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CHAPTER 1

PROJECT MANAGEMENT IN THE MINISTRY OF DEFENSE OF UKRAINE AND THE ARMED FORCES OF UKRAINE

ABSTRACT

In this section, an implementation of program and project management and project activities in the Ministry of Defense of Ukraine, the General Staff of the Armed Forces of Ukraine, and other military Commands/Headquarters is given, special attention is paid to the developed theory and practice of project management in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine.

The theoretical and methodological foundations of program and project management and project activities in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine, which evolve the national theory of military development and are the basis for improving the scientific and methodological apparatus for evaluating the effectiveness of creating new, developing and maintaining existing capabilities of the Armed Forces of Ukraine, are studied.

The theoretical and methodological foundations of project management in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine can also be used by other components of the defense forces at the stages of their project's execution (initiation, planning, monitoring, and completion).

KEYWORDS

Project management, Ministry of Defense, Armed Forces, defense planning, capability development.

The Ministry of Defense of Ukraine, the General Staff of the Armed Forces of Ukraine, and other military commands and headquarters are taking steps to implement program and project management and project activities.

Based on the project management standard (ANSI PMI PMBOK) and a series of standards (ISO 21500), the Project Management Guidelines [1] and two standards for program and project management in the Ministry of Defense of Ukraine [2, 3] were developed to define the project management procedures to ensure their timely implementation with optimal usage of resources and achievement the goals of defense reform.

In addition, the Instruction for the Organization and Implementation of Defense Planning in the Ministry of Defense of Ukraine, the Armed Forces of Ukraine, and other components of the defense forces was approved [4], which defines program and project management as a component of management activities aimed at achieving the goals of programs and individual projects and implementing changes. A set of programs (projects) for developing the defense forces' capabilities involves the formation of programs (projects) based on the program and project management methodology.

Project management in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine (hereinafter referred to as PM in the MoD and the AFU) is done by applying knowledge, skills, and experience to obtain the necessary results defined by the project objective [3]. This activity is also characterized by uniqueness, novelty, uncertainty, and risks. Within the framework of the PM in the MoD and the AFU the following activities are organized and carried out [1]:

– analysis and justification of the need for the project;
– defining the goals, conditions of implementation, and performance indicators of the project;
– interaction between project participants and stakeholders;
– risk analysis and management;
– implementation of the planned work;
– monitoring and control of project implementation;
– controlled and coordinated changes to the project;
– timely information on problematic issues;
– analysis, dissemination, and implementation of the acquired knowledge.

The difference between PM in the MoD and the AFU and day-to-day management lies in their different purpose:

Project management – to increase the rationality of strategic decision-making and manageability of processes aimed at creating and developing the necessary capabilities of the Armed Forces, taking into account the defined goals and limited resources (budget, time, materials, etc.);

Day-to-day management – to supervise, direct, and control the performance of tasks (operations) performed as part of day-to-day activities.

Project activities are outside the scope of day-to-day activities due to time constraints, but there are some points of intersection. Day-to-day activities are carried out within the framework of functional tasks by the MoD and AFU structural units, and initiatives that arise to make the necessary changes to day-to-day activities can be implemented as projects.

Project management, in addition to directly achieving clearly defined goals, also allows for additional benefits (positive effect) from the aggregate and coordinated implementation of project programs, namely:

– improve the efficiency of financial and human resources usage;
– eliminate duplication of planned works;
– optimize the working time of officials involved in projects;
– systematize the time and organizational framework of projects;
– increase the predictability and manageability of project execution from start to finish.

For example, the project to introduce program and project management in the MoD and the AFU, launched in 2016, is being implemented by the MoD's Department of Military Policy and Strategic Planning. During this period, project teams launched and implemented more than 100 projects in the MoD and the AFU [5], which were to be included in the State Program for the Development of Capabilities of the Ministry of Defense of Ukraine and the Armed Forces of Ukraine.

Examples of projects implemented in 2017–2024 include the following:

1) formation of a military unit by one of the Service Commands of the Armed Forces of Ukraine;

2) transformation of the command-and-control system of the Armed Forces of Ukraine within the framework of the implementation of the Law of Ukraine "On National Security of Ukraine" and other long-term planning documents;

3) certification of Special Operations Forces units in the NATO Response Force (NRF);

4) separation of *force employment* functions from *force generation* functions in the command-and-control system of the Services and individual Branches of the Armed Forces of Ukraine;

5) expansion and improvement of the defense forces airfield network, etc.

Thus, now, the PM in the MoD and the AFU is aimed at improving the rationality of strategic decision-making and the manageability of certain processes in the creation of new capabilities, development, and maintenance of existing capabilities of the Armed Forces, as well as at maximizing the effect of the funds allocated for defense.

At the same time, the implementation of program and project management in the MoD and the AFU has encountered some difficulties due to:

– conservative view of certain officials on the organization of the project management system;

– entrenched experience in managing day-to-day operations and complying with regulatory decision-making procedures;

– training of personnel who should be simultaneously involved in the development and implementation of projects, etc.

This requires a comprehensive study since the effectiveness of PM in the MoD and the AFU is important for completing the use of a process approach to daily activities (transition from a linear-functional to a matrix-process management model). This also applies to the introduction of Results-Based Management, Quality Management, and Risk Management. To ensure interoperability with the EU, it is also necessary to explore benchmarking tools such as management excellence models (CAF) and maturity models (CMM-like models).

1.1 DEVELOPMENT OF CAPABILITIES OF THE ARMED FORCES OF UKRAINE AND OTHER COMPONENTS OF THE DEFENSE FORCES

For today, one of the main tasks of the Ministry of Defense to develop the capabilities of the Armed Forces of Ukraine and other components of the defense forces in the context of the

Russian-Ukrainian war and limited defense spending is to obtain the maximum possible effect from the funds allocated.

The publication [6] presents views on improving the national defense management system and introducing program and project management tools into the activities of the Ministry of Defense of Ukraine, the Armed Forces of Ukraine, and other components of the defense forces. The author proposes a conceptual model of the programs and plans structure in the defense management system, which incorporates the principles and approaches adopted in NATO member states, as well as modern business practices adapted for program and project management of the development of defense forces.

According to the basic axiom of the functional systems theory, the purpose (mission) of an organization is realized through its main activities (main processes), and favorable conditions for the implementation of the main activities are formed through auxiliary processes – management and support [7–9]. However, the list of main processes (areas) of defense management in Ukraine is similar to those in the United States [10]:

– *Capabilities Integration and Development (JCIDS)* management system;
– *Planning, Programming, Budgeting, and Execution* (*PPBE)*;
– *Defense Acquisition System* (*DAS)*;
– *Systems Engineering* (*SE)*;
– *Operations Planning* (*OpsPlan)*;
– *Capabilities Portfolio Management* (*CPM)*.

The Ministry of Defense of Ukraine (MoD) is responsible for formulating and managing defense policy; the Commander-in-Chief of the Armed Forces of Ukraine (CinC) is responsible for defining the strategy; the General Staff of the Armed Forces of Ukraine (GS) is responsible for defining the required forces; the Cabinet of Ministers of Ukraine (CMU) is responsible for procurement quality and creating favorable conditions that increase the success of defense projects/procurement and provide state quality assurance.

In defense management in Ukraine are also involved: the Supreme Commander-in-Chief of the Armed Forces of Ukraine (SCinC), procurement agencies, branches of the Armed Forces, the Verkhovna Rada of Ukraine (VRU), i.e., the legislative body of the state and the executive authority in the form of ministries, agencies, services, as well as defense-specific elements (CinC, GS). In general, this corresponds to the distribution of responsibilities between the state authorities [11].

The distribution of power can also be traced through the distribution of responsibility for processes within the matrix-process model of management. Overlaying the model of the network of processes of key public administration players in the defense sector (**Fig. 1.1**), it is possible to see the role of the MoD represented by the Minister as a "corporate architect of defense".

It should be noted that "architectural decisions" (**Fig. 1.1**) are implemented by the legislative body of the state (VRU), while political decisions are made by the first person of the executive branch (the President – the SCinC). The GC is responsible for the development and implementation of the military component of the state strategy, while the SCinC makes military and political

decisions in cooperation with other branches of power, and the VRU approves the budget, including defense expenditures.

In addition:

1. The GS develops a model of the future Armed Forces by the needs for the implementation of capabilities in military operations (campaigns).

2. The CMU coordinates program development by the budget approved by the VRU.

3. The Services of the AFU – formulate requirements for meeting needs (procurement).

4. Research Agencies are looking for new solutions, and Procurement Agencies are procuring goods, works, and services, taking into account their life cycle and risks.

5. Joint Forces – realize the acquired capabilities on the battlefield.

6. Developers, producers, and suppliers – develop, produce, and supply goods, works, and services in the interests of the defense forces.

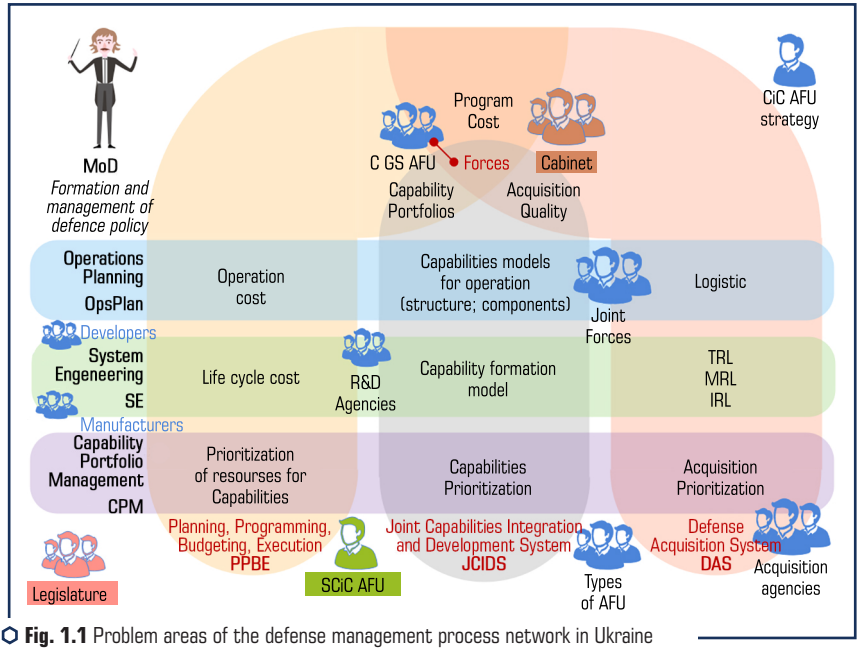

Fig. 1.1 Problem areas of the defense management process network in Ukraine

Fig. 1.1 also shows problem areas (areas of conflict of interest) in the network of defense management processes. Problem areas arise at the intersection of processes, i.e., at the points of transfer of goods, works and services, or the points of transfer of control from one process to another. There are four zones between the three basic processes (*PPBE*, *JCIDS*, *DAS*): formed forces/formed capabilities; capability portfolios (ability to form the required effects); features of

defense programs (quality of results, scope of work, number of resources, time characteristics; quality of defense procurement).

Nine critical areas between the basic processes and the other three have been identified. These critical areas should also be considered. Let's call these points according to a simplified scheme – "1+3".

For example, for the *OpsPlan* process (**Fig. 1.1**), the critical points of interaction with the *PPBE*, *JCIDS*, and *DAS* processes will be: the cost of operations/campaigns, the model of operation capabilities (operation design) and their components, and the logistics of operations. For the *SE* process – the cost of the life cycle (capability, sample of weapons and equipment, unit, etc.), the model (roadmap) of capability development, and the nature of supply sources (models of technological and production readiness levels). For the *CPM* process – prioritization of resources for capabilities, prioritization of capabilities, prioritization of procurement.

Therefore, no one project to develop the capabilities of the defense forces or development program in the defense sector can avoid the need to consider these critical points as part of risk management activities.

In contrast to the processes outlined in the *DODAF*, there are some historically established differences in Ukraine (**Fig. 1.2**):

– *Capabilities Integration and Development System* – corresponds to the system of capability development;

– *PPBE* process – the strategic planning process and the budget process;

– processes within the *Acquisition System* – refer to defense procurement;

– instead of *Systems Engineering*, there is life cycle management (mainly for weapons and military equipment) [12];

– *Portfolio Management Capabilities* does not have a direct equivalent (portfolio management is only being implemented, but there are some measures to *ensure* the efficiency of the use of budget funds.

Operations Planning (OpsPlan) should be noted separately as an activity with known differences and similarities.

The need to implement certain projects and programs for the development of the defense forces is determined based on an analysis of plans for future operations. A convenient tool for visualizing such an analysis is the "operation design" [13].

Knowing the required list of effects that should be formed in the operational area and maintained for a certain period [14], as well as the *gap* between the assessment of the existing and required level of capabilities, it is possible to form a list of measures to acquire the required level of capabilities. This does not contradict the previous concept of "combat readiness – combat capability", taking into account both the level of task performance to create the required effect (corresponds to the concept of "*capability*") and the volume of similar tasks (corresponds to the concept of "*capacity*"). Conceptually, the Ukrainian term "capability" covers both areas, but the build-up of forces and means of the defense forces without improving the methods and forms of warfare is referred to as typical scaling projects (creation/reduction of typical organizational structures),

and projects to develop the capabilities of the defense forces mainly include projects that change most of the components of capabilities.

The algorithm for selecting the type of project to develop the capabilities of the defense forces is shown in **Fig. 1.3**.

Projects to develop the capabilities of the defense forces (**Fig. 1.3**) cover various aspects of improving activities or changing approaches to generating the required effect and are referred to as intensive development measures. Extensive development measures include projects to change the size of the defense forces.

The creation of new capabilities, development and maintenance of existing capabilities of the defense forces is carried out by the basic components of capabilities using the program and project management methodology.

At the same time, all management decisions aimed at developing the capabilities of the defense forces should be made, taking into account the full life cycle of capabilities to ensure their realism and efficient use of resources [4].

This can be seen in the V-shaped systems engineering diagram applied to the activities of the defense planning cycle (**Fig. 1.4**) using an approach known as the "quality deployment function" or "quality house".

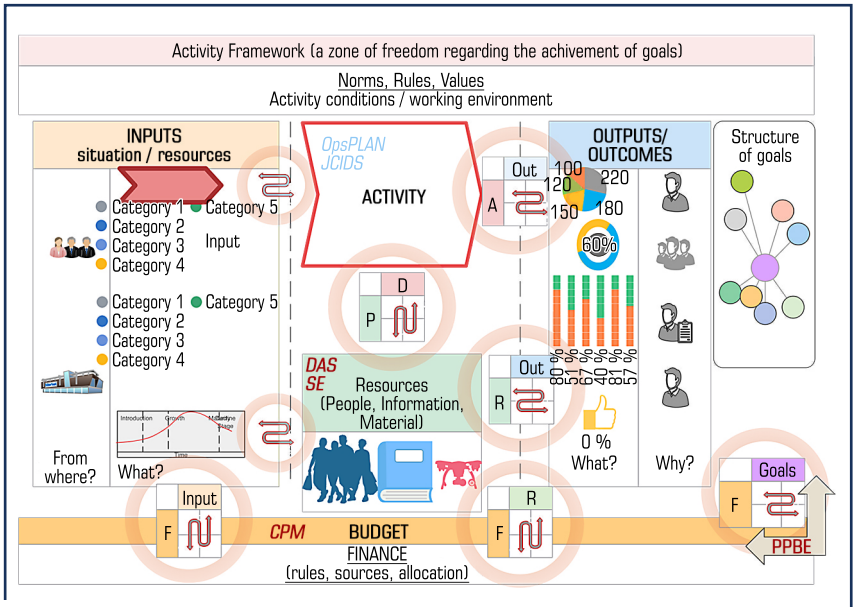

Fig. 1.2 Place of individual defense management processes in the overall defense system
Note: defense activities – OpsPlan and JCIDS processes; resource activities – DAS and SE processes; activities to set goals and finance the achievement of these goals – PPBE and CPM

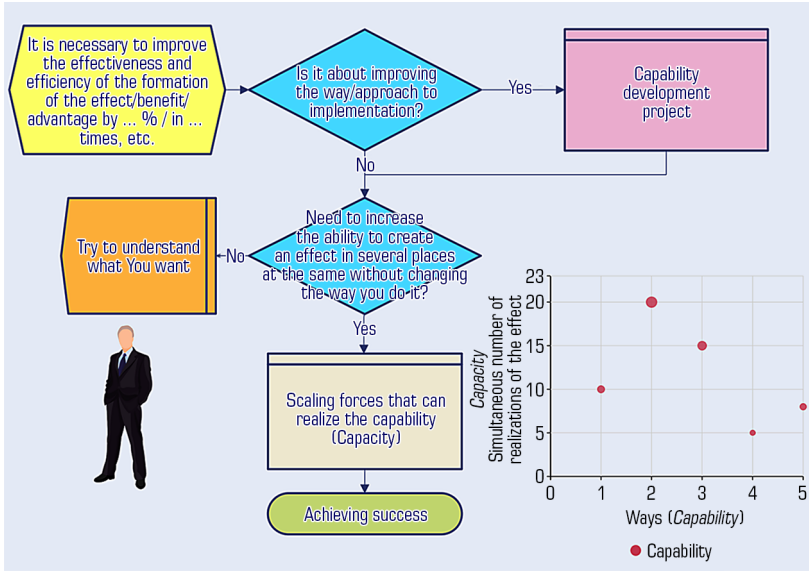

Fig. 1.3 Algorithm for selecting the type of project to develop the capabilities of the defense forces

Also, the activities of the defense planning cycle are presented in the form of an algorithm with the main documents' linkage (**Fig. 1.5**) following the scheme adopted in the *IDEF 3* standards.

In addition, **Fig. 1.5** shows the approximate distribution of responsibility for organizing the stages of the algorithm between the 'J'-structural units of the headquarters.

Based on the results of the main activities of the defense planning cycle (**Fig. 1.5**), documents (capabilities catalog) are developed to coordinate the required effects and tasks for developing the capabilities of the AFU, forces and means of other components of the defense forces (the basis for determining standard requirements for capability holders).

The main ways to improve PM in the MoD and the AFU to ensure the effective development of the capabilities of the Armed Forces of Ukraine are as follows:

– implementation and use of modern project management methods and tools (*PMBoK*, *PRINCE2*, and *Agile*) [2, 3, 15];

– organization and conduction of training (advanced training courses) for personnel on project and program management, in particular, at the National Defense University of Ukraine;

– establishment of a Project Management Center (Project Office) in the MoD that will provide advisory and methodological assistance in project implementation;

– making the necessary changes to regulatory acts, guidelines, and methodological documents in the defense sector.

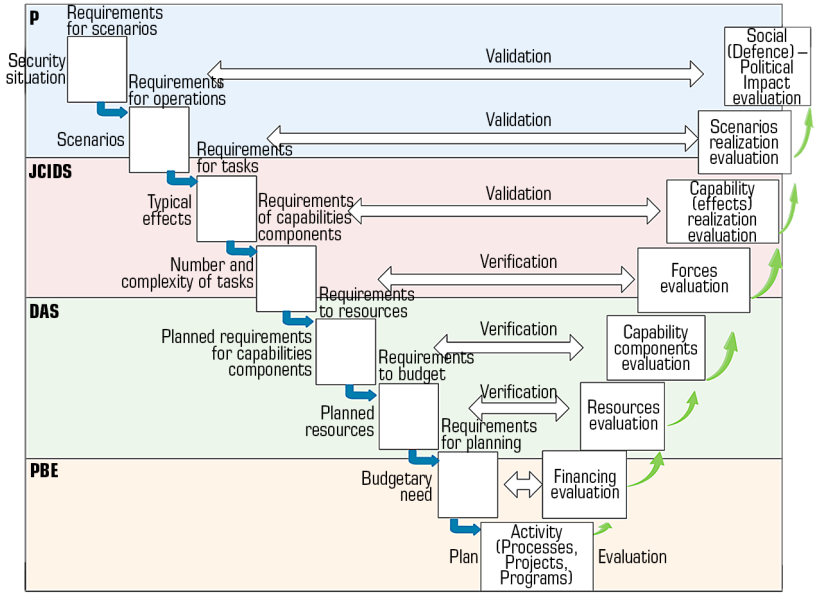

Fig. 1.4 Activities of the defense planning cycle with overlapping areas of coverage of basic defense management processes

Note: the measures in the blue and yellow zones correspond to the PPBE process; the measures in the pink zone correspond to JCIDS, and the measures in the green zone correspond to DAS

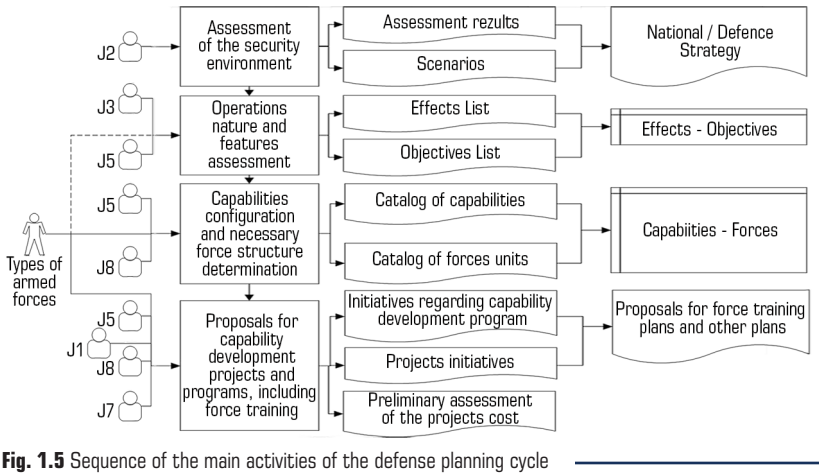

Fig. 1.5 Sequence of the main activities of the defense planning cycle

Therefore, the project should be considered as a unique set of interrelated activities aimed at achieving certain strategic goals for the development of the capabilities of the Armed Forces (defense forces) within a limited time and resources [4].

The dependence of the expected results of the development of the capabilities of the Armed Forces (defense forces) on each other is presented in the form of a pyramid in **Fig. 1.6**.

The top of the pyramid of expected outcomes of capability development (**Fig. 1.6**) is the "quality of outcomes", which depends on the completeness of the work performed, the duration of the work, and the number of resources allocated.

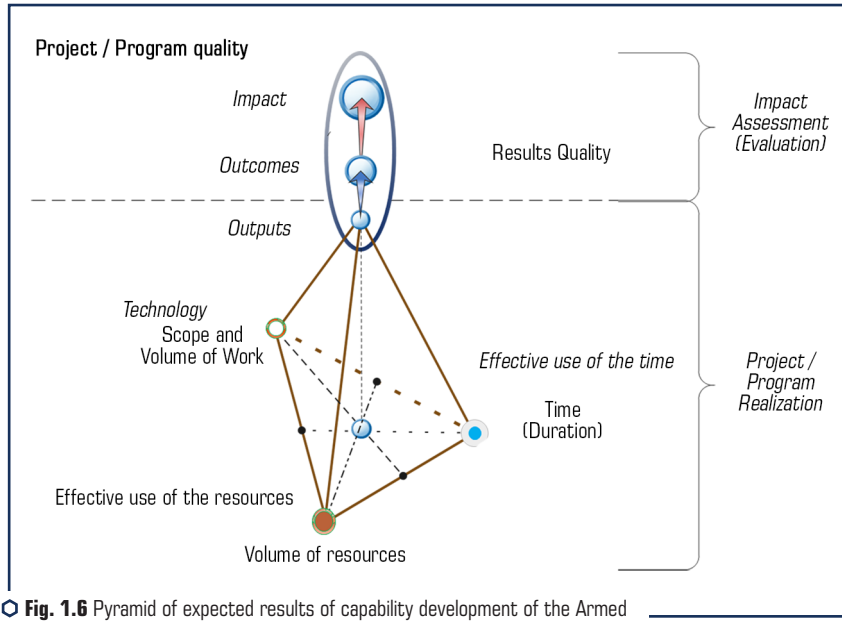

Fig. 1.6 Pyramid of expected results of capability development of the Armed Forces of Ukraine (defense forces)

Based on the results of the study of the MoD and AFU personnel training on project and program management (advanced training courses), a list of questions was identified to facilitate the understanding of officials (project teams) of the essence of the basic components of capability (**Table 1.1**).

Using the basic components of the capabilities (**Table 1.1**), the officials (project team) are offered standardized interview questions.

Strategic decisions aimed at creating and developing the capabilities of the Armed Forces (defense forces) should be made taking into account the full life cycle of capabilities to ensure their relevance and efficient use of resources [1].

● **Table 1.1** Basic components of the capability

Abbreviation	Title	Essence	Question
D	Doctrinal framework	Existence of concepts, guidelines, principles of application, standard operating procedures and other governance documents	Do you know what to do, when and how to do it?
O	Organization	The organizational structure of the relevant forces and means that create the appropriate capability	How is responsibility for activities (processes, projects, capacities) distributed?
T	Preparation	The existence of a system of training of relevant forces and means that create a certain capability, individual and collective training of personnel, training of headquarters and military formations	How to maintain the skills of personnel at a given level?
M	Resource support	Provision of the necessary weapons and military equipment, equipment, supplies and consumables, as well as financial resources	How to equip staff to perform tasks efficiently?
L	Quality of management and education (Leadership)	Strategic level: availability of an adequate level of professional training of the leadership at all levels, a system of military education and science that ensures the reasonable development and use of troops (forces). Operational level: implementation of current principles of activity (principles of operational art, quality, risks, human management, etc.). Tactical level: personal, team, command leadership, team building	How to outperform the enemy in terms of the quality of management decisions?
P	Staff	Availability of qualified and motivated personnel	Where can we find people, who will effectively and efficiently perform tasks in accordance with the organizational division of responsibilities?
F	Military infrastructure	Availability of facilities and separate structures intended to ensure the fulfillment of armed struggle tasks by troops (forces), as well as to accommodate and ensure their vital activity	How can we adapt the environment for our comfort and efficient, effective performance of tasks?
I	Compatibility	Doctrinal, operational and technical compatibility of forces and means for joint actions within the defense forces and multinational formations	What conditions must be met to be able to complete the task together?

Mixing the definition of capability in accordance with the Australian version [14] and the essence of the capability components according to the *DOTMLPFI* model, the capability model can be presented in the form of a coherent sentence (**Fig. 1.7**): "personnel (people), equipped with weapons and military equipment, in an environment adapted by infrastructure, using tactics appropriate to the strategy, structured to ensure manageability in units (groups), motivated to fight and able to make more correct than the adversary of the decision, properly prepared (trained), compatible in all these components within and with external subjects and objects, able to achieve

goals (results) in given conditions with given success rates/to form the necessary effect within a certain period in a certain operating environment and maintain this effect for a certain time" [14].

The directions for the implementation of Ukraine's military policy and the development of the capabilities of the Armed Forces (defense forces) are defined in the Strategic Defense Bulletin [16].

The strategic goals of the development of the Armed Forces (defense forces) and the expected results of their achievement, taking into account current challenges and threats to Ukraine's national security in the military sphere, are determined when planning the development of capabilities for the medium and long term in the course of operational planning [1]. The strategic goal, the strategic aim of the project, and the lower-level objectives should be coordinated with each other (**Fig. 1.8**).

To formulate the goals of the project for the development of the MoD and the AFU capabilities, it is advisable to apply a methodological approach based on the *SMART* and *DOTMLPFI* components (**Fig. 1.9**) that involves checking whether the goals meet the following criteria [1]:

1. *Specific* – What to do + no interpretation.
2. *Measurable* – A criterion for achieving a goal (quantity – numbers, quality – specifications, cost – monetary unit).
3. *Achievable* – Within the limits of knowledge, experience, and workload.
4. *Relevant* – Is the goal important to achieving a higher-level goal?
5. *Time-bound* – Correlation with a specific time (start – finish).

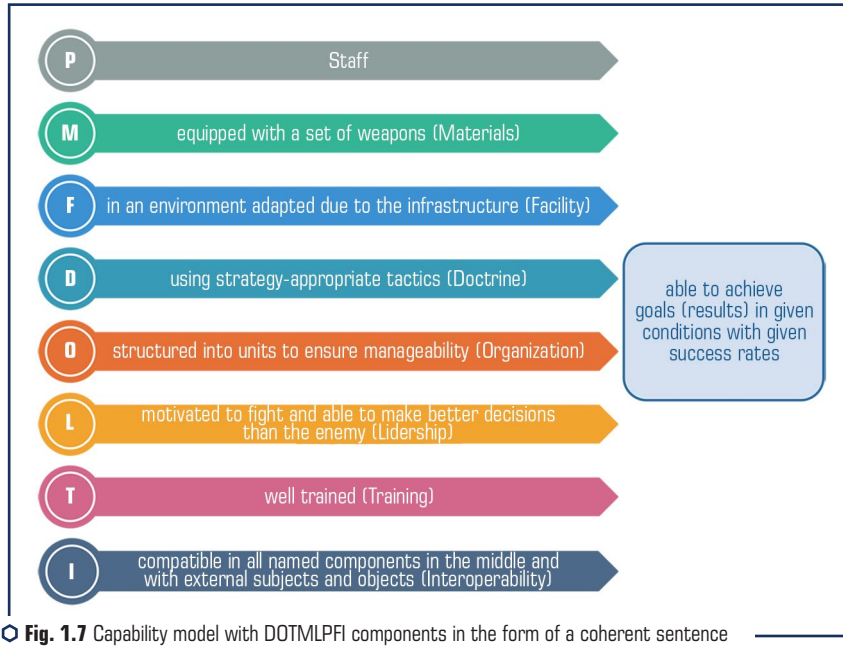

Fig. 1.7 Capability model with DOTMLPFI components in the form of a coherent sentence

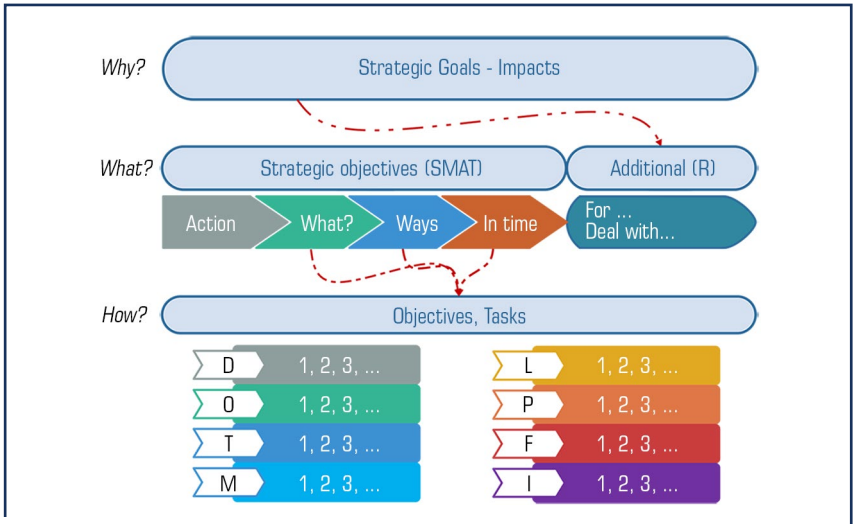

Fig. 1.8 Linkage between the objectives of the capability development project according to the approach adopted by the Ministry of Defense of Ukraine

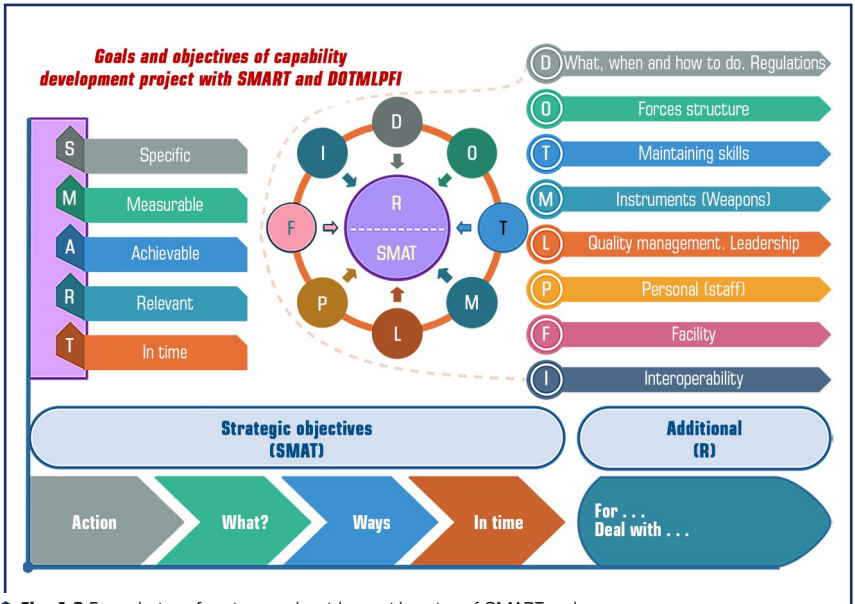

Fig. 1.9 Formulation of project goals with consideration of SMART and DOTMLPFI components

The application of the proposed methodological approach to defining the goals of the MoD and AFU capability development project increases the likelihood of achieving them and makes it possible to measure the strategic goal.

Using the algorithm for determining strategic goals proposed by the authors in [17], it is advisable to formulate the strategic goals of the project in the following sequence:

1) a mission statement should be defined to briefly explain the purpose of the organization, its objectives and core values, and to correspond to the main areas of its activities;

2) based on the mission, develop strategic goals that outline the relevance of the AFU (defense forces) activity in the context of changing internal and external factors;

3) to determine the degree of the goal achievement (development of the defense forces), it is necessary to determine the criterion of compliance of the achieved results with the goal (effect);

4) to clarify the purpose of the development of the AFU (defense forces), in case of changes in the factors that affect the implementation of strategic goals, to adjust them.

In publication [18], effectiveness is considered as the level of compliance of the achieved results with the set goal, which gives a positive effect from the implementation while rationally using available resources.

Using the proposed approach [18], the efficiency of achieving the strategic goal of the project is proposed to be evaluated by the expression:

$$Q_{SG} = f\left(S_{SG_{in}}\left(n_{jm}, k_{jm}\right)\right) \Rightarrow \max, \tag{1.1}$$

where Q_{SG} – a generalized indicator of the project's strategic goals achievement; S_{SGi} – the indicator of the i-th strategic goal achievement $i = 1, \ldots, N$, where N – the number of strategic goals, $S_{SGi} \in [0 \ldots 1]$:

– *unsatisfactory* achievement of the strategic goal $S_{SGi} \leq 0.3$;

– *satisfactory (pessimistic)* achievement of the strategic goal $0.3 < S_{SGi} \leq 0.4$;

– *average (most desirable)* achievement of the strategic goal $0.5 < S_{SGi} \leq 0.6$;

– *high (optimistic)* achievement of the strategic goal $S_{CSi} \geq 0.7$;

– n_{jm} – indicator of the strategic goal achievement $j = 1, \ldots, M$, where M – the number of tasks in the strategic goal;

– k_{jm} – the coefficient of the strategic goal importance;

– f – the value of the target function of the strategic goal efficiency, $f \rightarrow \max$.

To acquire the value of the efficiency of achieving the strategic goal, it is necessary to rank the tasks that affect the achievement of the strategic goal and determine their degree of importance.

The issue of determining the coefficient of the task importance is a poorly structured problem, characterized by the presence of both well-formalized components and components and relationships that cannot be assessed using objective methods.

In this regard, it is advisable to use the method of expert evaluations. One of these methods is the hierarchy analysis method, which, unlike analytical methods, allows for the ranking of the

strategic goal's tasks by all the defined characteristics with a certain degree of compromise. This will make it possible to more fully evaluate the impact of each task on achieving the goal, both the strategic goal and the degree of implementation of the entire project.

Applying the hierarchy analysis method [19], the first step is to decompose and structure the problem in the form of a hierarchy. The hierarchy is built from the top (the goal of the problem to be solved is determined), through the intermediate levels of the hierarchy (indicators on which the subsequent levels depend) to the lowest level, which is the list of tasks (**Fig. 1.10**).

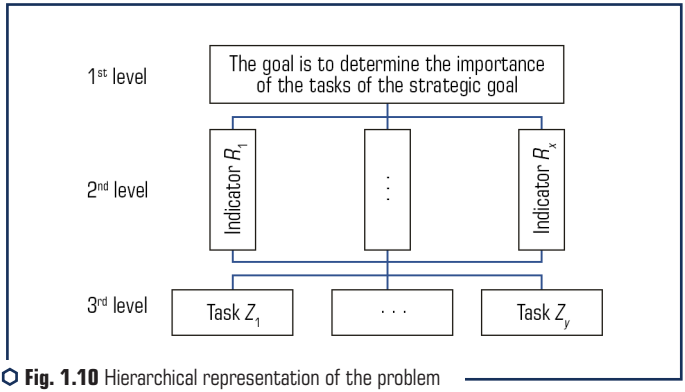

Fig. 1.10 Hierarchical representation of the problem

After decomposing the problem at the second stage of the method, at each level of the hierarchy it is possible to form a matrix of pairwise comparisons of elements E_t of size $T \times T$ (**Table 1.2**). Using a nine-point scale, experts at the second level of the hierarchy make a comparison of the impact of the indicator on the goal, and at the third level of the hierarchy – a comparison of the task according to the indicator.

Table 1.2 Matrix of pairwise comparisons

Elements	E_1	E_2	...	E_t
E_1	1	a_{12}	...	a_{1t}
E_2	a_{21}	1	...	a_{2t}
...	...	...	...	...
E_t	a_{t1}	a_{t2}	...	a_{3t}

The experts' evaluation is made in the form of weight ratios t–x of the elements, which are determined by the importance of the elements among themselves (**Table 1.2**), and their weights can be written in the following form:

$$a_{12} = \frac{\omega_1}{\omega_2};\ a_{1\xi} = \frac{\omega_1}{\omega_\xi}, \tag{1.2}$$

where ω – the ratio of the weight.

It is important to understand that if ω_1, ω_2, ω_3, …, ω_n are not known in advance, then the pairwise comparison of elements is carried out using subjective judgments of experts, quantified on a scale (**Table 1.3**).

Table 1.3 The scale of relative importance

Degree of importance (score)	Definition	Note
1	Equal importance	Two factors contribute equally to achieving the goal
3	Moderate predominance of one factor over another (weak significance)	Experience and judgment provide a small advantage to one factor over another
5	Significant or strong relevance	Experience and judgment provide a strong advantage to one factor over another
7	Very strong or obvious significance	The advantage of one factor over the other is very strong
9	Absolute importance	The evidence in favor of one factor over the other is highly convincing
2, 4, 6, 8	Intermediate values between adjacent scale values	They are used in compromise cases

In the third stage, let's synthesize the results acquired. Here, from the group of pairwise comparison matrices, it is possible to calculate the value of local priorities that indicate the relative influence of a set of elements on the element adjacent to the upper level. To do this, it is necessary to calculate the eigenvectors *P* for each *t*-th matrix of pairwise comparisons, and the result is normalized for each row to determine the geometric value according to the dependence [19]:

$$P_t = \sqrt[t]{\frac{\omega_1}{\omega_1} \times \frac{\omega_1}{\omega_2} \times \ldots \times \frac{\omega_1}{\omega_t}},\ t = \overline{1, T}. \tag{1.3}$$

Then, according to the following dependence, the value of the priority vector *x* is calculated:

$$x_t = \frac{P_t}{\Sigma_t P_t};\ t = \overline{1, T};\ \Sigma_t x_t = 1, \tag{1.4}$$

where x_t is the priority of the *t*-th element.

After conducting all pairwise comparisons and entering the eigenvalue data, it is necessary to determine the degree of consistency characterized by the consistency index *IY*.

The consistency of local priorities of pairwise comparison matrices is calculated as follows:
– determines the sum of judgments (elements) of each column of the pairwise comparison matrix:

$$z_{it} = \sum_i a_{it},\ i = \overline{1,I}; \tag{1.5}$$

– the value of λ_{max} for which the sum of the first column is multiplied by the value of the first component of the normalized priority vector, the sum of the second column by the second component, and so on:

$$\lambda_{max} = z_1 x_1 + z_2 x_2 + \ldots + z_i x_t; \tag{1.6}$$

– the consistency index is calculated:

$$IY = \frac{\lambda_{max}}{T-1}, \tag{1.7}$$

and for an inversely symmetric matrix always λ_{max}.

Then, using hierarchical synthesis to weigh the priority vectors with indicator weights and calculate the sum of all the respective weighted components of the priority vectors of the hierarchy level below.

The priorities are synthesized from the second level of the hierarchy downward. In this case, the importance coefficients of the alternatives within the group are determined by a dependency:

$$k_{im} = \sum C_{nj} b_{ji}, \tag{1.8}$$

where b_j – the priority of the j-th indicator, $j = \overline{1, J_t}$; J_t – the number of indicators that characterize the goal; C_{nj} – the priority of the impact of the functioning of the n-th task on the j-th indicator, $n = \overline{1, N}$; N – the number of tasks of the strategic goal.

Thus, the method of hierarchy analysis allows ranking the tasks of strategic goals of projects (programs) by all the defined characteristics with a certain degree of compromise and can be used as one of the tools of program and project management.

1.2 PECULIARITIES OF PROJECTS (PROGRAMS) ELABORATION FOR THE DEVELOPMENT OF THE ARMED FORCES' CAPABILITIES

The general scheme of the defense planning process is given in the publication [4]. This process is conditionally divided into five blocks/stages (planning, programming, budgeting, performing tasks within the framework of accepted practice, and implementing development activities (changing accepted practice)). In general, this model is presented in Section 1.1 (**Fig. 1.1**–**1.15**).

At the same time, it makes sense to consider in more detail the specifics of the stages and the relevant links between the stages. As can be seen, the stages of strategic decision-making and, accordingly, the blocks of activities in the Ministry of Defense of Ukraine are conditionally divided by analogy with the PPBE process.

The block of "planning" activities (**Fig. 1.11**) is designed to formulate strategic goals and allocate responsibility for these goals: development of the Joint Operational Concept, the Military Security Strategy of Ukraine, Strategies for the Development of Services and Individual Branches of the Armed Forces, the Strategic Defense Bulletin, and concepts for the development of Services and Branches of the Armed Forces.

It can be said that the content of this block of activities corresponds to the content of the formation of the motivational layer of the Corporate Architecture according to the *TOGAF* model [22, 23], that is: determining the circle of stakeholders at the state level; establishing assessments of their needs, interests and intentions; forecasting possible scenarios of situation progress; determining the list of effects and indicators of the conditions for their formation and requirements for the ability of the defense forces to form them; prioritizing ways to form effects (capabilities); features of the forces and means that should be involved in the implementation of the capability. The latter – without specifying the amount of forces and means (*capacity*).

Although the concept of an "architectural approach" is not widespread in the sphere of public administration in Ukraine, including the security and defense sector, during the spring and summer of 2024 the set of activities was accomplished under the leadership of the Minister of Defense as part of the project to develop a model of the "Integrated Defense System of Ukraine". In the initial stages of this project, the Minister of Defense is assigned the role of "Defense System Architect".

From another perspective, the model of the defense policy management cycle is very similar to the "corporate architecture cycle".

Let's compare the block of "Programming" activities from the model of the Department of Military Policy and Strategic Planning of the MoD with the corresponding stages of the architectural cycle. According to the "architectural approach", it is necessary to have a description of the process model of activities "as is" and "as should be". This description already contains elements of capabilities, sometimes in the characteristics of functional areas of activity, but more correctly – the ability to form the required effects in the working environment. After that, it is necessary to have a model of capabilities "as it is" and "as it should be" and the distribution of involvement of capabilities in the realization of capabilities, and to a greater extent, processes. After that, it is necessary to understand the procedure of transition from the existing to the required architectural model. All three stages of the architectural cycle – regarding processes, forces and means, and the order of transition from one architectural model to another – are covered by the "Programming" block of activities.

Namely, the block of "Programming" activities (**Fig. 1.12**) covers the development of proposals for the Government of Ukraine's activity program, the Defense Plan of Ukraine and interagency, departmental and sectoral capability development programs.

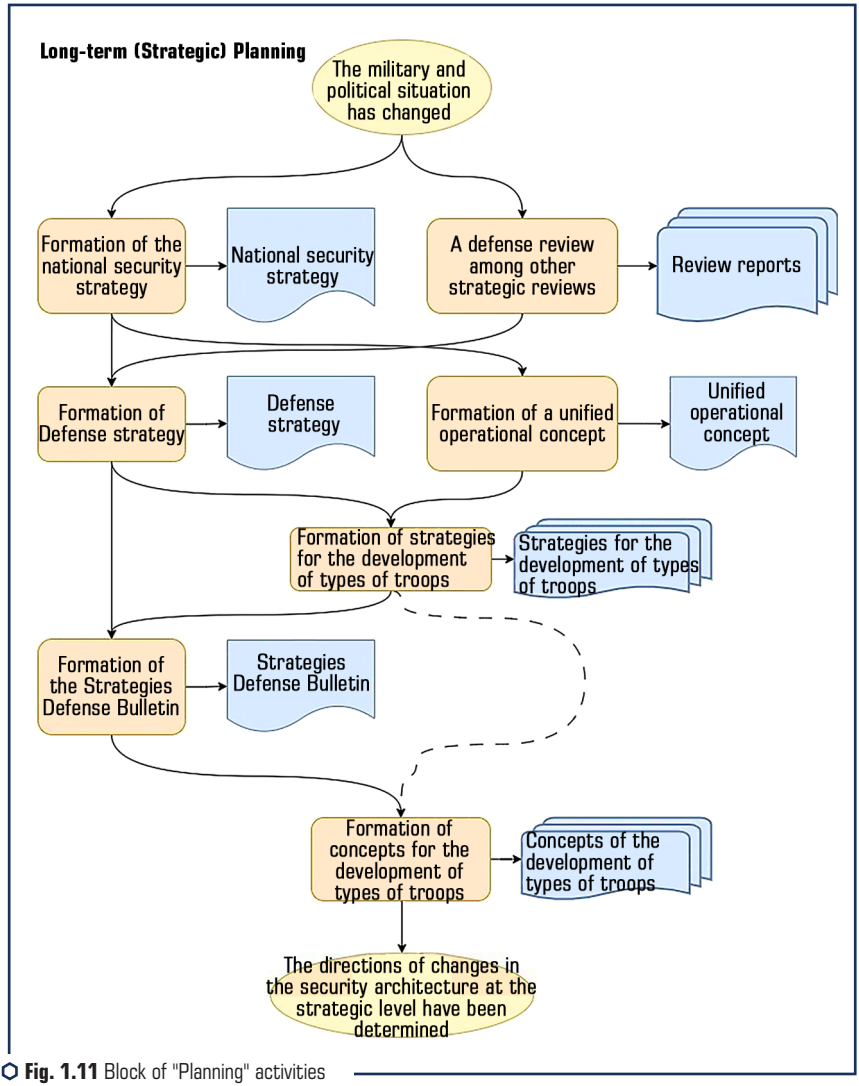

Fig. 1.11 Block of "Planning" activities

It should be noted that it is at the programming stage that the procedure and system for monitoring and evaluation of programs should be laid down. In Ukraine, such practices were actively introduced in the central governmental bodies on the eve of signing the Association Agreement with the European Union in 2012. However, these practices were not extended to the security and defense sector.

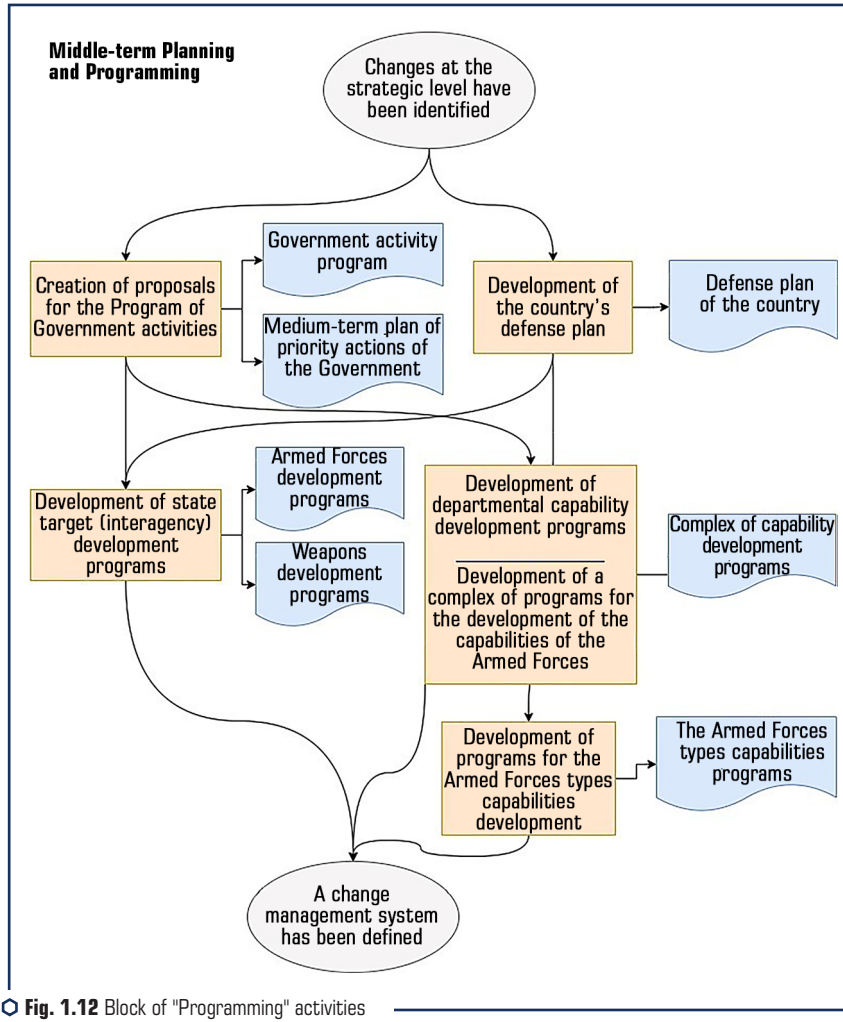

Fig. 1.12 Block of "Programming" activities

Another feature of programming in the field of management of the Ministry of Defense of Ukraine is the Service-based approach to the Armed Forces capability development programs. Due to the limited experience in implementing projects and programs for the Armed Force's capabilities development, it is not yet possible to assess the effectiveness of this approach, but most expert events on the organization of capability development programs mention the risks to the integrity of the capability development system, taking into account the peculiarities of joint operations.

Such risks are an organic feature of hierarchical vertically integrated organizational structures/ functional organizations.

Although the "budgeting" block of activities (**Fig. 1.13**) is defined as the next block of activities after the "programming" block, in reality, both of these blocks are parallel and consecutive steps of the iterative cycle: after proposals on the content of development programs, the possibilities for their financing are assessed; after that, several cycles of adjusting programs and, accordingly, budget activities take place. The content of budgeting activities in the context of the subject of this paper is as follows: to determine the sources of funding and the procedure for funds spending on development programs and projects, as well as other activities in the defense sphere.

The block of "budgeting" activities (**Fig. 1.13**) covers measures to plan the activities of the Government and finance the activities of the MoD and the AFU for the current and two following years, including procurement plans for several years and allocation of necessary funds from the state budget.

Thus, budgeting is a complex task: It is necessary to envisage the possibility of financing the needs for resources for several years (in Ukraine – three years), to determine the structure and procedure for managing budget expenditures in the conditions of dynamic changes in the political, military and, above all, economic situation in and around the country.

Another peculiarity of budgeting for defense activities in Ukraine is that state agencies and services often belong to a direct power vertical from the ministries, but planning, programming and financing procedures are mostly departmentalized. Therefore, coordination of activities for the maintenance and development of defense forces at the interagency level and about joint operations is quite difficult to be effective. It is enough to compare the planning and financial documents of the Land Forces Command of the Armed Forces of Ukraine and the National Guard of Ukraine. Even within the Ministry of Defense, some structures have significant peculiarities in terms of programming and budgeting: The MoD Main Intelligence Directorate, the State Special Transport Service, and others.

According to the classical *TOGAF* architectural cycle, after planning development activities, the following should be done: actually, implement the planned activities; support the implementation through assistance to the executors, additional corrective and preventive measures; evaluate the success of the activities, etc. This can also be seen in the *PPBE* model's block of activities according to the MoD.

The peculiarity of the implementation stage in Ukraine is that the block of "implementation" activities (**Fig. 1.14**) is divided into two parts, namely: a block of capability development projects and programs and a block of capability support activities. The above corresponds to the well-known model of "intensive" and "extensive" progress, but the ratio of the scale of these activities should be decided at the programming stage.

The application of the program-project approach to the organization of activity as a methodological approach in the military sphere is quite organic. This is because C2 of combat operations is project-based in the conditions of military crisis. An interesting comparison of the *MDMP* military decision-making procedure and the *PM BOK v.3* project formation procedure is made in [24].

However, combat operations C2 is usually attributed to special "crisis" activities, and project and change management activities to "calm" activities ("tame crisis").

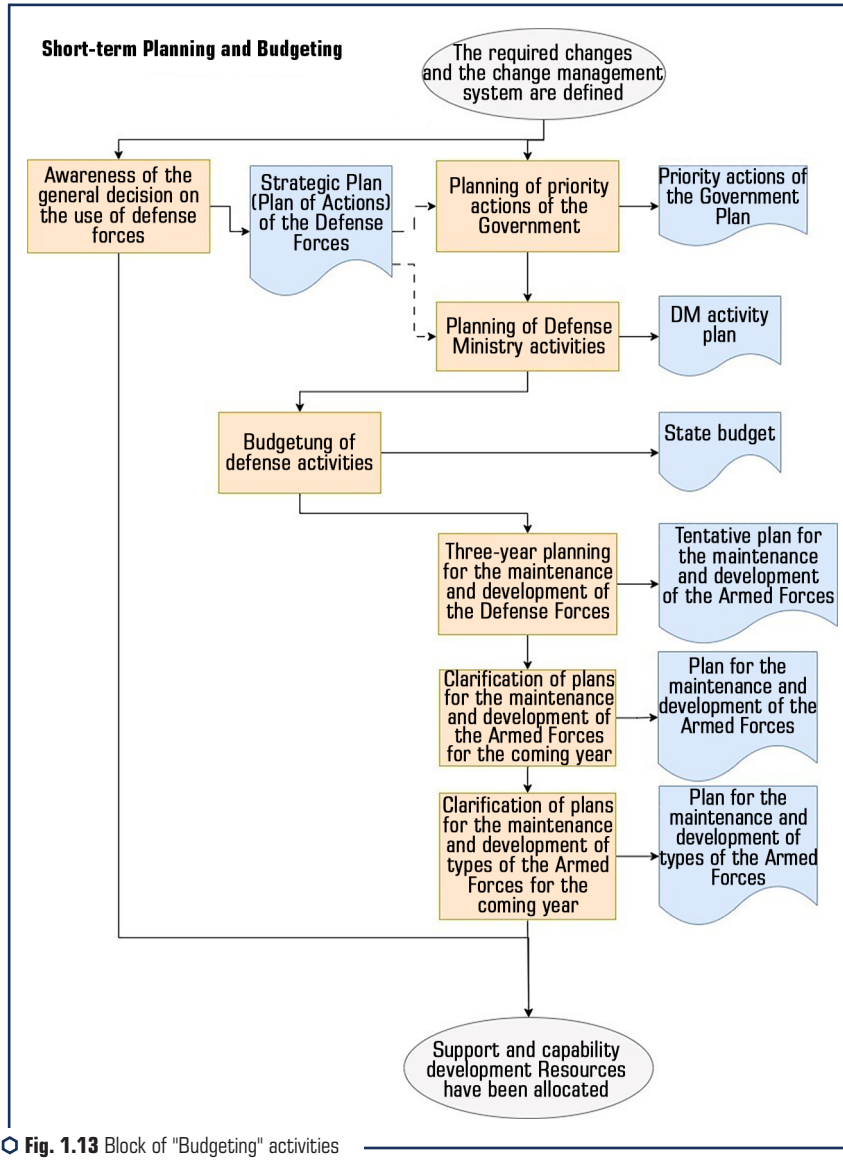

Fig. 1.13 Block of "Budgeting" activities

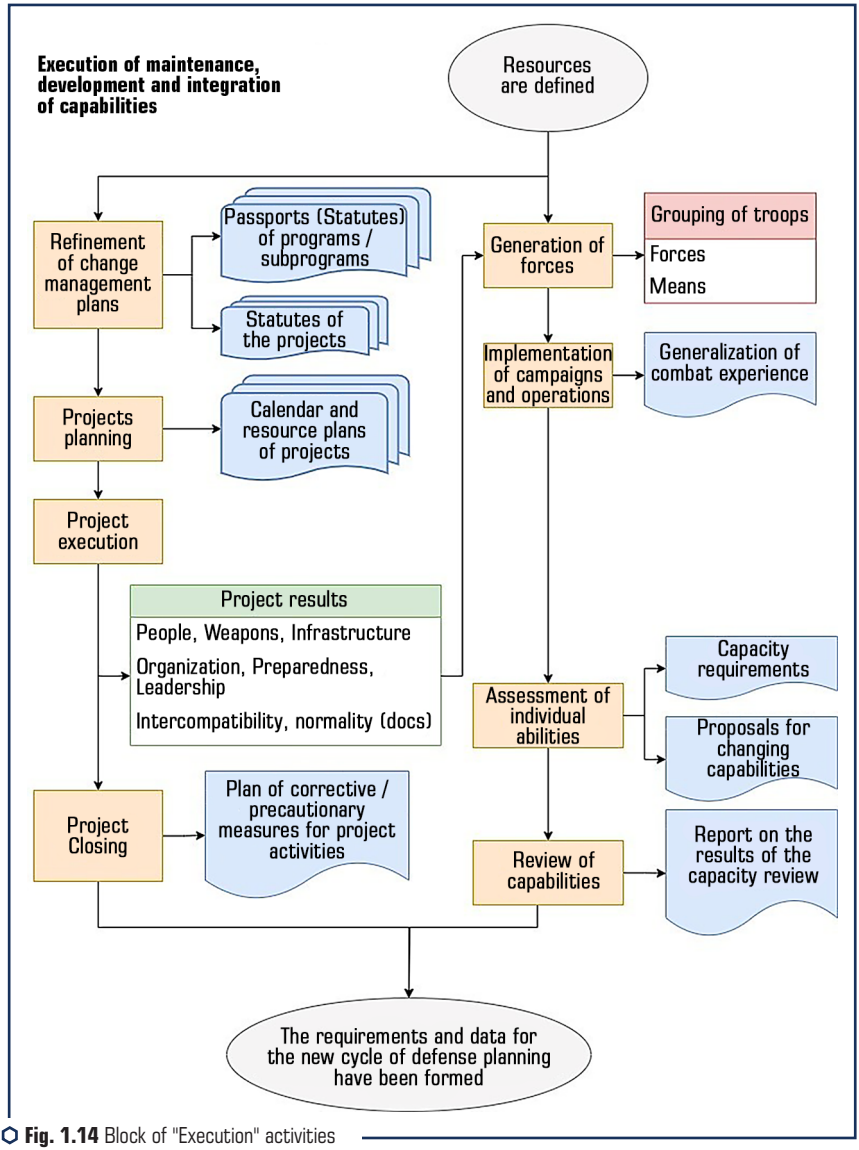

Fig. 1.14 Block of "Execution" activities

An important question is how to manage the programs and projects of force development in times of crisis, especially a military crisis. Let's consider this from the perspective of well-known

approaches to change management. The section on change management [25] provides a scheme for classifying changes by the following criteria: Duration of change {Long; Short} and Scope of change {Small; Large}, and the description includes another criterion – Pace of change, which is the ratio of the Scope of change (Volume of changes) to the Duration. In our opinion, one more feature is missing: Context {Internal; External}. The inclusion of this additional feature on Context has an internal connection with Statistical Process Management in terms of finding special causes of deviations or classifying causes that the organization can or cannot influence. If to add the mean scores to the above model {Magnitude of change: Minor, Major, Very Major; Duration of change: Short-term, Long-term, Very long-term; Causes: Internal (controllable), External (uncontrollable), Mixed}, let's get a more convenient version of this model (**Fig. 1.15**).

The full list of situations can be presented in the form of a matrix:

$$Change \supseteq \begin{Bmatrix} S_1T_1I & S_1T_1C & S_1T_1E & \dots \\ \dots & \dots & \dots & \dots \\ \dots & S_3T_3I & S_3T_3C & S_3T_3E \end{Bmatrix} = S * T * R,$$

$$S = \{S_1, S_2, S_3\},\ T = \{T_1, T_2, T_3\},\ R = \{Internal, Composite, External\}, \quad (1.9)$$

where *Change* – the superset of characteristics of the state of change; * – the sign of the fold; *S* – the vector of *Scale* values; *T* – the vector of *Time-bond* values (duration of changes); *I*, *C*, *E* – the vector of values of the origin of the causes of change (Internal, Mixed, External).

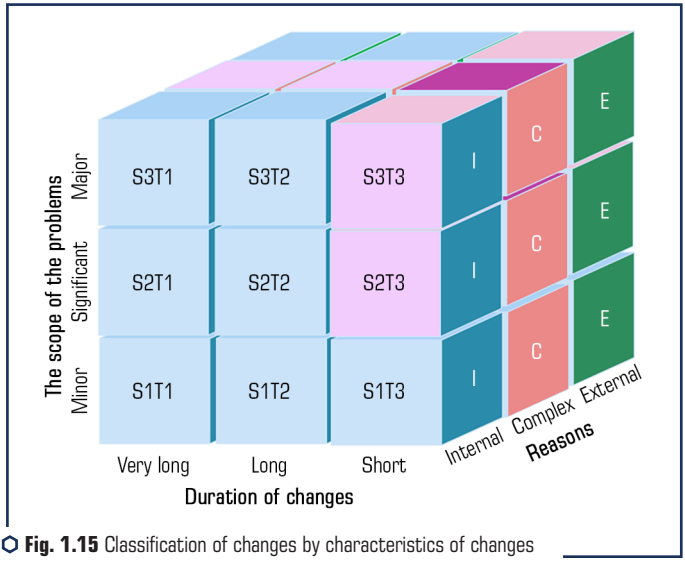

Fig. 1.15 Classification of changes by characteristics of changes and the nature of their causes

At first glance, the most comfortable situation is when the scale of the problems is small, the duration (time allotted for changes) is long, and the reasons for the changes are internal (under our control):

$$SChange_{easy} = \{S_1 T_1 I\}. \quad (1.10)$$

Accordingly, the most difficult option is:

$$SChange_{hard} = \{S_3 T_3 C\}. \quad (1.11)$$

However, the presence of people in the management contour leads to the need to take into account the so-called "subjective factor". This, again, is illustrated in [25] by the perception of "boredom" of long-term "insignificant" changes. Taking into account the psychological characteristics of a person, the most difficult changes are those that require changes in the nature of the actions of the actors (MoD, General Staff). Thus, the general expectation is that the highest probability of implementing the managed (proactive) changes corresponds to medium-scale, medium-term changes with a complex list of reasons (possibly a slight predominance of internally managed reasons).

Let's consider the conditions and features of changes in the management of projects (programs) to develop the capabilities of the Armed Forces in a "crisis".

When analyzing the current state of a project (program), it is necessary to assess in detail how the crisis has affected resources (financial, human, material) and the results of the main activities. It is important to understand which project (program) tasks require urgent adaptation or can be postponed.

Next, it is necessary to identify risks, describe possible risks associated with the crisis (economic, political, social), and their impact on the project (program) implementation.

In times of crisis, it is important to focus resources on the most important (critical) projects that have the greatest effect on preserving or developing the existing capabilities of the Armed Forces.

Therefore, projects (programs) should be adaptive to allow for rapid review and reprioritization in line with changes in the security environment.

A key aspect is to build an effective project (program) management system for developing the capabilities of the Armed Forces in a "crisis" to manage the necessary changes, optimize the use of available resources, engage key stakeholders, and maintain communication.

To do this, it is important to constantly monitor the status of projects (programs) and their compliance with strategic goals. Regular evaluation of performance will help to quickly identify deviations and manage the necessary changes. Performance evaluation standards may change in line with changing conditions and new goals.

It is also important to maintain transparent and regular communication with all project participants. A crisis can be long-lasting and have a negative impact on the morale of participants,

so attention should be paid to supporting people by providing them with proper information and emotional support.

In conditions of uncertainty (full or partial), it is advisable to evaluate several scenarios and develop alternative changes to ensure the full implementation of projects (programs). This will help to respond quickly to different crisis scenarios.

Thus, monitoring the status of projects (programs) to develop the capabilities of the Armed Forces in a "crisis" will help to adapt the strategy, and management approaches, prioritize projects, optimize resources, and effective communication (transparent, clear, and timely information transfer).

1.3 RESULTS-ORIENTED APPROACH TO PROJECT MANAGEMENT IN THE MINISTRY OF DEFENSE OF UKRAINE AND THE ARMED FORCES OF UKRAINE

Project management in the MoD and the AFU is provided for [26]:

a) understanding and continuously meeting the requirements of the military leadership;

b) reviewing projects from the perspective of creating additional value for the Armed Forces;

c) achieving the effectiveness of defense planning processes;

d) improving project management based on the evaluation of the effectiveness of intermediate results of achieving project (program) goals.

A results-oriented approach to PM in the MoD and the AFU requires managing both effectiveness and efficiency.

On the other hand, effective PM in the MoD and the Armed Forces requires high-quality monitoring and control by the project program manager (project sponsor, coordinator, customer) to make timely adjustments during project implementation and to identify which projects require more attention.

The monitoring and control tool is the Status Report [2], which is provided by the project (program) manager in the management vertical.

Practices of monitoring and evaluating government policies, programs, and projects are widespread in various fields and developed countries [22, 23, 27–36]. Initially, these practices were applied in the social sphere of public administration, and later they were extended to other areas, including security and defense.

The World Bank and international institutions were the first to implement such practices. A significant obstacle to the use of monitoring and evaluation of projects and programs at the national (intergovernmental) level was the different understanding of the concepts (indicators) of "effectiveness" and "efficiency" by the subjects of relations management. Subsequently, methodological techniques were developed to harmonize these indicators [31], as shown in **Fig. 1.16**.

The system of indicators (**Fig. 1.16**) is grouped into the so-called "direct" efficiency and effectiveness indicators, as well as into economic/resource effectiveness groups.

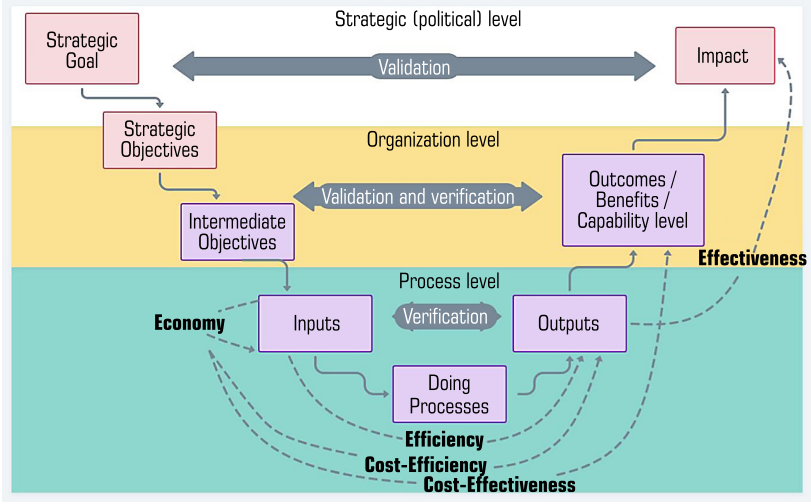

Fig. 1.16 The system of indicators

In the context of the MoD and the AFU, a simple example (case) of the tactical level can be considered. Let's assume that an enemy of up to a company (up to 100 soldiers) is attacking in the area of responsibility of a tactical unit. Over a certain period, they managed to destroy 10 enemy targets. Then the questions are:

– effectiveness – how did the inputs (100 enemy soldiers and your forces) turn into a changed enemy (90 intact/10 destroyed enemy targets and the remnants of your forces)?

– effectiveness (effect) – how outputs (direct results of activities) determine the advantages, benefits, or effects on the battlefield, *for example*: were we able to stop the enemy's offensive?

– resource/economic efficiency – how money/resources are converted into activity outputs: how much does it cost to destroy 10 enemy targets?

– resource/economic efficiency – how money/resources are transformed into effects, advantages, benefits: how much does it cost to stop an enemy offensive, or how much does it cost to ensure the safety of navigation in the near sea area?

As it is possible to see in the practice of the MoD and the AFU, everything above the middle line of the figure (**Fig. 1.15**) is referred to as performance indicators, and everything below it is referred to as efficiency. At the same time, the results are often not divided into outputs, benefits, and final impact. Meanwhile, modern models of planning, support, monitoring, and evaluation of government projects and programs have been implemented in Ukraine for some time in the areas of regional development programs, healthcare projects, and projects of the National Bank.

The "classical" approach to organizing project monitoring and evaluation involves the implementation of typical activities such as planning; data collection; evaluation; and reporting. However, the basis of monitoring and evaluation activities is the establishment of clear and measurable goals, indicators and criteria.Before starting the project, the project manager and the head of the monitoring and evaluation team should agree on the following issues: a list of indicators, rules for collecting data, rules for evaluating the collected data, rules for publishing data, etc.

The strategic goal of the project to develop the capabilities of the Armed Forces should be aligned with the ultimate impact of the project – the ability of the Armed Forces to effectively perform their tasks, and the development program – on the military-political situation, for example:

– the strategic goal of the project is to increase combat effectiveness/efficiency by improving the strike (intelligence, maneuver, defense, logistics) capabilities of the Armed Forces;

– the strategic goal of the program is to gain air superiority in the European theater of operations by improving the maneuverability of the air component of NATO forces in Europe.

Therefore, the strategic goal of the project (program) should include the names and characteristics (assessments) of the specific effects expected from its implementation (improved capability, improved performance), for example:

– the strategic goal of the project is to "improve the striking capabilities of the artillery units of the Armed Forces by transferring two artillery brigades to (*name of the artillery system*) by (*end-date*)";

– the strategic goal of the program is "to improve the maneuverability of the air component of NATO forces in Europe by building five mobile airfields based on the *DABS* system for $204 million".

The achievement of partial objectives and the strategic goal of the project (program) must be evaluated. Evaluation indicators and criteria should be selected according to certain requirements (rules). The most well-known are:

– *SMART – Specific, Measurable, Achievable and Attributable, Relevant and Time-Bound*;

– *CREAM – Clear, Relevant, Economic, Adequate and Monitorable*;

– *SPICED – Subjective, Participatory, Interpreted, Cross-checked, Empowering and Diverse*.

The MoD uses the *SMART* model because of its prevalence among project management professionals in Ukraine, as well as specialists from partner countries. Based on the data on the identified indicators, evaluation, monitoring and control are carried out.

"Evaluation" is carried out to obtain indicator scores at a specific time and place in the project area. "Monitoring" is the tracking of changes in the status/values of indicators over time to determine when management intervention is needed. "Control" means making management decisions/corrective actions based on monitoring data to bring the object of control to a certain state. It is quite common for the concept of "Control" to combine the other two concepts – "Monitoring" and "Evaluation".

Every project and every program of projects has its ultimate *impact*. For beginners and when changing the direction of work of a program and project management specialist, it is important to provide examples of how to define different formulations at different levels of management and in different areas.

At the **strategic level** – by areas:

1. *Increasing defense capability*, for example: "strategic goal" – strengthening the state's ability to defend its sovereignty and territorial integrity; "indicator" – the status of the readiness of the Armed Forces to act in various scenarios, including evaluations obtained during exercises and simulations.

2. *Technological development*, for example: "strategic goal" – development and integration of advanced technologies to improve defense capabilities; "indicator" – the number and effectiveness of implemented innovative technologies.

3. *Interoperability*, for example: "strategic goal" – strengthening the effectiveness of military cooperation at the national and international levels, in particular with allies and partners; "indicator" – the progress towards achieving a certain level of interoperability with allied forces.

At the **operational level** – by areas:

1. *Education, professional development and training,* for example: "strategic goal" – the development of professional skills and competencies of military personnel for the effective performance of tasks; "indicator" – the score of the growth of the level of qualification, based on the results of tests and exercises, and the conduct of combat operations.

2. *Logistics support*, for example: "strategic goal" – optimization of logistics processes and support systems to increase the efficiency and readiness of troops; "indicator" – reduction of response time to logistics requests and increase in unit satisfaction.

3. *Command and Control*, for example: "strategic goal" – improvement of command-and-control systems and communications to enhance coordination and decision-making, improve the quality of leadership decision-making, increase the resilience of the command-and-control system, etc.; "indicator" – the score of the increase in the speed and accuracy of decision-making based on feedback from military commanders, the number of cases of loss of control, etc.

At **the tactical level** – by area:

1. *Ensuring the effectiveness of combat operations*, for example: "strategic goal" – improvement of combat capability, including firepower, mobility and level of protection of troops (forces), etc.; "indicator" – estimates of the increase in accuracy/accuracy, efficiency, range of fire, mobility and survival/losses in combat conditions.

2. *Life safety (force protection)*, for example: "strategic goal" – strengthening the ability to protect military personnel, facilities and resources from threats; "indicator" – the level of the loss's reduction or attacks on military facilities and personnel.

3. *Innovation and experience management*, for example: "strategic goal" – ensuring tactical superiority through the development and acquisition of new weapons and equipment, changes in tactical techniques, etc.; "indicator" – the number of new weapons systems and tactical techniques that have been introduced and the volume of their impact on tactical superiority.

At the **socio-economic level of management** – by area:

1. *Economic*, for example: "strategic goal" – impact on the economy through defense orders, job creation, and development of the defense industry; "indicator" – increase in defense orders and their impact on the gross domestic product.

2. *Social responsibility*, for example: "strategic goal" – social integration of servicemen and their families, as well as veterans and persons equated to them; "indicator" – data on employment, education and social security.

3. *International cooperation*, for example: "strategic goal" – expanding and deepening international relations through joint defense initiatives and programs; "indicator" – the number of international exercises, operations, or programs in which the state participated; the number of harmonized capabilities between armed forces of different states/agencies.

A good source of examples of the strategic goals and objectives of programs and projects in the defense sector are already implemented programs and projects, both within the state and in other countries.

Consider examples where the "strategic goal" of the program is the readiness of the defense forces to act in various scenarios, and the "strategic objective" is focused on intelligence excellence. The "indicators" for assessing the level of intelligence capability development should reflect both the effectiveness of intelligence activities and their impact on overall defense capability.

A preliminary list of "indicators" for the program of intelligence capabilities development by area could look like this:

1. *Accuracy and relevance of intelligence*, for example: "share of accurately confirmed intelligence" – the percentage of intelligence that has been confirmed to be accurate during operations; "time to intelligence update" – the average time required to update intelligence.

2. *Intelligence area/intelligence coverage*, for example: "geographical area" – the size of territory regularly covered by intelligence activities; "variety of intelligence sources" – the number of types of sources used (electronic, human intelligence, space intelligence, etc.).

3. *The level of responsiveness/flexibility of intelligence capabilities*, e.g.: "response time to intelligence challenges" – the speed with which intelligence services can respond to changing operational conditions or requests; "flexibility of intelligence systems" – the ability of intelligence systems to quickly adapt to new types of military threats or tasks.

4. *Integration of intelligence for decision-making*, for example: "the level of intelligence use in strategic decision-making" – an assessment of how intelligence affects strategic planning and strategic decision-making; "the effectiveness of communication channels" – an assessment of the speed and reliability of intelligence transmission to relevant units and commanders.

5. *Development of the technological base*, for example: "innovations in intelligence equipment" – the introduction of the latest technologies and means in intelligence activities; "level of modernization of intelligence systems" – progress in modernizing existing intelligence systems and equipment.

It is also proposed to consider several well-known methods for use, for example, when initiating a program to develop the intelligence capabilities of the Armed Forces:

1. *Case Studies* – description and analysis of specific cases where intelligence had a decisive impact on strategic decision-making. This may include situations where intelligence has helped to identify and prevent threats, or where it has been used to formulate strategic initiatives.

2. *Surveys and interviews* – collecting feedback from key stakeholders, including military leaders and strategists, on how they use intelligence in their planning and decision-making. This will help to understand the impact of intelligence on decision-making.

3. *Scenario modeling and wargaming* – the use of scenario modeling and wargaming to assess the impact of intelligence on strategic decisions. This will allow to simulate different scenarios in which intelligence can be used to achieve the desired results (effect).

4. *After Action Reviews* – conducting an expert assessment based on the results of certain tasks to analyze how intelligence affected actual operations and their results. This helps to assess how effectively intelligence was used during planning and execution.

To use these methods, it is advisable to involve specialists from different levels of management (strategic, operational, tactical) and areas of activity (infrastructure development, defense procurement, territorial defense, etc.) in the monitoring and evaluation group.

In monitoring the implementation of projects (programs), it is important to use statistical methods that allow to identify the causes of deviations between expected and obtained results and minimize negative consequences (risks).

CONCLUSIONS

Project management in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine is important for making rational decisions at various levels of military management and for managing individual processes, projects, and programs to develop the capabilities of the Armed Forces, taking into account the defined goals and limited resources (budget, time, materials, etc.).

The theoretical and methodological foundations of program and project management and project activities in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine, which develop the national theory of military construction and are the basis for improving the scientific and methodological apparatus for assessing the effectiveness of creating new, developing and maintaining existing capabilities of the Armed Forces of Ukraine, are investigated.

Based on the results of the study, a list of questions has been identified that will facilitate the understanding of the essence of the basic components of the capability by officials (project teams).

The results-based approach to project management in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine proposed in this section groups the system of indicators into the so-called "direct" efficiency and effectiveness indicators, as well as into economic/resource efficiency groups. The peculiarity of the results-based approach is that it combines known methods, processes and concepts that characterize the long-term aspect, and formalizes the essence of defining the strategic goal and indicators using examples.

The practical value of these and other research results has been confirmed by acts of implementation in the Ministry of Defense of Ukraine, as well as implemented in the educational process of the National Defense University of Ukraine.

The theoretical and methodological foundations of project management in the Ministry of Defense of Ukraine and the Armed Forces of Ukraine can also be used by other components of the defense forces at the stages of their projects (initiation, planning, execution/monitoring, completion).

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