweighs the risk taken.

Also, when the commander of a joint force analyzes the risk management, he has to take into consideration, not only METT –T (mission, enemy, terrain, troops, and time available), but also the estimated number of casualties, collateral victims/ damages from the civil side, losing of the equipment/ availability of joint force assets, and the reaction of the world public opinion / mass-media over the joint military action conducted by him.

The commander of the joint forces, through his planning processes, must be able to quantify the risk he can reasonably expect during an upcoming operation. Only by doing this can a commander make **calculated** risk decisions based on tactical and accident hazards. Joint staff can recognize hazards during the military decision-making process (MDMP) and consequently control these hazards through risk reduction.

Battle planners have, in the past, identified hazards in their planning and probably mitigated the risk by employing control measures, such as a fire support coordination line (FSCL), without a second thought. Joint staff is executing some risk reduction, but observers have seen some areas where improvement is possible. The risk management worksheet must be a by-product of the Joint MDMP and outline all identified hazards as well as associated control measures. When performed correctly, this function allows commanders to recognize pertinent residual risk and accept or disapprove at the proper level. Commanders may also be able to determine whether or not to conduct the operation based on the benefit-to-risk ratio. If each developed COA has a related risk level associated to it, this becomes another decision aid for the commander.

Joint military action is a complex operation involving many military organizations in uncertain settings. Triggers and consequences are very hard to separate and prioritize. Risks can be analysed at several levels: the joint organization, the components, the units or modules. The interdependence between risks on different levels should be considered. The joint military actions can comprise various types of the mission, which can range from well-known defined and recognized military operations (as they are depicted in NATO doctrine, “articole 5”, “non-articole 5 CRO”) to Military Operations Other Then War (MOOTW) or missions under a UN mandate. There are many justifications for a rigorous and thorough risk management at any stage of a joint operation or at any level of organization, one should make assumptions to aggregate and compare different measures or assessments of risk in order to manage it in the best way.

The elements/steps of the risk management in schematic approach are depicted in the figure below:

Fig. 1 Risk management

Characterstics of Risk Management in joint military actions

There have been identified the following characteristics of risk management:

- create value – resources expended to mitigate risk should be less than the consequence of inaction, or (as in value engineering), the gain should exceed the pain
- be an integral part of military force organizational processes
- be part of joint military decision making

- explicitly address uncertainty and assumptions on the reality of the battlespace/JOA
- be systematic and structured
- be based on the best available data/information
- be tailorable and rapid adjusted to the real conditions of the joint military actions
- take human factors into account for both all side own/ friendly troops, and adversary/enemy troops
- be transparent and inclusive
- be dynamic, iterative and responsive to the rapid changes from the battlespace;
- be capable of continual improvement and enhancement
- be continually or periodically re-assessed

Levels of Risk Management in joint military actions

The risk management process operates on three levels. Although it would be preferable to perform an in-depth application of risk management for every joint operation, the time and resources may not always be available. The three levels are as follow:

Time-Critical

Time-critical risk management is an "on the run" mental or verbal review of the situation using the basic risk management process without necessarily recording the information. This time critical process of risk management is employed by personnel involving in a joint military action to consider risk while making decisions in a time-compressed situation. This level of risk management is used during the execution phase of training or joint operations as well as in planning and execution during conflict/ crisis responses. It is particularly helpful for choosing the appropriate course of action to be presented and proposed to the joint force commander when an unplanned event occurs during execution of a planned joint operation or daily routine.

Deliberate

Deliberate Risk Management is the application of the complete process for planning of the joint military action. It primarily uses experience and brainstorming to identify risks, hazards and develops controls and is therefore most effective when done in a group of planners when a joint military actions is planned. Examples of deliberate applications include the planning of upcoming joint operations, review of joint standard operating procedures, or training procedures.

Strategic

This is the deliberate process with more thorough hazard identification and risk assessment involving research of available data, use of diagram and analysis tools, formal testing, or long term tracking of the risks associated with the system or operation (normally with assistance from technical experts, analysts and specific sytems or devices such us TOPFAS). It is used to study the hazards and their associated risks in a complex operation or system, or one in which the hazards are not well understood. Examples of strategic applications include the long-term planning of complex joint operations, introduction of new equipment, materials and operational, development of tactics and training curricula. Strategic risk management should be used on high priority or high visibility risks.

Risk level mission effects

Extremely high (E) - mission failure if hazardous incidents occur in execution.

High (H) - significantly degraded mission capabilities in terms of required mission standards. Not accomplishing all parts of the mission or not completing the mission to standard (if hazards occur during mission).

Moderate (M) - expected degraded mission capabilities in terms of required mission standards. Reduced mission capability (if hazards occur during the mission).

Low (L) - expected losses have little or no impact on mission success.

Risk Assessment versus Risk Management

We all do a risk assessment matrix as part of normal joint operations planning. This procedure use the steps of the process and does not fulfill the requirement. Risk assessment matrices are merely tools for the commander to identify potential hazards. Only by completing the process can a joint force accomplish risk reduction through implementation of identified control measures.

All members of any joint planning cell must be able to recognize hazards inherent to their piece of the plan. The chief of staff of the joint force must reinforce this when they brief the staff before initiating their planning. A technique is to require each planning cell to identify all hazards associated with their portion of the mission during planning. Once they identify the hazard, that cell should also identify appropriate risk reduction measures since they are the subject matter experts in that area. Someone from the joint planning cell must consolidate these

hazards and controls and give them to the person responsible for completing the risk management worksheet.

The responsible individual can then insert the information into the worksheet to determine initial and residual risk levels for each hazard and choose the best way to implement each control. Standardized documents are generally the best form of implementation of controls. The OPORD is the ideal vehicle to disseminate the control measure(s) for specific missions, with the unit SOP being better for long-term implementation. The final step is to identify who will supervise the control measure and determine whether or not it was effective.

AN EXAMPLE FOR RISK MANAGEMENT ESTIMATION

In this paper, I used as an example for a rsik management estimation, a combination of Influence diagrams, Depmster-Shafer theory, and Mission Decomposition Structure for risk assessment and aggregation.

Dempster-Shafer theory of evidence can be used to tackle the aggregation of information received from several sources about a situation or an event (this is the case which have often happened during the joint military action).

The *Dempster-Shafer theory* is based on *belief functions* and *plausible reasoning*, used to combine separate pieces of information (evidence) to calculate the probability of an event. The theory was developed by Arthur P. Dempster and Glenn Shafer and represents a generalization of the Bayesian theory. Dempster-Shafer theory is based on two ideas:

i) obtaining degrees of belief for one question from subjective probabilities for a related question;

ii) Dempster's rule for combining related bodies of evidence to form a composite belief about a hypothesis. The main difference from the known probability theory is that in the Dempster-Shafer theory P(B)+P() may be different from 1. Dempster-Shafer theory has been effectively used in airborne sensor networks to fuse enormous amounts of uncertain and noisy information for better battlefield situation assessment.

Bayesian network may be used for capturing and storing uncertainty and cause-effect relationships of a risk. A Bayesian network is a compact way of representing conditional dependencies, It is a probabilistic causal graph, *i.e.*, a directed acyclic graph whose nodes

represent random variables and whose arcs represent influence or causal dependencies. Each variable has a probability distribution assigned. A node with parents has conditional probabilities – a state table with a joint probability distribution of its own states, given the states of its parents. The probability of a state of such a node depends on the previously observed states of its parents. Thus, Bayesian network captures two 'forms' of knowledge:

i) the causal structure of the relationship between random variables,

ii) the probabilities.

Influence diagram is a generalization of Bayesian network produced by adding decision nodes. Each decision node has a number of states that represent possible alternatives.

Coming back to my example, we know that a joint military action is structured as on a hierarchy with number of structures involved over a period of time. Also uncertainties are implied. In practice, risk issue is performed by a human analysts and it is based on their experience and expertise. Our approach combines risk assessment and information aggregation in order to analyse them, the make the right decision and to handle in an appropriate manner the risk management. In order to accomplish this task we have to answer three questions:

How to aggregate risk related information from separate sources?

How to aggregate homogeneous risk assessments through a hierarchical structure?

How to aggregate heterogeneous risk assessments?

We can use diagrams and Dempster-Shafer theory of evidence, and risk aggregation through Mission Decomposition Structure (MDS). One can distinguish many risk types associated with joint military actions:

- risk of mission failure (M),
- risk to military personnel health/ life (P),
- risk of collateral damage (C), risk of important buildings damage (B)
- risk to resources and equipment (R).

Our approach starts with a joint mission. We assume that the pre-planned mission can be divided in elementary actions, and we propose the following static risk aggregation approach:

1. (S1) Generate a tree-like graph representing a Mission Decomposition Structure (MDS) dividing the mission in tasks, subtasks, and actions;
2. (S2) Determine the importance weights for the edges of the MDS;
3. (S3) For each action/task, identify associated risks;

4. (S4) For each risk, identify its core factors and generate corresponding Bayesian network, influence diagram, and an Expended Influence Diagram (EID) combining Dempster-Shaffer methodology and influence diagram.

Due to dynamic changes over time, a real-time (continuous or iterative) risk monitoring and assessment should be carried out using the following steps:

1. (D1) For each risk, assess its level, using EID;
2. (D2) For each risk type, aggregate risks over tasks, going upwards along the MDS
3. (D3) At each level of command and MDS, aggregate different risk types.

The MDS can be used to aggregate risks and propagate the relevant risk information to the upper levels of the mission structure or command. Only comprehensive information is presented to decision-makers and commanders. Disaggregation of the risks is also possible all the way to the action level of the mission. Also, disaggregation of aggregated risks consisting of different risk types is possible and desirable.

Only the risks of the same type are to be combined and aggregated using these approaches. If a number of risks of the same types are associated with one node, the aggregation at this node should be done first. Note that one aggregation approach is more applicable to certain risk types. Specifically, for the mission success (M), the most appropriate would be to use Importance rule; for risks to people health/ life (P) and for risks of collateral damage, the most appropriate would be to use Max rule; and for the risk to important buildings (B) and equipment (R) any of the two may be used.

Other methods like weighted sum, system accident model, and influence diagrams might be used for risk aggregation. Multiple Criteria Decision Analysis methods and procedures are also good candidates for heterogeneous and hierarchical risk aggregation to take it into consideration for managing the risk during the joint military operations.

SOME CONSIDERATIONS ON OPERATIONAL RISK MANAGEMENT (ORM) IN JOINT MILITARY ACTIONS

(Operational) risk management is a concept which has been initiated and developed at US Army services level, with a slightly different approach and “name”. As an example, US Air Force uses the term ‘Operational Risk Management (ORM)’ while the Army uses the term ‘Risk

Management (RM).' The Air Force defines ORM as "a decision-making process to systematically evaluate possible courses of action, identify risks and benefits, and determine the best course of action for any given situation." (Department of the Air Force, 2000a). It calls for all levels to utilize the systems for all situations, both on- and off-duty. It states that proper implementation of the program will increase the overall strength of the Air Force's war fighting ability by enhancing mission accomplishment and preserving resources and individuals.

The Army defines RM as "the process of identifying, assessing, and controlling risks arising from operational factors and making decisions that balance risk costs with mission benefits." (Department of the Army, 1998) It calls for all levels, from soldiers to leaders, to implement risk management and states that the principles apply to all manners of operations and environments within the service. It notes the importance of leaders being able to properly apply risk management in order to conserve resources, protect personnel, and develop competent leaders and units.

ORM principles in joint military actions

Operational Risk Management identifies four key principles that must be applied when managing risk in joint military actions. The principles should be used at all stages of decision-making; before, during, and after and should be used continuously when risk is present.

1) Accept no unnecessary risk: unnecessary risk does not involve a positive return of benefits. From day to day operations in joint military actions, risk is almost always involved at some level. This is the best approach to accomplish the joint military actions' objectives while minimizing exposure to such unnecessary risks.

2) Make risk decisions at the appropriate level: structures which are accountable for the completion of operations are responsible for making risk decisions.

3) Accept risk when benefits outweigh the costs: unlike situations involving unnecessary risk, acceptable risk involves gained benefits due to undertaken risk. Acceptable risk can be identified when potential costs are compared to potential benefits. Such undertakings are acceptable, but joint force structures should always attempt to minimize the risk and maximize the benefits.

4) Integrate ORM into joint military actions and planning at all levels: from structures at the lowest level conducting joint military actions to the commanders at the highest levels establishing policy, risk management should be comprehensively applied.

Operational Risk Management Process

Operational risk management process is based on several key fundamentals. It is designed to be a comprehensive system but must be tailored to fit each unique situation being addressed. The system outlines steps that provide tools for joint structures to manage the immediate risk and provides six steps to use that define the risk management process.

1) Identify the Hazards: use various hazard identification techniques to identify the hazards at hand.

2) Assess the Risk: the application of qualitative and/or quantitative assessment techniques should be used to determine the probability of risk and the implicit danger involved.

3) Analyze Risk Control Measures: determine strategies that may be used to avoid, minimize, or eliminate the perceived risk.

4) Make Control Decisions: make a decision at the appropriate level based on the cost-benefit analysis.

5) Implement Risk Controls: carry out the selected strategy.

6) Supervise and Review: continual review of the chosen strategy and the results of the action should be accomplished periodically to ensure success and improvement over time.

Fundamental Goals of ORM

The overall goals of the ORM program is that understanding and minimizing risk will maximize mission effectiveness and accomplishing the joint mission by integrating of four different “rules”:

1) Enhance mission effectiveness: incorporation of ORM principles and practices will enhance all levels of mission effectiveness by preserving assets and keeping personnel safe and healthy.

2) Integrate ORM into processes: ORM should be integrated into mission processes at all times and decisions should be based on risk assessments.

3) Comprehensive acceptance at all levels: all personnel should be trained and motivated to use ORM in all situations where risk is involved, both on- and off duty.

4) Improve conflict fighting capabilities: by utilizing the ORM concepts of cost-benefit analysis, the joint force will make better, more informed battlespace decisions and will in turn help ensure victory in joint combat situations.

CONCLUSIONS

The modern battlefield is more lethal than any in history. The tempo of joint military actions is rapid, and the nonlinear nature of the battlefield creates a lot of problems for commanders at all joint force level including the risk management. Leaders of the joint military actions (to include their staff) must always remember that the effectiveness of the process depends on their understanding of the situation. They should never approach risk management with "one size fits all" solutions to the risks their unit faces. They must consider the essential tactical and operational factors that make each situation unique.

The primary objective of risk management and fratricide avoidance in joint military actions is to protect and help joint force structures 'combat power and capabilities through risk reduction, enabling them to win the battle quickly and decisively with minimum losses. risk management and the avoidance of fratricide. Risk is the chance of injury or death for soldiers and of damage to or loss of vehicles and equipment. Risk, or the potential for risk, is always present across the full-spectrum of joint military actions.

Risk management must take place at all levels of the chain of command during each phase of any joint military action; it is an integral part of planning. Each commander from all joint foce level, must know how to use risk management, in order to minise the own losses, avoid the fratricide and to achieve the desire end state of their mission and also, to ensure the execution of the mission in the safest possible environment within mission constraints.

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[6] AFI 90-901, Operational Risk Management (Department of the Air Force, 2000a),

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CONSIDERATIONS ON THE IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT PRINCIPLES INTO ARMED FORCES

CPT CDR Fănel RĂDULESCU

> „*I find that the great thing in this world is not so much where we stand as in what direction we are moving: To reach the port of heaven, we must sail sometimes with the wind and sometimes against it, but we must sail, and not drift, nor lie at anchor*”.[21]
>
> **Oliver Wendell Holmes, Sr.** (1809 –1894)

INTRODUCTION

Due to the effects of the financial crisis which affected and unfortunately seems to last for an unknown period of time while continuing to shrink defense budget, some protective and corrective measures have to be taken by the armed forces and MoD. In nowadays situation a new reduction of the number of personnel will not be the optimum solution. On the one hand, the last massive retirement generated decay in the body of the remaining specialists, situation which in conjunction with new changes in military personnel status, modalities for promotion and retirement, generated a high level of de-motivation.

On the other hand, that cutting in the number of civilian and military personnel did not necessarily mean that the amount of saved money was returned to MoD for R&D, or to restart postponed programs, because the main objective of that contraction was to decrease the costs with human resources.

[21] *** http://en.wikiquote.org/wiki/Oliver_Wendell_Holmes,_Sr.

More than that, as a secondary effect, due to the necessity to fill fast some gaps in the system organizations and vacancies, an escalation of risks and stress level, and lack of motivation, has been observed among the members of both military and civilian personnel.

To face that, in those uncertain situations is better to find solutions which will be not so costly, able to give the possibility for a natural retirement and focused on the development of military organization performances and reduction of current expenses. One possible solution tacked by other armed forces in similar situation was to build-up and implement in theirs armed forces the concepts of Total Quality Management (TQM).

Basicly, TQM is an organizational philosophy which focuses on customer orientation, statistical thinking, and continuous improvement of process. That will provide a long term benefit for armed forces, but before starting implementing it we will have to eliminate some constraints arising in short time. If the armed forces agreed to do this step, then will have to agree with the process of molding its leadership and management philosophy onto the concepts of TQM.

TQM mens also a leadership and management philosophy that demands decentralization, experimentation, risktaking, and empowerment of people. For gaining the changing success we have to inoculate more than implement the TQM philosophy into the Armed Forces, because that will require a significant change in the Armed Force's current culture. [22]

The change has to be started at the level of senior leadership of the Armed Forces, and they must change the old culture and embed the new TQM culture into the Armed Forces. All of us have not only to realize, but also to understand the importance and role of culture in organizations and haw we have to build-up a stronger bridge between culture and the TQM philosophy. As a result of this changing approach we will have to face many cultural barriers against TQM arising or existing in the Armed Forces, such as the leadership itself, an overabundance of regulations, and last but not least the focus on action oriented on short term results.

The senior Armed Forces leadership will have to master these cultural barriers by: first changing their own behavior, changing the modalities of evaluation, recognition, and assignment

[22] *** Overcoming the Cultural Barriers to TQM in the Army, Colonel Ryan M. Zimmerman, Us Army War College, Carlisle Barracs, PA 17013-5050, at the address http://www.dtic.mil/dtic/tr/fulltext/u2/a251323.pdf

systems, modifying procedural mechanisms such as Armed Forces regulations, and not the least changing the attitudes and behaviors of the people in the Armed Forces. [23]

THE ORIGINS AND EVOLUTION OF THE TQM CONCEPT

The TQM parents

Talking about the term „TQM" as a terminology, perhaps the greatest contributors to the development of it was Feigenbaum and Ishikawa.

Armand Vallin Feigenbaum (born 1922) is an American quality control expert and businessman. He designed the concept of Total Quality Control, later known as Total Quality Management (TQM).

His contributions to the quality body of knowledge include: [24]

- "*Total quality control is an effective system for integrating the quality development, quality maintenance, and quality improvement efforts of the various groups in an organization so as to enable production and service at the most economical levels which allow full customer satisfaction*."
- The concept of a "hidden" plant: the idea that so much extra work is performed in correcting mistakes that there is effectively a hidden plant within any factory.
- Accountability for quality: Because quality is everybody's job, it may become nobody's job the idea that quality must be actively managed and have visibility at the highest levels of management.

The other recognised quality management gurus such as Crosby, Deming and Juran have shaped the dimensions, practices and mechanism which shaped up the concept, but it is noted that neither of these three actually use the TQM term. TQM started to be used in the mid 1980s and only became a recognised part of the quality-related language in the late 1980s.[25]

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[23] *** Planning and implementing total quality management in the Royal Australian Air Force: a multiple case study analysis, at the address http://www.acas.org.uk/index.aspx?articleid=748

[24] *** http://www.vectorstudy.com/management_gurus/armand_feigenbaum.htm

[25] *** Total Quality Management: Origins and evolution of the term, Angel R. Martínez-Lorente, University of Murcia, Spain, at the address http://repositorio.bib.upct.es/dspace/bitstream/10317/441/1/tqm2.pdf

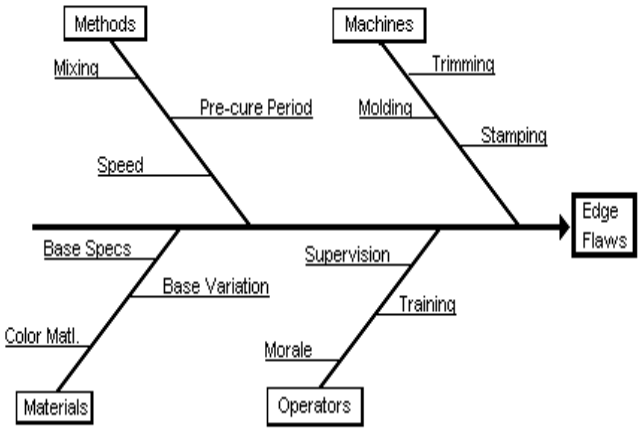

Fig.1**.** (Cause and effect diagram example – *edge flaws)*

Kaoru Ishikawa (July 13, 1915 - April 16, 1989) was one of the main "*gurus*" associated with TQM. He initiated **C**ompany-**W**ide **Q**uality **C**ontrol that started in Japan during the period 1955-1960, following the visits of Deming and Juran. Ishikawa created the cause-and-effect diagram (the Ishikawa diagram or the fishbone diagram, fig.1.[26]) that is used mainly in the analysis of industrial process, but not only.

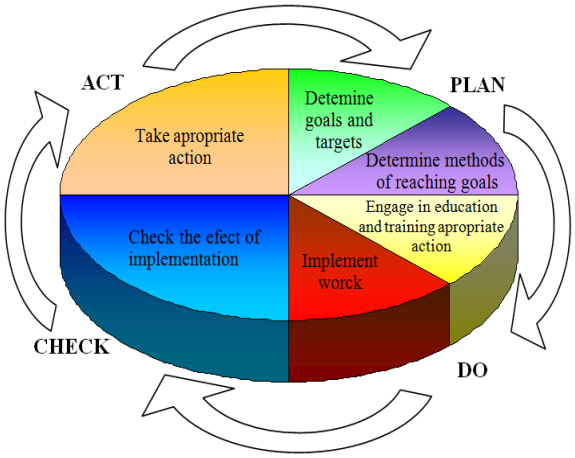

Fig.2 (Ishikawa expanded Deming's TQM principles diagram

Ishikawa expanded Deming's four steps „*Plan-Do-Check-Act*", into the following six steps, as presented in fig. 2.

[26] *** The 2012 Handbook for New Quality Managers", Ashley Osgood of IBS America, Inc., www.ibs-us.com 781.862.9002 IBS, from source http:// info.ibs-us.com /Portals/14010/ docs/quality %20101%202012 %20handbook%20for%20quality.pdf

[26] *** http://www.skymark.com/resources/leaders/ishikawa.asp

He believed in the importance of support and leadership from top level management. He continually urged top level executives to take quality control courses, knowing that without the support of the management, these programs would ultimately fail.[27]

Based on his personal opinion it would take firm commitment from the entire hierarchy of employees to reach the company's potential for success; he stressed the idea that one improvement is to also approach quality throughout a product's life cycle, not only during production. He believed strongly in creating standards, he felt that standards were like continuous quality improvement programs, and urged that they too should be constantly evaluated and changed.

He strongly believed that managers have to consistently meet consumer needs, because in his opinion standards are not the ultimate source of decision making, but customer satisfaction is.

Moreover, history presents as the father of scientific management and also the one of the first management consultants an American, mechanical engineer named **Frederick Winslow Taylor** (1856 –1915) who sought to improve industrial efficiency by using a scientific aproach.

Taylor was one of the intellectual leaders of the "Efficiency Movement" and his ideas, broadly conceived, were highly influential in the Progressive Era.

Frederick W. Taylor was the first man in recorded history who deemed work deserving of systematic observation and study.

Taylor's scientific management consisted of four principles: [28]

- *Replace rule-of-thumb work methods with methods based on a scientific study of the tasks*.
- *Scientifically select, train, and develop each employee rather than passively leaving them to train themselves*.
- *Provide "Detailed instruction and supervision of each worker in the performance of that worker's discrete task" (Montgomery 1997: 250)*.
- *Divide work nearly equally between managers and workers, so that the managers apply scientific management principles to planning the work and the workers actually perform the tasks.*

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[28] *** http://en.wikipedia.org/wiki/Frederick_Winslow_Taylor

Edwards Deming took a step forward understanding that quality is determined by the system of work that determines how work is performed not by the the capabilities of the workers. If the workers have attained process stability (removal of all the variations that could occur within the work process) and output is still unacceptable, then a redesign of the system is warranted.[29] He implemented the cicle **PDCA – PLAN, DO, CHEC, ACT**.

Joseph M. Juran, an investigator at the Hawthorne Works experiments, just as Deming, started from Shewhart's work. He understood that the system problems could be addressed through **planning**, **control** and **improvement**, the fundamental three managerial processes.

Philip B. Crosby in his turn came with another vision, which made him advocate the "**zero-defects**" program adopted by the US federal government defining quality as "**conformance to requirements**".[30]

The „*parents*" of TQM process Juran, Deming, and Crosby, Feigenbaum, Ishikawa developed the *participatory management,* aproach.

All of them established in diferent ways that the organization's primary goal is to realize internal and external customer satisfaction based on professional quality management, employee participation and recognition, management participation and attitude.

Quality and TQM definitions.

For a good understanding of what Quality and Total Quality Management means, we have to define those terms, previously discussing about importance of TQM implementation in the armed forces and its implementation benefits. For that we will use the definitions provided for TQM by its forefathers.

"*Quality control consists of developing, designing, producing, marketing, and servicing products and services with optimum cost-effectiveness and usefulness, which customers will purchase with satisfaction. To achieve these aims, all the separate parts of a company must work together*" (**Ishikawa**, 1990).

[29] *** http://www-caes.mit.edu/products/deming/home.html.
[30] ***http://www.eskimo.com/~mighetto/lstqm.htm

„*Quality is total composite product (goods and services) characteristics, through which the product in use will meet the needs and expectations of the customers*". (**Feigenbaum** 1983)

On his showing, „*concept of quality must start with identification of customer quality requirements and must end only when the finished product is placed into the hands of the customer who remains satisfied through various stages of relationship with the seller*"[31]

To **Crosby**, quality means "*conformance to requirements*" (Crosby, 1979).

In his opinion „*Quality*" must be defined in measurable and clearly stated terms to help the organization take action based on tangible targets, rather than on bunch, experience, or opinions.

„*Management*" must measure quality by continually tracking the cost of doing things wrong

Crosby refers to this must understand the importance of consumer research, as the "*price of nonconformance*" (Crosby, 1979). To make understandable that idea, Crosby developed the Cost of Quality – (***C**ost of **Q**uality = **P**rice of **C**onformum + **P**rice of **N**otn**c**onformance*).[32]

CQ=PC+PNc.	(form. 1.)

In that formula PC represents the cost of getting things done right at the beginning, and PNc offer to manger information on the wasted cost, and a valuable indicator of progress/regress depends if the organization improves or not.

Deming does not define quality in a single phrase. He states that the quality of any product or service can only be defined by the customer. To meet or exceed the customer's needs, managers must understand the importance of consumer research, of statistical methods to processes.

Definitions extracted from his writings by Lowe & Mazzeo reflect this emphasis on quantitative methods, the application of which results in products having:

(1) *A predictable degree of uniformity resulting from reduced variability*,

(2) *Lower cost*, and

(3) *Suitability for the market* (Lowe & Mazzeo, 1986).

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[31] *** http://www.ceecis.org/iodine/08_production/TQM/TQM%20foof%20presentation.pdf

[32] ***Three Experts on Quality Management: Philip B. Crosby, W. Edwards Deming, Joseph M. Juran, *J. Gerald Suarez,* Department of the Navy Under Secretary of the Navy Total Quality Leadership Office, from source http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA256399

Deming in his righting „*Out of the Crisis",* was cautious in defining quality and characterizes the difficulty of achieving it. "*The difficulty in defining quality is to translate future needs of the user into measurable characteristics, so that a product can be designed and turned out to give satisfaction at a price that the user will pay*". (Deming, 1986, p. 169)[33].

Juran's definition of quality reflects his strong orientation to meeting customer's expectations. Anyone affected by the product is considered a customer, according to Juran. This group includes those who deal with the product during its developmental stages, the *internal customers,* and those who deal with the finished product t he *external customers.*

Juran defines quality as "*fitness for use*." He stresses a balance between product *features* and products free from *deficiencies.*

*„The word "***product***" refers to the* **output of any process***, and that includes goods as well as services".* (Juran & Gryna, 1988). This is a very important statement for my paper, being a fist bridge pillar between TQM theory and considerations on TQM implementation into the armed forces.

The second element of Juran's definition of quality addresses **products free from deficiencies** (e.g., errors in invoices, factory scrap, late deliveries).

According to Juran, these failures make trouble for the customers and, as a consequence, they become dissatisfied.

Now we can assume that „*Total Quality Management is a management approach centered on quality, based on the participation of an organization's people and aiming at long term success*". (ISO 8402:1994).

In other words, TQM is a philosophy for managing an organization in a way which enables it to meet stakeholder needs and expectations efficiently and effectively, without compromising ethical values. This is achieved through customer satisfaction and benefits all members of the organization and society.[34]

TQM is a way of thinking about goals, organization, processes and people to ensure that the right things are done right first time. This thought process can change attitudes, behavior and hence results for the better.

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[33] ***Three Experts on Quality Management: Philip B. Crosby, W. Edwards Deming, Joseph M. Juran, *J. Gerald Suarez,* Department of the Navy Under Secretary of the Navy Total Quality Leadership Office, from source http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA256399

[34] *** http://www.thecqi.org/Knowledge-Hub/Resources/Factsheets/Total-quality-management/

TQM excepting ISO 9000 approach, which may be limited to the processes producing deliverable products, is applicable to the whole organization. TQM applies to every activity in the organization, covering all aspects such as ethics, attitude and culture.

TQM Principles

So, we have seen different approaches and definition of Quality and TQM, but was enough to understand what is TQM?

Starting from those definitions we identified three main focused aspects: "Customer orientation", "Statistical thinking", and "Continuous improvement of process".

Analyzing separately those elements I will try to build the basis of TQM philosophy transfer from is civilian field approach and orientation through the all aspects covering the military organization.

"**Customer orientation**" – is referring at the focus at two faces of the same coin, taking in consideration both internal and external customers. *Internal customers* in civilian organization include its employees; we can include as „internal customers" in the armed forces everyone in the organization, means civilian and military personnel including their families as well. *External customers* include those who provide or receive goods, services, or support to or receiving from the organization, having same understanding for both civilian and armed frameworks. In addition of that, external customers for the armed forces must be assumed also civilian country citizens, for whom armed forces have to provide trusted and an overall protection against every kind of classic and asymmetric forms of aggression directed or threaten them. Other external customers for armed forces are all representing its strategic and based on agreed treaty partners. Last but not least we have to introduce in that category also all ONGs, host nation, health and care organization, and such like, which are interacting with military organization.

Therefore, "*Customer orientation*" means focus on customers, in order to meeting the needs and expectations of those upon whom the organization depends most, and it is the driving force of TQM philosophy. For being able to achieve a customer orientation in an organization, a *quality culture* must be created, and that must be orientated to define and support the TQM philosophy.[35]

[35] *** Overcoming the Cultural Barriers to TQM in the Army, *Colonel Ryan M. Zimmerman*, **U.S.** Army War College **NTIS** CRA&I Carlisle Barracks, Pennsylvania **17013,** from source: http://www.dtic.mil/dtic/tr/fulltext/u2/a251323.pdf

Going forward to the next element, the "**Statistical thinking**" I can assume it, as a scientific package of dedicated tools giving to the armed forces the possibility to execute the measurement of all aspects of work process to determine how these processes can be improved or what elements of a process might need improvement. For assurance a "**Continuous improvement of process**" we have to assume that process demands a long-term focus and perspective which is a never ending, and need a continuous monitoring and evaluation in order to understand what we do, why we do it, and how we will do it.

A better understanding of the evolution and TQM ideology development in close linkage of different approaches of the TQM mentors and followers should be offered by the content of Table. 1. The table is containing main developed dimension of TQM and some approaches of it's, from the early beginning to almost nowadays.

Table 1. (Comparisons between different philosophical approaches to TQM main dimension)

DIMENSIONS	DESCRIPTION	DEMING JURAN ISHIKAWA FEIGENBAUM CROSBY	DALE (1994) SARAPH (1989) FLYNN (1994) AHIRE (1996)
		Differences between the most important „gurus" approaches to quality management and the actually widely accepted vision of TQM	**Total Quality Management** approaches
TOP MANAGEMENT SUPPORT	- TM commitment is one of the major determinants of successful TQM implementation. - TM has to be the first in applying and stimulating the TQM approach, and managers have to accept the maximum responsibility for the product and service offering. - has to provide the necessary leadership to motivate all employees	No important differences No important differences No important differences No important differences No important differences	Commitment and leadership of the chief executive officer; Planning and organisation Role of divisional top management and quality policy Top management support Top management commitment
CUSTOMER RELATIONSHIP	The needs of customers and consumers and their satisfaction have always to be in the mind of all employees. It is necessary to identify these needs and their level of satisfaction.	No important differences - "*For important purchases it is well to use multiple sources of supply*" (Juran, 1974). - The number of suppliers has to be two. Only one supplier can be dangerous. - the importance of long term relationships and reduction in the number of suppliers is not considered No important differences	Culture change Customer involvement Customer focus
SUPPLIER RELATIONSHIP	Quality is a more important factor than price in selecting suppliers. Long-term relationship with suppliers has to be established and the company has to collaborate with suppliers to help improve the quality of products / services.	Not considered Not considered Not considered Not considered Not considered	Culture change Supplier quality management Supplier involvement Supplier quality management
WORKFORCE MANAGEMENT	Workforce management has to be guided by the principles of: training, empowerment of workers and teamwork. Adequate plans of personnel recruitment	Importance of training and improvement are basically a managers' work.	Culture change; Education and training; Teamwork Training; Employee relations

DIMENSIONS	DESCRIPTION	DEMING JURAN ISHIKAWA FEIGENBAUM CROSBY	DALE (1994) SARAPH (1989) FLYNN (1994) AHIRE (1996)
		Differences between the most important „gurus" approaches to quality management and the actually widely accepted vision of TQM	**Total Quality Management** approaches
	and training have to be implemented and workers need the necessary skills to participate in the improvement process.	No important differences The importance of quality circles. Empowerment and teamwork are scarcely considered. He does not consider empowerment	Workforce management Employee empowerment; Employee training
EMPLOYEE ATTITUDES AND BEHAVIOUR	Companies have to stimulate positive work attitudes, including loyalty to the organization, pride in work, a focus on common organizational goals and the ability to work cross-functionally.	Motivational campaigns are useless. Motivation does not assure a zero defects production (Juran, 1974, p. 18-8). No important differences. No important differences Not considered	Involvement Quality improvement rewards Employee involvement
PRODUCT DESIGN PROCESS	All departments have to participate in the design process and work together to achieve a design that satisfies the requirements of the customer, according to the technical, technological and cost constraints of the company.	No important differences No important differences No important differences No important differences No important differences	Product/service design Product design Design quality management
PROCESS FLOW MANAGEMENT	Housekeeping along the lines of the 5S concept. Statistical and no statistical improvement instruments should be applied as appropriate. Processes need to be mistake proof. Self inspection undertaken using clear work instructions. The process has to be maintained under statistical control.	He focuses on the need of maintain the process under statistical control. He criticises the zero defects approach and sampling inspection. No important differences No important differences. No important differences He focuses on the need of achievement of zero defects through prevention.	Use of tools and techniques Process management / operating procedures Process management SPC usage
QUALITY DATA AND REPORTING	Quality information has to be readily available and the information should be part of the visible management system. Records about quality indicators have to be kept, including scrap, rework and cost of quality.	Not considered No important differences No important differences. Not considered No important differences	Measurement and feedback Quality data and reporting Feedback Internal quality information usage
ROLE OF THE QUALITY DEPARTMENT	Quality department need access to top management and autonomy and also has to combine the work of other departments.	No important differences No important differences Involvement of all employees in studying and promoting quality control. It has not to be an exclusive domain of specialists. He does not make any specific comment about quality departments. The need to have a management function whose only area of operation is in the quality control jobs. Quality is everybody's job, it may become nobody's job is this department does not exist. No important differences	Role of the quality department
BENCHMARKING	A benchmarking policy for key processes should be in place. Benchmarking is a continuing process of measuring products, services, and practices against your strongest competitors. More simply stated, it means using the best companies as the yardstick against which your company measures itself. If your	Not considered Not considered Not considered. Not considered Not considered	Benchmarking

DIMENSIONS	DESCRIPTION	DEMING JURAN ISHIKAWA FEIGENBAUM CROSBY	DALE (1994) SARAPH (1989) FLYNN (1994) AHIRE (1996)
		Differences between the most important „gurus" approaches to quality management and the actually widely accepted vision of TQM	**Total Quality Management** approaches
	company comes up short, than improvements must be made to ensure that your products are just as high in quality as those of your competitor.		

*Based on Angel R. Martínez-Lorente, Frank Dewhurst and Barrie G. Dale analysis, published in, *Total Quality Management:Origins and Evolution of the Term*, from source: http://repositorio.bib.upct.Es/dspace/bitstream /10317/441/1/tqm2.pdf

All those elements: Customer orientation, Statistical thinking, and Continuous improvement of process, related to presented TQM dimension approach are part of, and represent the philosophy based on which a organization shared values and beliefs of the culture representing it.

We are talking about „*Culture of the Organization",* one of the key elements staying at the base of TQM implementation and development. Also is true that at the implementation TQM process initial phase it should be also a braking trigger for applying the cultural or organization change.

Approaching the culture of the organization, referring at the cultural changes which will be make in order to implement TQM into the armed forces organization we have to bear in our mind the fact that is important for pushing forward this cultural elements to empower the military and civilian personnel, (respecting the military hierarchy, and job related responsibilities), to take risks, be innovative, and be held individually accountable for their role in achieving quality. More of that, TQM is getting things done through people by decentralizing, tolerating experimentation, risk taking, empowering at lower echelons, and both giving and hence getting the support and trust of people. **TQM is** in fact **a leadership** and **a management philosophy** that effectively **links people within process**.[36] Having the core and well fitted personnel empowered our feedback which will let us to know when something is broken, not efficient, or just plain dumb, very fast, because the personnel are the first „watch keepers", who will observe and suddenly report the existing, incoming or foreseen unconformities. Based on Deming opinion almost all defects and waste are caused by system failures, not from or by

[36] *** Overcoming the Cultural Barriers to TQM in the Army, *Colonel Ryan M. Zimmerman*, **U.S.** Army War College **NTIS** CRA&I Carlisle Barracks, Pennsylvania **17013,** from source: http://www.dtic.mil/dtic/tr/fulltext/u2/a251323.pdf

people failures. He asserts also that only management is who can improve the system. „ ...***Costly confusion***. *Confusion between common causes and special causes leads to frustration of everyone, and leads to greater variability and to higher costs, exact contrary to what is needed. I should estimate in my experience most troubles and most possibilities for improvement add to proportion something like this: 94% belong to the system (responsibility of management) and 6% special*". (William Edwards Deming, Out of the Crisis**,** page 315**)**

To conclude, we have discussed till now about the TQM Pre-requisites, which are: Leadership from the top; Effective management of the cost of quality; Focus on customer satisfaction; Continuous improvement in all aspects of all operations; complete involvement of everyone in quality improvement. In addition other three principle of quality management are: Factual approach to decision making - effective decisions are based on the logical and intuitive analysis of data, and Information, mutually beneficial supplier relationships, and processes approach.

MAIN ASPECTS PRECEDING TQM IMPLEMENTATION

From principles to practices

To implement TQM in an organization the management must adopt practices which promote continuous improvement by keeping clear communication channels with staff, and stimulating innovative ideas from all levels within the organization.[37]

Analyzing the content of table no.1, we should affirm that all TQM philosophies offer quite a common vision of base elements to gain and provide quality as: realizing teamwork, using proactive philosophies of management and orientation to a continuous process improvement, based on continual evaluation of the effectiveness of the total quality system.

For emphasize the evaluation importance, I will start from the basic but important elements of total quality management as expounded by the American Society for Quality Control, are: policy, planning, and administration; product design and design change control; control of purchased material; production quality control; user contact and field performance; corrective action; and employee selection, training, and motivation.[38]

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[37] Ibidem [3];

[38] *** The 2012 Handbook for New Quality Managers, *IBS America, Inc. www.ibs-us.com 781.862.9002,* from source http://info.ibs-us.com/Portals/14010/docs/The%202012%20Handbook%20for%20Quality.pdf

Part of TQM principle, "*Statistical theory has changed practice in almost everything. Statistical techniques, in their ability to aid the discovery of causes, are creating a science of management and a science of administration.*" (Deming`s comment while accepting the ASQ's Shewhart Medal in 1955)

That direct as to his famous „*14 Points for Management*":[39]

Create constancy of purpose for improvement of product and service.

In the armed forces that should be assumed as a modality to inspire the personnel to contribute to the preservation and development of competitive approach at all spectrums of assumed area of responsibility in order to conserve and increase organization recognition. That have to remind about the importance of stability in jobs and new opportunities which may come up in later stages, if they work will be done efficiently.

Adopt the new philosophy. We have to face daily a lot of inputs which came from a quite incontrollable environment, giving open flour to some demands aroused from part of armed forces „*customers*".

For armed forces „*the competition in the market*" is in close relationship with risks assessment analysis and assumed threats. Due to theirs rapid nowadays rate of evolution we have to accept new philosophies according to the „*market trends",* and technology revolutions, (or technology which we can to afford, preparing ourselves in the same time for future results of a redeveloped R&D).

Cease dependence on mass inspection. Instead of controlling and analyze the execution of an order or mission qualitative result, or quality of a law implementation or new regulation at the end of the execution process, infuse quality at the beginning itself with execution and implementation quality control, as this will ensure no raw effects or results are wasted for the lack of quality.

End the practice of awarding business on price tag alone. Instead, minimize total cost - move towards a single supplier for any item, on trust.

Constantly and forever improve the system of production (*forces readiness and preparedness to act**,** focus on contingency situation anchored in present and foreseen reality*), **and service (***all means from services, supply, support and gathered information, directed to sustain a high level of forces operational capability*). Enterprise systems and services must keep

[39] *** Ibidem [18]

growing indefinitely in order to catch up with the competitive opponents (*the market for the armed forces*), and thus constantly decrease costs.

Institute modern methods for training focused on the job. Trained personnel has more productivity and quality than an untrained one, so giving training sessions will drastically improve the quality of the person and directly it helps in better product quality performance and customer-focused organization. The armed forces have to previously identifying the main courses and training programs which are not only needed for develop the military system itself but also needed by the personnel in order to be able to increase on the one hand the quality of daily working result, and at the other hand, the ability to effective and efficient theirs objective fulfillment, in conjunction of organization main goals.

Institute modern methods of supervision (develop the leadership). A company can obtain sensible growth if potential leaders are correct identified, promoted and encouraged.

Drive out fear. Creating a fearful impression in the personnel does not give more quality and productivity to work. If a person is not working willingly with satisfaction then he can never do a work perfectly even if he has the intention to be perfect in conscious mind, so driving out fear is essential. So reducing the level of stress generated by to much lack of thrust, control and tensioned relation will have as effect that everyone may work effectively for the company, (at their level on in the military framework).

Break down barriers between staff areas (departments). The workers in design, sales, and production, (for example at the operational level in military field: human resources, operation, logistics, and all other departments), must work together to face problems and resolve them, which takes the company to better quality assurance management and also other profit with better planning.

Eliminate numerical goals for the work force. Slogans or exhortations call for more quantity in production than focusing on quality control in manufacturing, which will severely damage the quality management process. Employees should have a calm and quiet quality atmosphere in the company. Creating good adversarial relationships (challenge), will substitute leadership.

Eliminate work standards and numerical quotas. This focuses on quantity rather than quality of product. Establishing realistic goals and objectives, and focusing personnel to assume by self quality of work, the result will be a qualitative outcome.

Remove barriers that hinder the hourly worker. Supervisor responsibility must be focused on quality, not numbers (quantity). Abolish annual or merit rating completely. Generally, maintaining the rating of personnel, will give a lack of motivation to the personnel who want to generate qualitative work, but consumed time more than the workers whom doing jobs just to finish in time, without any care on quality of it.

Institute a vigorous program of education and training. A person must grow after joining a company, and letting them learn new technology and techniques will increase employee longevity. Develop a personnel transparent career evolution, a promotion system based on level of skills accumulation, fulfillment the job`s requests, and the career manager jobs, at the level of all branches HQ, one for each category of personnel from the armed forces.

Create a situation in top management that will push every day on the above points. Just like products and services, every employee in a company must work to accomplish the transformation. Bear in mind: „*Put everyone in the company to work to accomplish the transformation. The transformation is everybody's job". (Deming, 1986).*

TQM tools and techniques

„*The use of statistical management techniques provides a method of timely, direct communication with a process and allows an accurate assessment of productivity and quality improvements*". (Siegel, 1982)

Implementation of TQM into armed forces needs to have some tools and related techniques which can be used in order to provide a measurement of processes in the organization and their evolution.

A successful implementation of TQM is based on possibility to use a statistical process control, who is giving it the possibility for success development. My intention is to have a briefly approach at those tools, without realize a case study or a deeply analysis of their in different parts of TQM. So, those tools are as following:

Figure 3. Reprezenting a **Cause & Effect**

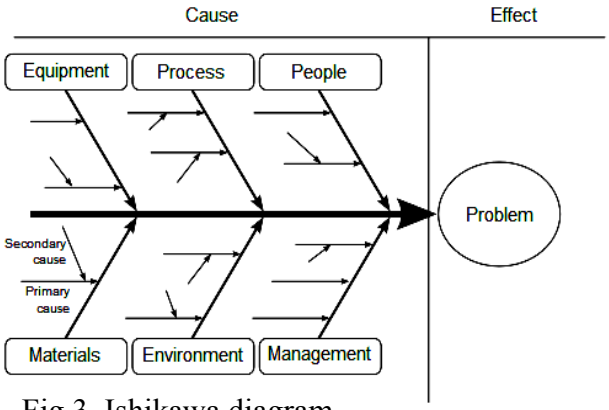
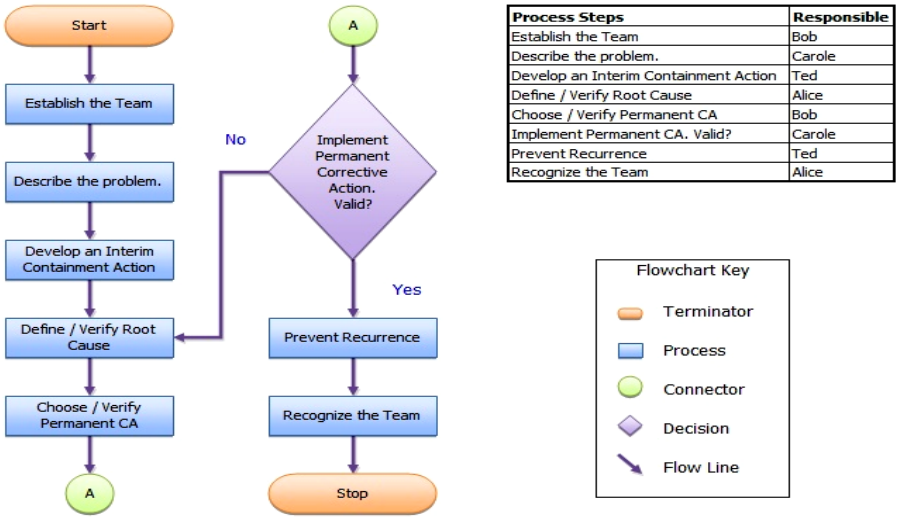


Fig.3**.** Ishikawa diagram
Source: http://en.wikipedia.org/wiki/Ishikawa_diagram

Diagram, whjch is showing factors of Equipment, Process, People, Materials, Environment and Management, all affecting the overall problem. Smaller arrows connect the sub-causes to major causes.

Another basic statistical chart is the **Flow Chart**, one of its format is reprezented in **Figure 4**. It is a useful technique destinated to identify and clarify the logical steps of a process.



A chart

Fig.4. Flow Chart
Source: http://www.lisisoft.com/tools/flowchart.html

which is a dedicated way to address the causes that have the greatest impact on the effect is reprezented in Figure 5. And is called **The Pareto chart.**

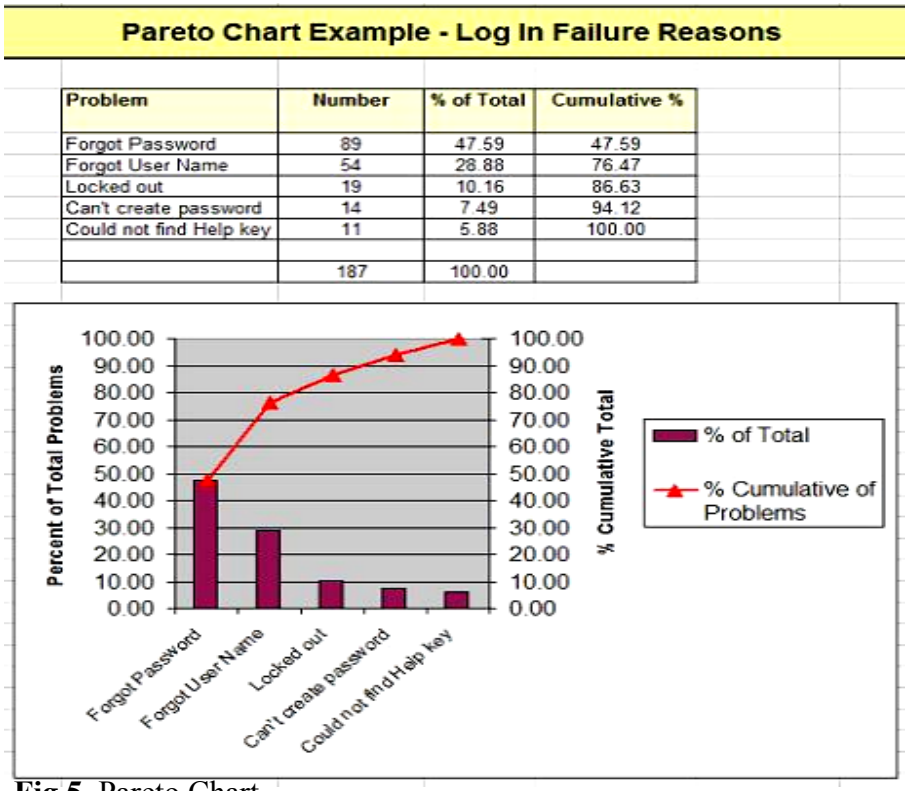


Fig.5. Pareto Chart
Source: http://www.rapid-business-intelligence-success.com/pareto-chart.html

In order to displays how our process data changes over time, and can reveal evidence of special cause variation that creates recognizable patterns, we have to use a **Run Chart,** represented in **Figure 6.**

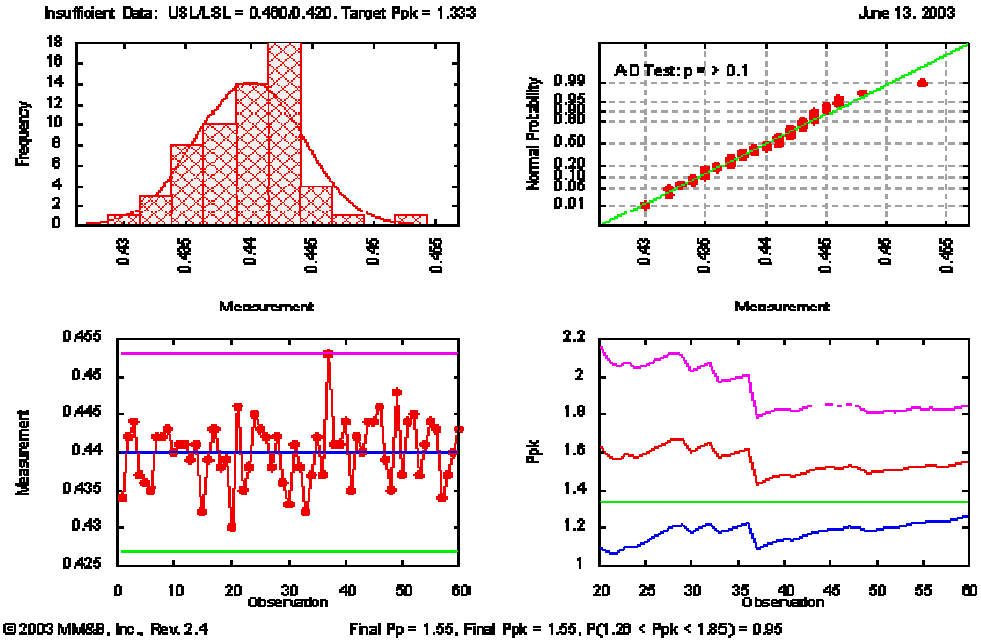


Fig.6. Pareto Chart Source http://www.mmbstatistical.com/Software/PpkExamples.html

Histogram. Histograms are used to display the frequency of some event compared to other events. An example of a histrogram is presented in **Figure 7.**

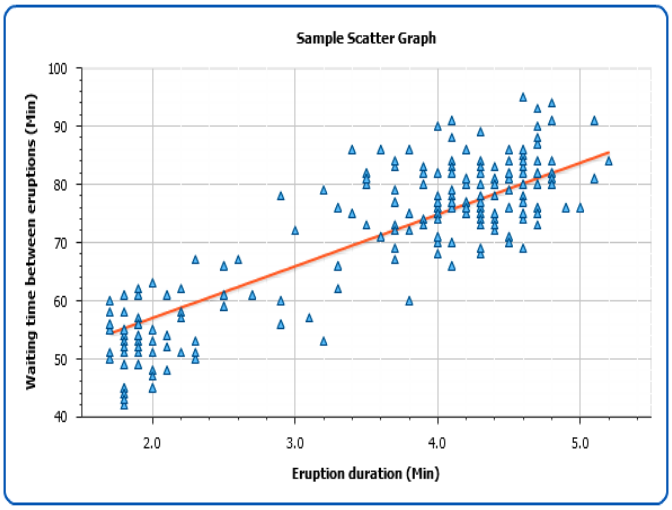


Fig.8. Scatter Chart or Diagram
http://www.anychart.com/products/anychart/buy/

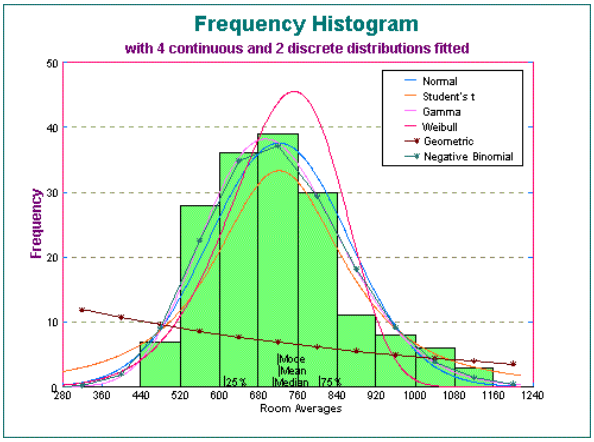


Fig.7. Model of Histogram
Source http://www.unistat.com/531.html

Another diagram is the **Scatter Chart** or **Diagram,** reprezented in **Figure 8.** It has two value axes, showing one set of numerical data along the horizontal axis (x-axis) and another along the vertical axis (y-axis). This chart combines these values into single data points and displays them in uneven intervals, or clusters. Scatter charts are commonly used for displaying and comparing numeric values, such as scientific, statistical, and engineering data.

Control Charts are often used as part of process control systems. They were developed by W. A. Shewhart in 1924 while working for Bell Telephone Laboratories. Control Charts consists of a center line and two boundary lines placed above and below the center line (the control limits). Control limits are based on the variability within the data. Values are plotted to determine the state of the process. Control Charts tell you how the process is performing – they do not contain Specification Limits.[40]

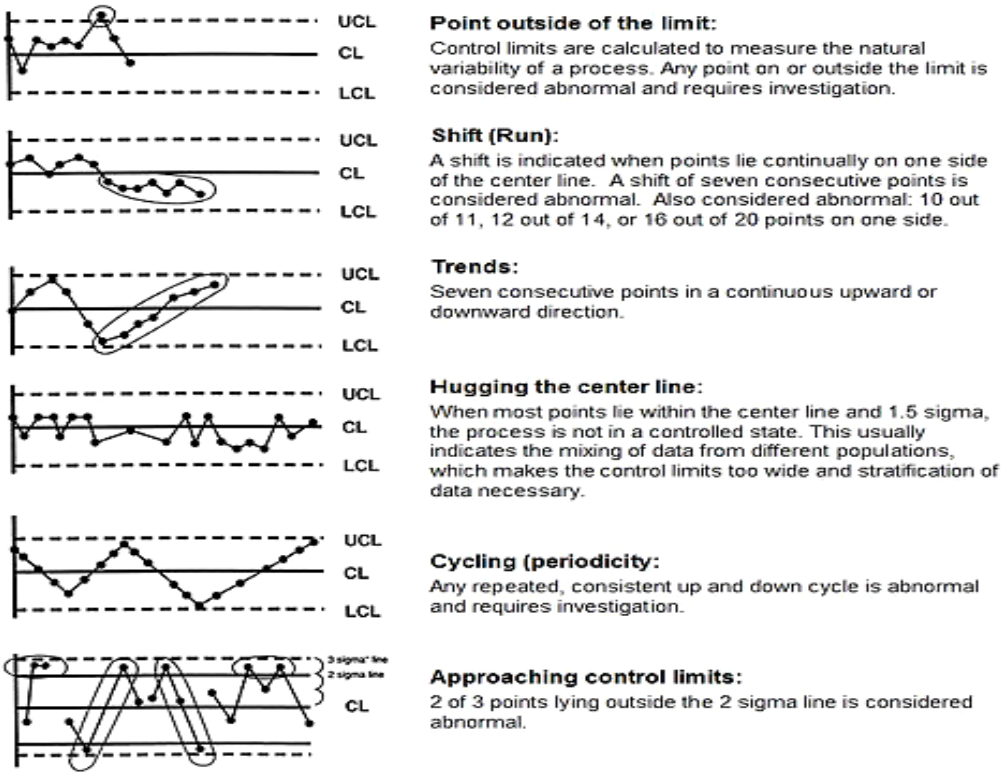


Fig.9. The Control chart and its model of interpretation
http://www.shmula.com/statistical-process-control-why-you-should-care/241/

[40] *** Statistical Process Control Visualization, Pete Abilla on November 7, 2006, from source: http://www.shmula.com /statistical– process–control–why–you–should– care/241/

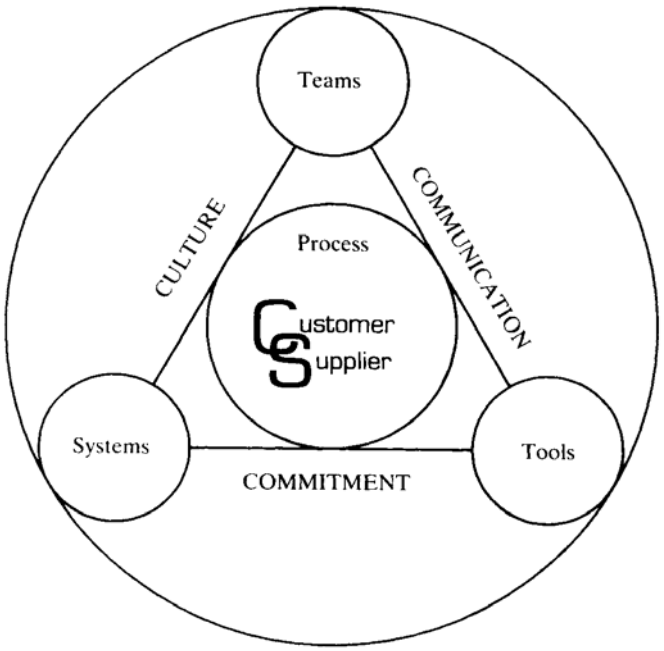


Fig.10. Total quality management model, by source:
Total Quality management text with cases, *John S Oakland,,ISBN 0750621249*

The main role of statistical tools as charts and diagrams used in TQM is not only the support offered for measurement the quality, but more than that it are showing the evolution or analysis results, and not only let the flour to the staff management to analyze and evaluate situational evolution, but also is giving a sort of motivation for the personnel, and teamwork, who have in this manner the possibility to visualize depicted the quality of their efforts. In Fig. 10, representing a schematic TQM model, in which are represented all the three prerequisite management elements: teamwork, a good quality management system customer focused, and a SPC – Statistical Process Control, as a TQM specific tools.

Cultural barriers to TQM in the Armed Forces

The main brakes in implementation of TQM are represented by old culture of the organization, and the collateral aspects related to it. We can`t implement TQM in an organization before understand which are the specific cultural barriers and find the ways for solve them.

Some of the most serious barriers that management in general, potentially faces within an organization, are identified by Deming, and are named „*Seven Deadly Diseases*", in many related publications. Those are as following:

1. Lack of constancy of purpose to plan product and service that will have a market and keep the company in business, and provide jobs.

2. Emphasis on short-term profits.

3. Employing personal review systems, or evaluation of performance, merit rating, annual review, etc. for people in management, the effects of which are devastating. Instead, managers should understand that the best way to develop cooperation is by focusing on the nature of work environment, not monetary rewards.

4. Mobility of Management: Job-Hopping

Managers who have an eye on the next promotion want results - now - to gain the next rung on the ladder.

5. Use of visible figures only for management, with little or no consideration of figures that are unknown or unknowable.

6. Excessive Medical Costs.

7. Excessive costs of liability.

Starting from adding those aspects to very broadly seen cultural barriers my intention is to show you a personal opinion about some of in the armed forces cultural barriers against to TQM philosophy implementation.

Because is supposed that organizations culture is primarily changed by senior leadership, the

Throughout the history of the armed forces, their basic purposes (to deter or to beat back a potential enemy, in order to protect the national territory or issued AOR from an aggression), has never changed.

An armed forces representative culture element is the army ethic which is based on some well known professional values of duty, as: integrity, loyalty, and selfless service, strengthened by the soldier values of commitment, competence, candor, and courage. Those culture elements are directing the behavior aspects of the in armed forces personnel not only in the military live, but also in civilian ambit, or in private live. The military ethic was a coagulating agent which sticks together armed forces personnel in the time of conflict or crises. Over the time external

and internal inputs have shaped the armed forces culture which was developed and sustained by traditions, ceremonies, daily work rituals, leadership styles, and crises responses in addition of its ethic.

In our struggle to find wais to implement TQM in armed forces, arise the importance and necessity to make the cultural changes, at the level of organization, starting at the level of senior leadership. Even though **leaders** are playing one most important role in changing culture we have to take into consideration at the same time, the fact that they should represent in some circumstances real cultural barriers to a TQM leadership philosophy implementation.

One another barrier against fundaments of TQM philosophy should be represented by need for exercising the control at one level very close to obsession. No one commander will agree easily to overcome their **fear to lose the control** over the demands of the external environment, without a good understanding of the difference between control and analysis, evaluation and empowered/delegating certain responsibilities to under command personnel, and risks assuming.

Some senior leadership should have a dysfunctional behavior reflected in an authoritarian style of command and control which neither accept employee empowerment, and risk taking, nor innovation and continuous process improvement. All of these are TQM requests, and as a result such a **dysfunctional leadership behaviors** of **seniors** will certain act as strong barrier.

A **reduced tolerance for risk taking** at the senior leadership level will represents also a strong barrier to implementation of TQM into the armed forces. Despite of existing regulation for risk analysis and risk taking, some gaps between the doctrine and execution are arising often. That aspects being reflected not only in this situation, but also at the level of evaluation, promotion, and recognition, because sometime, are differences in what is executed and what is statutory in armed forces doctrine, rules and regulations.

This **gap between what leaders say and what they do** is also a barrier to the TQM philosophy.

Another cultural barrier to TQM which could be assumed as a biggest enemy's for its implementation is the **priority of the quick-fix** (*a senior leadership's reaction to crises*) **over the long-term solution** or improvement of process.

The success of TQM will in a large part be based on reinforcement of the TQM philosophy every day, even in time of crisis. Even in crises we must never forget that "*this too*

shall pass" and we must be prepared to continue to live with what in large measure we create on the other side of the crisis. [41]

No action needed or lack of interest to find counteraction measures regarding challenges of rapidly shrinking armed forces, and uncertain domestic, political, and world situation nowadays and future possible evolution, will not give the needed room to TQM in the armed forces. To face this situation maybe a solution should be to focus on long term commitment to TQM, approach which is working successfully for other partner armed forces.

Another major cultural barrier to TQM is the armed forces should be the **level of bureaucracy**. It is reflected mainly by inner services provided, R&D and acquisition planning development, PPBES budgeting. Also the overabundance of regulations, guidance, rules, policies, and procedures which are too many, too brushy, and many time stand alone, without any correlation among them, should be others bureaucracy level indicators.

The **hierarchical nature of the armed forces** can also be a cultural barrier to TQM.

Blind obedience could serve as another cultural barrier to TQM.

If the **awards and recognition** programs of the armed forces are tending to **reward action oriented accomplishments** should become also a barrier to TOM.

TQM philosophy will not be implemented in the armed forces without a long term focus on improving the processes which are already in place. The focus on **short-term results** and **fixes** also creates other cultural barriers to risk taking and innovation.

The **action oriented**, (just do something, but don't make a mistake), **numerical goals culture** (no one cares how you accomplish your goals or what the long-term ramifications are for the organization), of the Army is a significant barrier to the TQM philosophy.

Maximum short term effort normally is directed toward **the "clean up" of deficiencies**, and cleaning up findings on inspections is a good example of another barrier to the TQM philosophy.

That is happening because if you are not doing any struggle to analyze and fix the process which caused the deficiencies in the first place, after a while, the same deficiencies probably will happen again.

If so often, especially officers, doesn`t like to have their opinions challenged and to be forced to agree other different opinion, tacking the disagreement as form of disrespect, they will

[41] *** ibidem [2]

transmit the signal that **showing candor is not a virtue**. That is a barrier for TQM because they will a step aside for all approaches which will request personal opinion, express of candor and commitment, and mutual involvement in problems solving.

Last but not least barrier to TQM philosophy implementation in the armed forces which I inserted in this paper is referring at the situation in which dedicated and skilled personnel is working hard to develop programs within the armed forces, but fail to finalize them due to external causes such as lack of resources. Over time will they maybe will not be happy to start new programs. If those personnel are not well briefed about what really represent TQM, they will look at the implementation of TQM as well as to another program whit uncertain ending, and will argue against its implementation.

CONSIDERATION ON TQM IMPLEMENTATION INTO ARMED FORCES

TQM characteristics and steps of implementation

We have to bear in our mind when start to analyze necessity and utility of TQM implementation, those three main characteristics necessary for TQM to succeed within an organization, as identified by Joseph Jablonski, which are as following : [42]

- **Participative management**;
  - realize the intimate involvement of all members of a company in the management process;
  - de-emphasizing traditional top-down management methods;
  - managers set policies and make key decisions only with the input and guidance of the subordinates;
  - subordinates will have to implement and adhere to the directives;
  - improves upper management's grasp of operations;
  - is an important motivator for workers who begin to feel like they have control and ownership of the process in which they participate
- **Continuous process improvement**
  - draw the recognition of small, incremental gains toward the goal of total quality;
  - maintain small, sustainable improvements over a long term;
  - necessitates a long-term approach by managers;

[42] *** Implementing TQM, *Jablonski, Joseph R.*, Albuquerque: Technical Management Consortium, 2nd ed, 1992 .

- motivate the willingness to invest in the present for benefits that manifest themselves in the future;
- workers and management develop an appreciation for, and confidence in, TQM over a period of time

- **The utilization of teams**

- involves the organization of cross-functional teams within the company;
- the multidisciplinary team approach helps workers to share knowledge;
- help personnel to identify problems and opportunities
- derive a comprehensive understanding of personnel/workers role in the over-all process;
- align personnel work goals with those of the organization

Modalities for TQM implementation into the armed forces

The TQM cannot be implement in the armed forces if senior ledership (management), perceives it as a quick fix, or a tool to improve worker performance, but it can be adopted only if executive management has seen the error of its ways, opened its mind and agree to adopt the TQM philosophy. The benefits of adopting the TQM philosophy should:

- make armed forces more competitive
- establish a new culture which will enable growth and longevity
- provide a working environment in which everyone can succeed
- reduce stress, waste and friction
- build teams, partnerships and co-operation

Before adopting TQM, we have to strength the formal management system in place, in order to make it able to facilitate and sustains forced change in culture, processes and practice. As a long term effect, such a system will provide many of the facts on which to base change and will also enable changes to be implemented more systematically and permanently.[43]

In order to focus all efforts in any TQM initiative and to obtain permanent benefits, the team who will initiate the change must answer some fundamental questions: what is its purpose regarding the necessity of change, and expected outcome; what its vision for the overall business is; what is its mission; what are the factors upon which achievement of its mission depends; what are its values; what are its goals and objectives?

[43] *** http://www.thecqi.org/Knowledge-Hub/Resources/Factsheets/Total-quality-management/

We have to take initially all this TQM philosophical approach a process, focused on a quality chains which it is linked at the very end to the customers (internal & external) request and expectations requests. Fig.11. is training to figure out this approach..

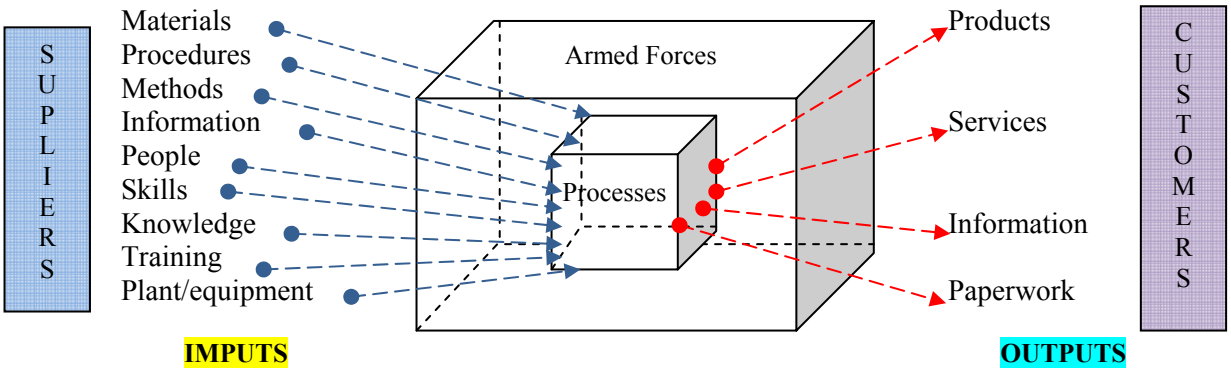


Fig.11. Describtion of a process, based on aproach of:
Total Quality management text with cases, *John S Oakland,,pag 12.*

In order to be more specific, I will present in the next table some approaches referring at phases of an quality orientated process flows

	1st phase	*2nd phase*	*3rd phase*	*4th phase*	*5th phase*	*6th phase*
Edwards and Hodgson [7]	providing the vision	management action	increasing the participation	business alignment		
Ghobadian et al [16]	conformance quality	customer driven quality	market driven quality	strategic quality		
Foster et al [10]	start-up	honeymoon	transformation	decline OR new TQM model		
Kanji and Asher [30]	identification and preparation	management understanding and commitment	scheme for improvement	new initiative with new targets and critical examination		
Glover [19]	awareness	education	structural change	necessary activities	expected improvements	
Beer et al [2]	mobilize commitment to change through joint diagnosis of business problems	develop a shared vision of how to organize and manage for competitiveness	foster consensus for the new vision, competence to enact it, and cohesion to move it along	spread revitalization to all departments without pushing it from the top	institutionalise revitalization through formal policies, systems and structures	monitor and adjust strategies in response to problems in the revitalization process
Merli [36]	initial situation (conventional approach)	organization of/for continuous improvement	management by processes	complete the implementation of TQM		

Table 2. (Aproaches of a quality process changing phasess)
By source: http://dspace.brunel.ac.uk/bitstream/2438/1306/1/TQMImplementation01.pdf

There are a number of approaches to take towards adopting the TQM philosophy. The teachings of Deming, Juran, Taguchi, Ishikawa, Imai, and Oakland etc can all help an organization realign itself and embrace the TQM philosophy. However, there is no single methodology, only a sum of tools and techniques.

TOOLS	TECHNIQUES
• flowcharting	• benchmarking
• statistical process control (SPC)	• cost of quality
• pareto analysis	• quality function deployment
• cause and effect diagrams	• failure mode effects analysis
• employee and customer surveys	• design of experiments

Table 3. (TQM tools and technique)

Using some techniques and tools I will draw in Fig. 12. And Fig.13 generic TQM implementation frameworks.

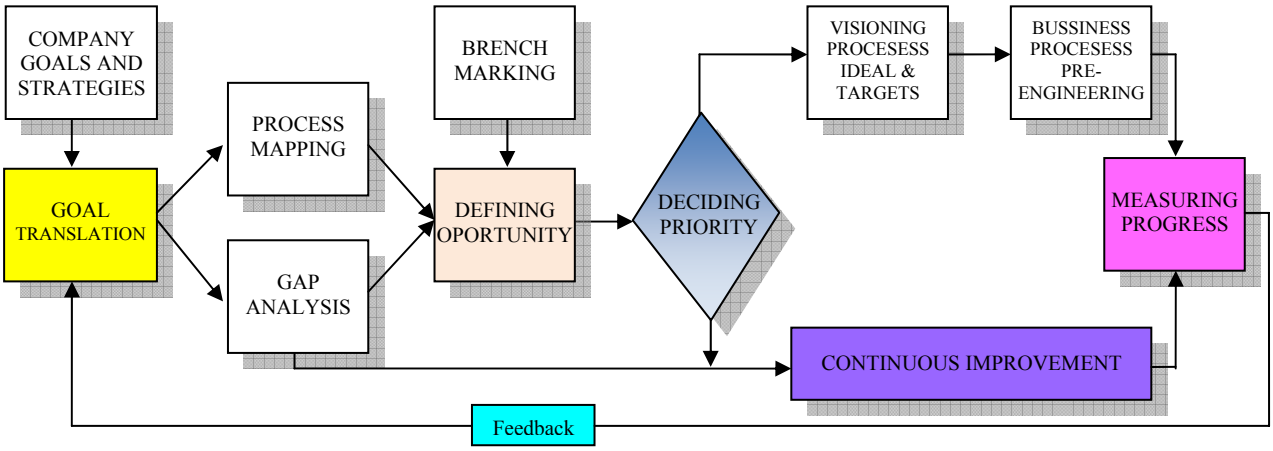


Fig.12. TQM implementation framework.
based on:Total Quality management text with cases, *John S Oakland,,pag 73.*

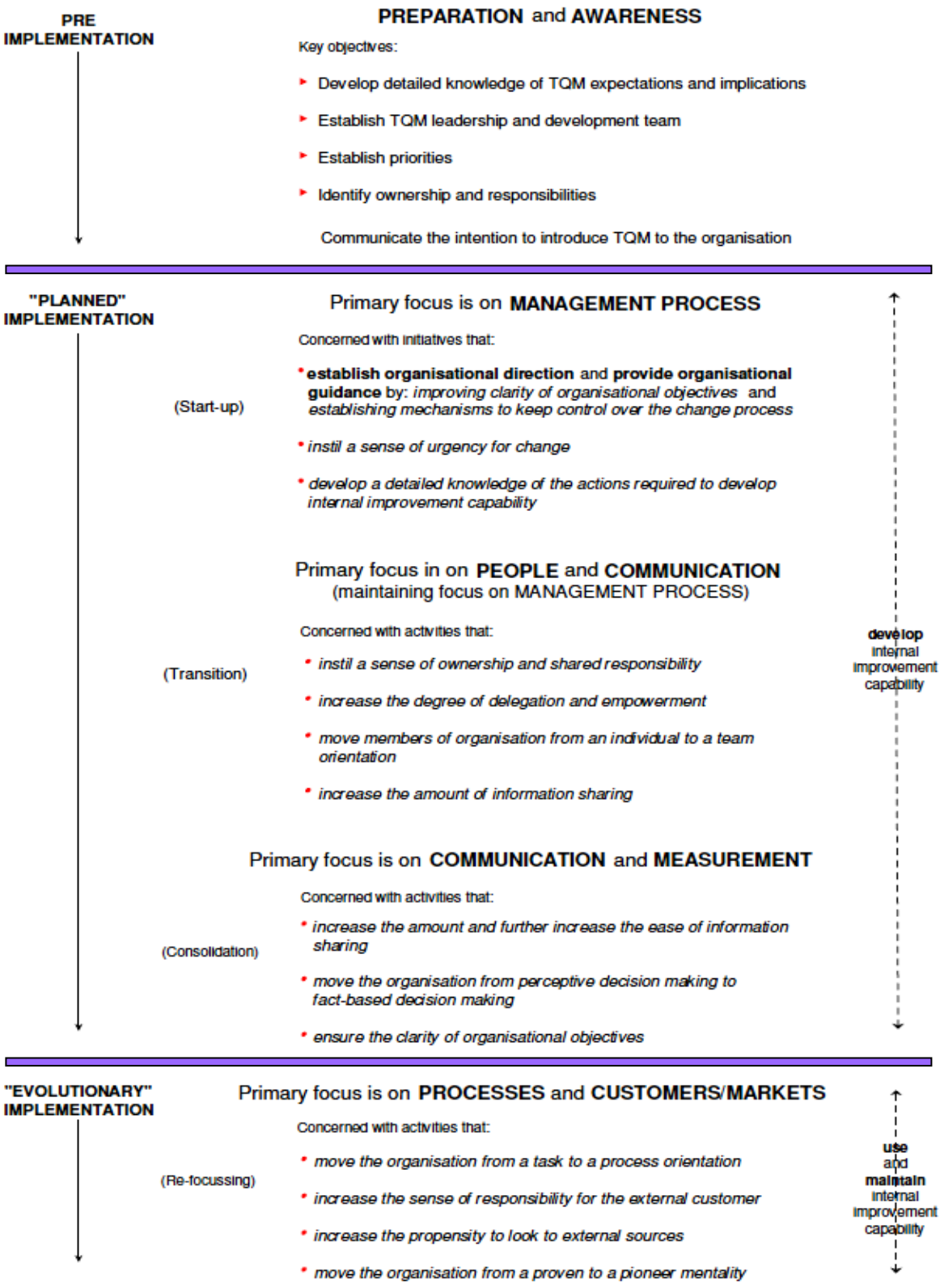


Fig.13. TQM implementation phases & related steps.
By source: http://dspace.brunel.ac.uk/bitstream/2438/1306/1/TQMImplementation01.pdf

Another approach referring at several phases needed for implementing total quality management are the Jablonski five-phase: preparation, planning, assessment, implementation, and diversification. I chose this approach because from my point of view each phase designed to be executed as part of a long-term goal of continually increasing quality and productivity, should be adapted to military organization – armed forces. Moreover Jablonski's approach is one of many that have been applied to achieve TQM, but contains the key elements commonly associated with other popular total quality systems.[44

]

Preparation	- during preparation, management decides whether or not to pursue a TQM program; - they undergo initial training, identify needs for outside consultants, develop a specific vision and goals, draft a corporate policy, commit the necessary resources, - and communicate the goals throughout the organization
Planning	- a detailed plan of implementation is drafted (including budget and schedule); - the infrastructure that will support the program is established, - the resources necessary to begin the plan are earmarked and secured
Assessment	- emphasizes a thorough self-assessment—with input from customers / clients—of the qualities and characteristics of individuals in the company, as well as the company as a whole
Implementation	- the organization can already begin to determine its return on its investment in TQM. It is during this phase that support personnel are chosen and trained, and managers and the work force are trained; - training entails raising workers' awareness of exactly what TQM involves and how it can help them and the company; - it also explains each worker's role in the program and explains what is expected of all the workers.
Diversification	- managers utilizes their TQM experiences and successes to bring groups outside the organization (suppliers, distributors, and other companies have impact the business's overall health) into the quality process; - diversification activities include training, rewarding, supporting, and partnering with groups that are embraced by the organization's TQM initiatives

Fig. 14 Jablonski approach

[44] *** ibidem [22]

TQM improvement and measurement of quality

TQM system improving.

Bringing together concept of Deming's Cycle of Continuous Improvement – Plan, Do, Check Act, upgraded which have Ishikawa inputs, with a TQM system, we will be able to simplify the concept, and to figure out a simplifies form of quality system which will have an perpetual improvement. That will be represented below in Figure 15. and a strategy for process improvement will be presented in Figure16.

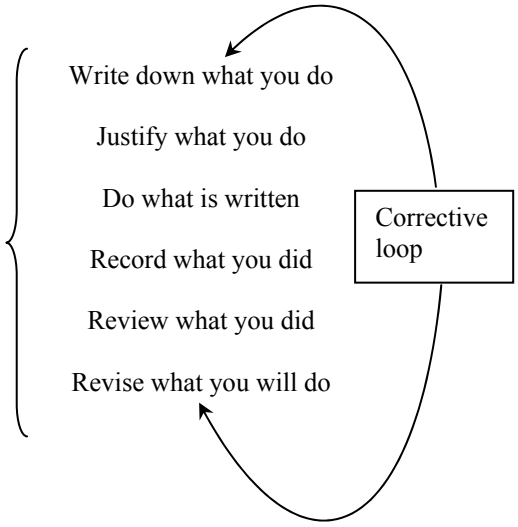
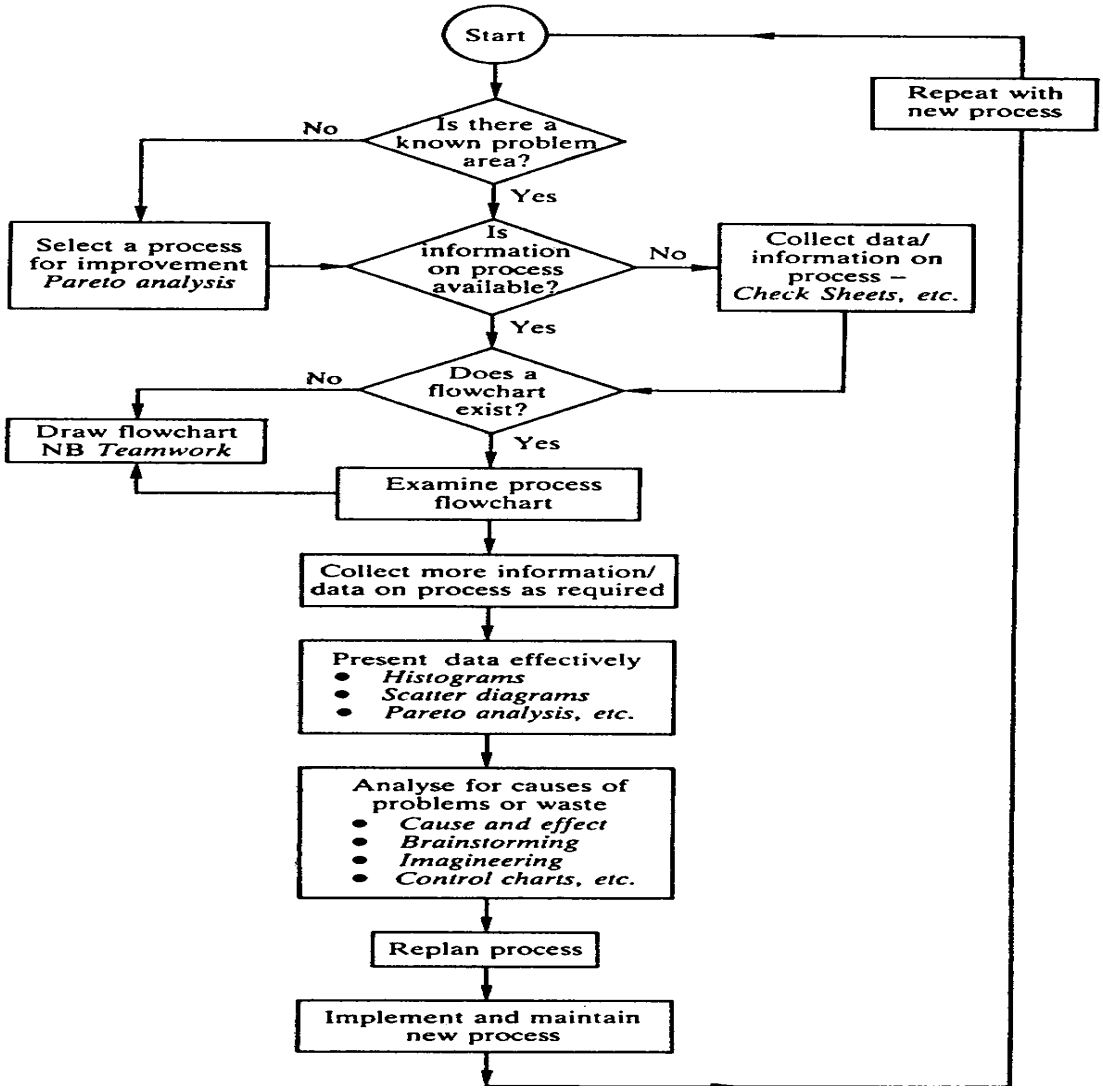


Fig 15. TQM system improving

Continuous improvement (CI) is a method for improving every facet of a company's operations and increasing competitiveness by developing a company's resources. The improvement can involve many goals—producing products with zero defects or achieving 100 percent customer satisfaction—but CI has the same basic principles no matter what the goal:

- Involve the entire company at all levels
- Find savings by improving existing processes, not by investing more money
- Gather data about company operations and quantify that data, which becomes the baseline against which improvements will be measured
- Do not forget that common sense is perhaps the most important component of CI
- Do not just give lip service to improvement—implement or practice ideas.



- **Measurement of quality**

After using the tools and techniques an organization needs to establish the degree of improvement. Any number of techniques can be used for this including self-assessment, audits and SPC.

In the cycle of never ending improvement, measurement plays an important role in:

- Identifying opportunities for improvement (quality costing); Process control and improvement; Benchmarking.

Benchmarking is a continuing process of measuring products, services, and practices against your strongest competitors. More simply stated, it means using the best companies as the