

NATIONAL ARMAMENTS STRATEGY

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A. INTRODUCTION

1. National armaments strategy (see “the strategy” hereinafter) is a set of ideas, principles and procedures formulating the basic principles of armaments of the Czech Republic. The strategy is based on the Czech Republic’s Military Strategy and on the implementation document titled “Concept of Development of Professional Armed Forces of the Czech Republic (see ACR hereinafter) and Mobilisation of the Czech Armed Forces Reviewed after Defence Spending Cuts”. This document serves as a basis of further concepts and methodologies in the sphere of armaments.
2. The strategy elaborates strategic approaches to provide material resources within the Czech Republic’s armaments necessary for implementation of the defined missions and tasks of the Czech Armed Forces. It specifies the role and position of the home industrial and economical base in the national defence planning system (armaments sub-system) with regard to the life cycle of military material. The strategy reflects the most topical development trends and procedures of the Alliance¹ concerning the armaments of the Czech Armed Forces and suggests the changes in development of the armaments system that would enable increasing of effectiveness of creation of both the material and intellectual resources for the implementation of security and defence policy of the state, armaments of the Czech Armed Forces and for the promotion of economic growth. It creates conditions for implementation of international obligations of the Czech Republic concerning the sphere of armaments that follow from our membership in North Atlantic Treaty Organisation (NATO), European Union (EU) and Western European Armament Organisation (WEAO).
3. From the viewpoint of its importance in the hierarchy of strategic, control and planning documents, the National Armaments Strategy is a partial strategy that continues in line with the Security Strategy of the Czech Republic – Military Strategy of the Czech Republic – partial strategies and concepts.
4. General framework of the strategy aimed at development of ideas, principles and methods of the whole armaments system creates conditions for a long-term validity and positive influence on the armaments conceptual development. On a lower legal level, the strategy affects creation of the armaments methodology for the control of projects, co-operation with industry, carrying out of the marketing analyses, analyses of costs of military material life cycle, logistic analyses, feasibility studies, introduction of military equipment and material into armament, research planning, logistic support system and creation of technical conditions. Application of ISO², IEC³ international standards and NATO standards is a basic methodological approach.
5. The strategy is based on the analysis of defence industry capabilities within a defence research project⁴ and on the analysis of the Czech Armed Forces made during the elaboration of the document titled “Concept of Development of Professional Armed Forces of the Czech Republic and Mobilisation of the Czech Armed Forces Reviewed after Defence Spending Cuts”⁵.

¹ Alliance – NATO (North Atlantic Treaty Organisation)

² ISO – International Standardisation Organisation

³ IEC – International Electrotechnical Commission

⁴ Defence research project titled “Capabilities of the Czech Republic’s Defence Industry and its Possible Share in the provision of Future Needs of the State Defence”; resolver: Institute of Strategic Studies of Military Academy, Brno, September 2000 – February 2003; Final Report ÚSS/2003-POV-POTŘEBY-ZVZ.

⁵ An analysis of required capabilities, target structure and composition of the whole Czech Armed Forces; <http://www.army.cz>.



6. The strategy develops the following four key areas of the armaments policy: national and international co-operation; importance of defence planning for the armaments; effective acquisition⁶ and strategic partnership of public and private sector in order to achieve an effective creation and use the material and intellectual abilities for the needs of the state defence.
7. In its chapter titled "Position and Starting Points of the Armaments Policy and Strategy", the document defines **WHAT** is the content and purpose of the armaments. The chapter titled "Armaments Policy" elaborates **HOW** to implement international and national co-operation and system bonds of defence planning in relation to defining the key operational capabilities. The chapter titled "Armaments Strategy", which contains the main tools of implementation, elaborates **BY WHAT** tools the national armaments strategy targets should be achieved.
8. The strategy is aimed at effective provision of the ACR needs that would enable achieving of the required operational capabilities by supplying military equipment and services. Main directions of the armaments creating the conditions for achieving the required operational capabilities are as follows:
 - Provision of the basic tasks of the Czech Armed Forces by military equipment and services within required time, given framework of resources and possessing the power and quality that would increase potential of the Czech Armed Forces;
 - Assessment of newly acquired military material and services from the viewpoint of the whole life cycle, namely its costs in the phases of analysis, development, implementation, operation and use and its subsequent disposal;
 - Priority development of the ACR specialization in the sphere of chemical and biological defence and passive tracking systems in both the research and development as well as within project management, procurement and implementation of the new military material and services;
 - Meeting of NATO standards in the sphere of armaments necessary for the achievement of operational capabilities (in the nearer horizon – till the end of the year 2006 – the initial operational capabilities);
 - Cooperation with the partners in NATO and European Union on the joint projects leading towards joint security support;
 - Support and development of non-profit marketing on the government-to-government level;
 - Securing of national projects within NATO Security Investment Programme (NSIP) and Foreign Military Financing (FMF) programs implemented by the USA resources;
 - Use of possibility of an indirect financing of the ACR development (e.g. foreign debts to the Czech Republic, development of public and private partnership (PPP));
 - Partnership co-operation with industry and use of its capacities in all phases of life cycle of the acquired military equipment and services;
 - Elaboration of system of so called "sleeping projects" that are activated in case of worsening of the security situation;
 - Minimisation of implementation risks at the acquisition of military equipment (final decision concerning necessary requirements should be made as early as the phase of analysis; marketing analysis, investigations, studies, simulations; testing of capabilities on demonstrators – prototypes; combination and simplification of decision-making processes and procedures; simplification of administrative processes; gaining of support of the industry and public sector; priority use of the products and services available on the market; refraining from specific requirements on design; making of efficiency analyses).
9. The strategy will be implemented on the basis of changes made in the Security Strategy of the Czech Republic, Military Strategy of the Czech Republic and in the strategic conceptual documents of NATO and European Union, which could principally affect the armaments sphere.

⁶ Defence Acquisition, the Ministry of Defence Policy Paper No. 4, Ministry of Defence of United Kingdom, December 2001.

B. POSITION AND BASES OF ARMAMENTS POLICY AND STRATEGY

ARMAMENTS DEFINITION

10. Armaments of the Czech Armed Forces is a process implemented by armaments system in order to equip the Czech Armed Forces by necessary material resources (weapons, weapon systems, military equipment, material and technology of strategic character) that will secure performance of the expected tasks so that using the available resources they could achieve the prescribed operational capabilities for the Czech Republic's defence within EU and NATO.
11. The strategy emphasises the understanding of term "armaments"⁷ as the activities connected with the acquisitions made with an aim to secure the tasks in the sphere of military equipment, material and others, namely long-lasting property of military material⁸ nature (with the exception of its maintenance, repair and procuring of spare parts for it) and other spheres of military activity supported by a research activity. The armaments involves expression of needs, marketing, project proceedings, research, development, tests, production, standardisation, quality assurance, codification, financing, acquisition, management of the concluded contracts, logistic support and other activities, procedures and fixed resources necessary to secure the property, services or any other system to secure performing of the tasks of the department of Ministry of Defence (see "MOD" hereinafter), to secure state defence, Alliance defence and European security, which is solved with regard to the life cycle of military material.
12. Following the defence planning, the purpose of armaments is:
- Securing of the required operational capabilities following from the political and military ambitions of the state;
 - Support and implementation of acquisition process during the whole life cycle of the property (beginning from definition of the requirement for its procurement, support in the course of its life cycle up to the liquidation of this property)
 - while adhering the standardisation, classification and quality requirements of the Alliance, nation and department and
 - using the achieved knowledge and potential of science and research and expressing the support to national defence industry.

⁷ In the United Kingdom Armaments Policy titled "The Ministry of Defence Policy Papers" from the year 2001 we can read the following terminological explanation: *Ministry of Defence uses the term "acquisition" to mark the whole process beginning from allocation of the request for new facility, equipment or service, its procuring, support for the whole life cycle till its final disposal or putting out of service.*

⁸ Act No. 219/1999 Coll., on the Czech Republic's Armed Forces, as subsequently amended.



13. The armament is understood as a complex of principles, processes and activities used for achieving such level of equipment of the Czech Armed Forces by military material which would make them capable of accomplishing the targets set by political-military ambitions and hence following operational capabilities.
14. Process of armament is understood as a process divided into logical phases, stages and milestones of concept, research and development, production, use, support and acceptance of delivery of the system products and services and putting the military material out of operation (life cycle model⁹). The functions secured by the phases and the milestones are defined by concrete purposes and results and by a set of activities that create the process. The life cycle is created by the processes based on the principle of modularity (maximum cohesion of functions of the process and minimum interconnection of independent processes) and ownership (responsibility for the process).
15. Purposeful and economical provision of material resources for the Czech Armed Forces activity is a basis for effective process of armament. Creation of material resources supports primarily the provision of the key operational capabilities. These operational capabilities must be permanently analysed and defined in the defence planning system and they must be connected with operation planning and crisis management system.

⁹ ISO/IEC 15288 CD2 Life Cycle Control – Processes of the System Life Cycle.

C. ARMAMENTS POLICY

16. Armaments Policy represents an integrated approach towards arrangement of the life cycle control processes of armament systems, equipment and related services within the Czech Republic, NATO and EU. Armaments policy represents an integral part of defence and security policy of the Czech Republic and application of the armaments policy is related to maintaining of collective security system of European and Trans-Atlantic Alliance.
17. The armaments policy sphere involves required operational capabilities of the Czech Armed Forces. The strategy develops the armaments policy targets in the areas of project management and control, research and development, procurement, logistic support, co-operation with defence industry and international cooperation. It affects both the current and future capabilities of the armament, technological level of defence industry and its abilities to cooperate and compete within national and international scale. The armaments policy expresses also national benefit in acquiring the key capabilities defined from the level of the Alliance.

ARMAMENTS POLICY OBJECTIVE

18. An objective of the armaments policy is to ensure the up-to-date and advanced armament systems supplied to the Czech Armed Forces in the planned time, quality and price, which would satisfy operational requirements from the viewpoint of performance, capability, logistic support and interoperability while using the allocated (human, financial and material) resources.

IMPLEMENTATION OF ARMAMENTS POLICY OBJECTIVE

19. Implementation of the armaments policy objective in a wider conception **on national level** means the use of modern, shared procedures for identification of any and all forms of co-operation within the state administration and private sector and their engagement in the preparation, management and control of projects and programs and in the creation of a synergetic effect using the professional knowledge of both military and civilian experts. This co-operation will enable more effective delivery and will help to promote the technical level of the Czech defence industry and the industry as a whole as well as its capability to assert itself in international competition. Its purpose is not only learning and large-scale use of the best technological and industrial "tops" but also promotion of participation of the national industry on the world market and its involvement in the consolidation process of the European defence industry.



20. Implementation of the armaments policy objective in a wider conception **on international level** develops the possibilities to initiate joint projects, to take part in the joint projects and the possibility to present and to assert the Czech interests and needs in the European and Alliance organisations dealing with military armament (EDA¹⁰, WEAG¹¹, CNAD¹², OCCAR¹³, EDIG¹⁴, RTO¹⁵). Its purpose in the sphere of bilateral relations is to ensure the Czech contribution to the harmonisation of military requirements and acquisition processes and to the systemisation of the offers that create condition for development of modern, powerful and technically developed Armed Forces of the Czech Republic. Cooperation is the only way how to achieve the required operational capabilities of the Czech Armed Forces from both the technological and financial point of view.
21. Implementation of the armaments policy objective **in the sphere of research and development** means the necessity to direct and co-ordinate basic technological research towards defence and security. Basic objectives and directions of the research and development are defined in National Research and Development Policy of the Czech Republic and in its implementation document titled National Research Program. Basic directions of research and development for the sphere of defence and security are defined and specified in the Concept of Research and Development in the Department of Ministry of Defence.
22. Implementation of the armaments policy objective in a narrower concept **in the Czech Armed Forces** means the necessity to create, maintain and develop the indispensable capabilities of the Czech Armed Forces that are able, within the Alliance defence security, to eliminate a spectrum of the security risks endangering peace and stability¹⁶ and that are capable of operational use on the territory of our country and out of its borders. Implementation of these capabilities requires an armament systems and equipment which is effective, mobile, functional and reliable and which can be easily secured from the viewpoint of maintenance, support and interoperability. Absence of these individual aspects has a direct impact on the military capabilities of the Czech Armed Forces. Effective armament and support of the Czech Armed Forces means the necessity to harmonise the processes with international standards and to implement the methods and procedure used by the Alliance partners and to participate in their development.

¹⁰ EDA – European Defence Agency

EDA is an agency that affects the Czech Republic's armament in a decisive way. The Agency that covers the areas of development of defence capabilities, research, acquisition and armaments as well as the technological base of defence industry will have an objective to co-ordinate national armaments policies to prevent a duplicity and mutual competition. EDA will operate under the authority of General Secretary of EU as a support to Common Foreign and Security Policy of EU (CFSP) and European Security and Defence Policy (ESDP). EDA should gradually involve all the existing multilateral European activities in the sphere of defence research and industry (first of all WEAG/WEAO, then apparently also OCCAR, Lol, EUROPA, POLAREM and others). The Agency will start its activity till the end of 2004. First, it will fulfil an advisory role and prospectively, even executive role.

¹¹ WEAG – Western European Armaments Group, WEAO – Western European Armaments Organisation

WEU (Western European Union) was established in Brussels in 1948. It was the only European organisation having responsibility for defence for a long time. Today it has become a basic system for co-operation of European nations in the sphere of military armaments policy. Its integration to EU as a military wing of EU was approved at the WEU ministerial conference in Marseilles in November 2000. WEAG, which was incorporated in WEU, will continue in its activities till establishing an adequate structure that would exist within EU. WEAG was established to promote co-operation among European nation in the sphere of defence plants. It is an informal, consensual forum, without pressures, working as a group of experts. Its activities are divided into three commissions according to individual themes; in the concrete, it is harmonisation of operational requirements, co-operation in the sphere of research and development and opening of defence markets together with the promotion defence industrial and technological base in Europe.

¹² CNAD – Conference of National Armaments Directors

CNAD is charged with the main responsibility for the co-operation at NATO armaments. The extensive co-ordination and co-operation in the sphere of armaments is an important tool to achieve decisive advantages of the collective defence both political and military ones as well as the advantages at the use of given resources.

¹³ OCCAR – Organisation conjointe de coopération à l'armement

OCCAR was established by France, Germany, United Kingdom and Italy on November 16, 1996 (since January 28, 2001 it has been using a legal status) and in 2001 it was enlarged by Spain, Belgium and the Netherlands. OCCAR was established with the aim to make the co-operation more effective and to control the armament programs of the member states in harmony with the best experiences. Its principles involve creation of supranational program teams using up-to-date and advanced methods of control; promotion and development of defence industrial and technological bases in Europe; use of general principle of "juste retour" for several programs and for several years; in the decision processes concerning selection of the plants, it is prioritising of such plants development of which was participated by the states incorporated in OCCAR. OCCAR is the first element of the European multinational aggregation of the acquisition subjects, which should be transformed into "European Armaments Agency" capable to guarantee closer co-operation of national program activities and joint program management ensuring maximum interoperability among the Armed Forces of individual countries.

¹⁴ EDIG – European Defence Industrial Group

¹⁵ RTO – Research and Technology Organisation

¹⁶ Military Strategy of the Czech Republic, Part B, Security Environment; Prague, 2004.

PRINCIPLES OF ARMAMENTS POLICY IMPLEMENTATION

23. Functional system of defence planning should be achieved by co-operation among the ministries, harmonisation with NATO, EU and WEAG defence planning, by ensuring contacts with security and defence policy and by real, resources-backed, long-term (perspective) planning and medium-term (conceptual) programming connected with budgeting.
24. Functional system of armaments should be based on real defence planning. The defence planning system should permanently analyse the capabilities of the Czech Armed Forces expressing their quality and employability. Results of the capability analyses should be transformed to the requirements for military material. The requirements for military material should be involved in medium-term plan of activity and development of MOD in a form of projects and the activity should be always executed with regard to the military material life cycle. The following principles should be observed here:
- Procurement of military material should be realised on the basis of the specifications and orders of the required outputs (operational capabilities) instead of the traditional approach based on the inputs anticipating the possibility of alternative solutions;
 - As a matter of principle, the utility value of military material should be evaluated from the viewpoint of costs of the system service life not only from the viewpoint of its initial purchase cost;
 - When procuring the military material we should use modern and high quality practical knowledge of project management that are used in private sector as well as recommendation of our Alliance partners.
25. Functional (prosperous) industrial base consisting of the research, development, production and repair capacities should be aimed at the following aspects: support of the specialization of the Czech Armed Forces, procurement of services for the professional Czech Armed Forces, partnership of private and public sectors¹⁷, provision of analyses and modelling, co-operation in integrated project teams and joint working groups of the MOD and industry under the auspices of Defence Industry Association and Manufacturers' Aircraft Association.
26. Realisation of orders from foreign suppliers should be connected with the requirements for compensation (offset programs). The offset programs should be required from the foreign suppliers in case if the orders are higher than 300 million CZK (100 million CZK in case of sub-suppliers). With regard to the trend of economically developed countries that gradually desist from the strict implementation of the offset programs it would be efficient to assert a direct participation of the national defence industry in the implementation of the orders from abroad.¹⁸ Requirement of the direct participation of national defence industry in the implementation of the orders from foreign suppliers should be considered as a strategic orientation of MOD even in case of the orders that do not amount the limits set for the offset programs.
27. Professionalization of the Czech Armed Forces and the tasks set for achieving initial and target operational capabilities in the area of armament require:
- To secure intensive international co-operation with the other NATO and EU members states and national co-operation with the other ministries and national industry;
 - To support asserting of the new defence planning system and thorough analysis and planning of the key operational capabilities.

¹⁷ PPP (Public and Private Partnership) involves several forms of co-operation. Its core is PFI (Private Finance Initiative); other forms include contractual ensuring of services (outsourcing), integration, control and implementation of the project by private sector while ownership of the procured property and the costs remain to public sector (prime contracting), wider markets that enable commercial use of non-reducible free capacities of public sector and partnering securing long-term contracts.

¹⁸ D. Barrie, B. Tigner: OCCAR finally moves towards oversight role. In: Defence News, 11 December 2000.



INTERNATIONAL AND NATIONAL CO-OPERATION

28. The sphere of armaments has been witnessing reforms of the acquisition systems in advanced Armed Forces, namely in the Alliance countries in the last five years. This process is affected namely by the decay of bipolar world, globalisation, escalation of investments to the sphere of information technologies, transformation of the Czech Armed Forces connected with reduction of combat potential and restructuring of American and European defence industry. The Czech Republic as NATO and EU member country considers it necessary to identify itself with this development. In the sphere of armament, it should follow and actively influence the development in NATO, EU and WEAG with an aim to harmonise the requirements and processes, to deepen the cooperation in the sphere of research and development, acquisition and production and to search and actively use the possible ways of cooperation. International co-operation in the sphere of armament should be organised namely via:

- Main committees of NATO Council (CNAD¹², NAFAG¹⁹, NAAG¹⁹, SNLC²⁰, SC²¹)
 - CNAD Committees (LCM²², RTB/RTO²³, Air Force Armaments Group, Army Armaments Group, NIAG²⁴) and selected special-interest working groups and teams;
 - NAMSA²⁵;
- EU agencies for the area of development of defence capabilities, research, acquisitions and armaments (EDA¹⁰); and
- other European organisations: WEAG¹¹, OCCAR¹³, Lol²⁶, EDIG¹⁴ and OSCE²⁷.

29. Production (acquisition) logistics that is a tool used to accomplish the objectives of armaments and enables the Armed Forces common access to the logistic support is a part of armaments within NATO system. Co-ordinated logistic planning of NATO is the main aspect of a purposeful and economical use of the resources. Main objective of co-operation of the Czech Armed Forces within NATO is accomplishment of the political objective (to increase the coherence and viability by means of demonstration of unity in the effort of joint defence), military objective (to promote standardisation on the level of interoperability), social-economical objective (to create a space for more effective distribution of national resources into research, development and production and to maintain the all-Alliance defence industrial and technological base) and technological objective (to share the technological resources and the resources of defence research in order to ensure the technological lead over the potential enemy). The main NATO and CNAD committees should be used at accomplishing these objectives.

¹⁹ NAFAG – NATO Air Force Armaments Group, NAAG – NATO Army Armaments Group

²⁰ SNLC – Senior NATO Logisticians Conference

²¹ SC – Science Committee

²² LCM – Life Cycle Management

²³ RTB/RTO – Research and Technology Board/Research and Technology Organisation

²⁴ NIAG – NATO Industrial Advisory Group

²⁵ NAMSA – NATO Maintenance and Supply Agency

Its mission is to provide logistic services in peacetime, during crises and conflict for the systems of weapons and equipment held collectively by NATO countries. Its aim is to promote the combat readiness, to improve the effectiveness of logistic operations and to realise substantial savings by means of consolidation of procurement of supplies. NAMSA carries out its duties in the sphere of supply, maintenance, calibration, procurement of supplies, transport, technical support, engineering services and configuration procedures for about 30 weapon systems. Moreover, it elaborates the agreement for disposal of all kinds of ammunition and supports the group of national directors for codification. NAMSA is NATO agency that provides logistic services for the member states on the basis of bilateral and multilateral agreements of these countries with NAMSA.

²⁶ Lol – Letter of Intent

On July 27, 2000, six major European Ministers of Defence producing weapons (Germany, France, Spain, Italy, United Kingdom and Sweden) signed a framework agreement that enables restructuring of the defence industry in Europe. The agreement offers a joint frame for creation of an environment prioritising development of European industry that is more capable and stronger to compete on the total defence market and to create an integrated European market. The agreement contributes to securing the long-term deliveries of equipment for Armed Forces for lower prices and thus it supports development of the common European security and defence policy.

²⁷ OSCE – Organisation for Security and Co-operation in Europe

30. CNAD as a co-ordinator of NATO armaments is engaged in performing the tasks of NATO defence planning in the sphere of technologies and technological solutions. CNAD performs the defence planning tasks by securing the requirements following from FG²⁸, DCI²⁹ and PCC³⁰. The CNAD procedures result in recommendations to further develop the activities concerning namely the following aspects:
- Exact specification of standardisation and co-operation criteria that the equipment of the member-states Armed Forces should meet in order to achieve an effective result in a joint action. Securing the capability of cooperation is a key factor of success whenever it refers several allied Armed Forces in a joint operation.
 - Exact specification and selection of the armament and technologies the financing of which is shared by all or several countries.
31. Current backbone (long-term) NATO projects involve:
- AGS project – development of the Air Force command and control system – “Alliance Ground Surveillance System”;
 - Ammunition with terminal guidance for Ground Forces, Air Force and Navy;
 - Suppression of the enemy anti-aircraft defence with supporting jamming;
 - Large-capacity air and sea transport;
 - Refuelling during the flight;
 - Solution of the study of anti-missile defence in the area of battlefield continues.
32. NAMSA should be used to support the system of NATO co-operative logistics. Emphasis should be put on NCS³¹. We should participate in the meeting of the East European Armaments Production Group as an observer (the stocks and production capacities cover the needs of the Czech Armed Forces concerning the equipment of the East European production that is gradually being put out of operation) with an aim to offer the new NATO members states assistance in the supply and repair of their equipment in case of need. We should use the possibility of cooperation with NAMSA at Mi-24 and Mi-17 helicopters upgrading, at implementation of STANAG 4613, 6414, 4615, DEF-STAN 00-60, MIL-STD 1388/2B (NPDM, TLBM, ISO/IEC 15288, ISO/IEC 12207, ISO/IEC 10303/AP239)³² standardisation agreements with the Czech defence industry and Czech Armed Forces. Gradually introducing the military material compatible with the armaments of NATO member states we should approach the negotiations with NAMSA with the requirements for securing the logistic support (in case of its effectiveness for the Czech Armed Forces).
33. Involvement of the Czech Republic in EDA¹⁰ represents a necessary complement to the Czech Republic’s foreign policy. EDA will aim its attention at identification of the key problems for EU armaments, joint solution of principal EU armaments projects, assessment of national armaments intentions and possibilities of international cooperation, consolidation of technological base of EU defence industry, directing of the areas of research technologies to the development of defence technologies and to the needs of the defence industry. EDA creates a space for coherent cooperation of the still-fragmented European organisations in the sphere of armaments (OCCAR, Lol, WEAG, etc.) The OCCAR and Lol organisations are especially important

²⁸ FG – Force Goals

²⁹ DCI – Defence Capability Initiative

³⁰ PCC – Prague Capability Commitment

³¹ NCS – NATO Codification System

NCS enables a unified system of allocating the NATO Stock Number (NSN) for military material identification. It enables precise control of supplies and maintenance within NATO member states.

³² STANAG 4613 (Model for NATO Products Data), STANAG 4614 (Implementation of Model for NATO product Data), STANAG 4615 (Interchange Specification for NATO Products Data).

NPDM – NATO Product Data Model; an integrated view of the information and data concerning the product, system, for its support and ensuring of logistic processes.

TLBM – Through Life Business Model – Business model of a defence system life cycle. The model was created as an aid in creating a common framework for describing the system life cycle and a complex set of properly defined procedures and related terminology.

ISO/IEC 15288 CD2 – Life Cycle Control – Processes of the System; ISO/IEC 12207 – Information Technology – Processes in the software life cycle; ISO/IEC 10303/AP 239 – Standard for Exchange of Product Model Data and its part PLCS (Product Life Cycle Support).



from the viewpoint of future arrangement that the developed European countries would like to achieve as a result of rationalisation of the process of supply and demand in the sphere of armaments. It is an interest of the Czech Republic¹⁶ (Ministry of Defence, Ministry of Industry and Trade and Ministry of Foreign Affairs as well as the Czech defence industry) to start negotiations on the accession or cooperation with these organisations and their integration to EDA.

34. International cooperation should be considered as the only way, from technical and financial point of view, that enables the Czech Republic to achieve the required operational capabilities and involvement of the Czech defence industry in the process of restructuring of the European defence industry.
35. Development of the Czech Armed Forces in the sphere of armaments should be system-linked with the expected development of NATO and EU capabilities and with the involvement of the Czech Republic in the European structures and organisation. Bilateral cooperation with the influential EU countries should be developed with an aim to promote the credibility of the Czech Republic as a reliable partner.
36. Harmonisation of needs for securing the defence on both national international levels should increase the degree of security, international prestige, defence capability, degree of interoperability and support the economical growth.

NEW DEFENCE PLANNING SYSTEM

37. The Concept of Development of Professional ACR and Mobilisation of the Czech Republic's Armed Forces Reviewed after Defence Spending Cuts approved by the Czech Republic's Government sets an effective defence planning and crisis management system on the level of MOD as well as on national and Alliance level. An objective of the defence planning is development of effective defence system disposing of adequate forces and means.
38. The planning system requires to secure a cohesion of production planning, preparation and use of the Czech Armed Forces with the programming and budgeting processes as well as cohesion of material and financial planning.
39. Planning of development, preparation and use of the Czech Armed Forces is a key sphere of defence planning. It defines necessary capacities and capabilities of the Czech Armed Forces to perform their tasks (conclusions from operational planning and NATO requirements) and necessary to eliminate the threats in a form of development targets. It is based on the assessment of combat potential of the Czech Armed Forces and specifies the needs of resources.
40. Planning processes in the department of MOD are based, first of all, on the Security Strategy of the Czech Republic, Military Strategy of the Czech Republic, NATO Strategic Concept, NATO Summary Report, NATO Ministerial Directives, NATO Target Force Goals, etc. as well as on the strategic documents formulating the security and defence interests and priorities of EU. Basic processes related to the Czech Republic's defence planning will be passing in regular cycles.
41. Defence planning process includes an assessment of security risks. Process of security risks assessment is concluded by the requirement to express the missing (insufficient) operational capabilities³³.

³³ Operational capabilities of Armed Forces express their quality and employability. They enable to effectively eliminate the security threats and risks in the future crisis situations and in war conflicts in both the collective and individual defence.

42. Expression of the missing and insufficient capabilities in the department of MOD, setting of the future requirements upon the capabilities and qualities of the acquired military material, priorities of procurement and assessment of the state of satisfying the capabilities require establishment of a body of operational capabilities administration. In connection with implementation of the development trends in the Armed Forces the process of establishing this body within MOD has already been started.
43. Planning process of the department of MOD includes an orientative long-term planning, accentuates medium-term planning including the medium-term programming and annual planning.
44. The medium-term plan of activity and development of the MOD department proceeds from the principle of programming where the programs express the way of achieving the required operational capabilities (resulting from the assessment of security risks). The required operational capabilities expressed in a form of programs including the requests for strategic acquisitions of military material are implemented in the process of armaments.
45. The programs to complete the planned operational capabilities of the Czech Armed Forces should be implemented in the process of armaments and their accomplishment should be supported by the defence industrial base. We should plan our involvement in the joint defence programs of NATO, EU and make use of possibility of the defence industrial co-operation within the grouping of NATO and EU countries and other European organisations (WEAG, OCCAR, EDIG, Lol) and develop the co-ordination of use of the research and development for the needs of development of the Armed Forces capabilities.
46. Proposing the implementation of programs of strategic acquisitions of the military material (see “armaments programs” hereinafter) we should make use of our involvement in NATO planning system of conventional armaments and NATO system of armaments harmonisation.

KEY OPERATIONAL CAPABILITIES OF THE CZECH ARMED FORCES

47. Key operational capabilities³⁴ that qualify the development of all the elements of the Czech Armed Forces for the period of the nearest ten years and are decisive for the accomplishment of missions, tasks and the Alliance commitments of the Czech Armed Forces are as follows:
 - Well-timed availability of the forces and means necessary to perform the tasks in operations;
 - Development of forces, military presence in risky localities and in their surrounding; maintaining of readiness of the forces for deployment; training and exercises; necessary supplies;
 - Effective system of command and control, communication, informatization, intelligence, surveillance and reconnaissance;
 - Capability of planning, organisation, control and command to the Czech Armed Forces; development and use of stationary and mobile means of intelligence, reconnaissance, surveillance, communication and information infrastructure;
 - Deployability and mobility;
 - Capability of planning, preparation and organisation of transport of the forces to the area of deployment; availability of ground and air transport means; readiness of military infrastructure; capability of loading to air and sea transport

³⁴ Military Strategy of the Czech Republic, Part C, Political-Military Ambitions (Prague, 2004); Concept of Development of Professional Armed Forces of the Czech Republic and Mobilisation of the Czech Armed Forces adapted to the changed frame of resources, Chapter 1.2, Specification of Military-Political Ambitions of the Czech Republic and Annex No. IV/21, Key Operational Capabilities.



means; furnishing with transport and handling equipment, logistics (containerisation and palletisation); transportability; capability of transport organisation in the area of deployment;

- Capability of effective commitment to battle and reconnaissance;
 - Operation planning; target identification; co-ordination of activity conducting; effective manoeuvre; adequate armament and equipment;
- Long-term sustainability of forces in the area of deployment;
 - Preliminary planning; preparation and organisation of personnel support; logistic and medical support of forces; optimisation of structure and amount of supplies and their restorability; supply, standardisation and interoperability; evacuation and repair; reserves and replenishment;
- Power of resistance and protection of forces;
 - Early warning against an attack; active and passive protection; air defence; use of the unmanned weapon systems.

48. In order to secure the key operational capabilities of the Czech Armed Forces in connection with the changes of the framework of resources, the implementation of programs and projects should be aimed at achieving both the initial and target operational capabilities. The programs and projects must satisfy the basic goal i.e. securing of the Czech Republic's defence in the most effective way using all the possibilities following from the security environment with an emphasis laid on economical views and maximum possible covering of risks. The programs and projects for achieving the initial operational capabilities should be aimed at the following aspects:

1. Decisive projects of the ACR Specialized Forces:

- Passive tracking systems;
- Building up of Biological Protection Centre;
- Development and modernisation of the Specialized Forces;
- Acquisition of chemical and microbiological means for the Specialized Forces;

2. Decisive projects of armament of the ACR Ground Forces:

- Building up of Military Rescue Units;
- Wheeled armoured carrier;
- Introduction of artillery radar into the ACR armament;
- Operational-tactical system of command and control of the Ground Forces;
- Building up (reconstruction) of perspective garrisons;

3. Decisive projects of the ACR Air Forces armament:

- Upgrading of Mi-17 and Mi-24 helicopters;
- Lease (procurement) and operation of a multipurpose supersonic aircraft;
- Signal communication systems;
- Air traffic control systems;
- Procurement of man-portable air defence system;
- Operational-tactical system of command and control of the Air Forces;
- Building up (reconstruction) of perspective Air Force Bases;

4. Decisive projects of the ACR Support and Training Forces:

- Reconstruction and modernisation of Defence University;
- Reconstruction of infrastructure of the Support Forces;

5. Sectional projects of the ACR:

- Introduction of a medium-size off-highway truck;
- Containerisation;
- Sectional information system;
- Ecological disposal of ammunition.

Special attention should be paid namely to resource-intensive armaments programs and the programs solved in co-operation with several departments. It concerns the programs of leasing of supersonic aircraft and ensuring of its armament; operation of L-159 aircraft and its armament; upgrading of helicopter aviation; acquisition of wheeled armoured carrier; procurement of medium-size off-highway truck; second stage of ammunition disposal; building up of tactical systems of command and control of both Ground and Air Forces; completion and modernisation of the MOD communication infrastructure and building up of sectional information system. We should consistently keep to the accepted intradepartmental contracts and agreements with the Ministry of Transport with an aim to ensure maximum safety of both civilian and military air traffic and effective use of the Czech Republic's airspace. Within the preparation of the new programs in cooperation with the Czech defence industry we should aim our primary attention at the program titled "Soldier of the 21st century" with an emphasise laid of the selection of hand weapons, night vision devices, signal, navigation and communication means and proper equipment.

49. Starting point of the armaments policy and the basic goal should be applied on both national and international level when planning and implementing the programs leading towards achieving the required operational capabilities. Their application should be enforced in all directions of the armaments policy implementation.



D. ARMAMENTS STRATEGY

50. Armaments strategy is a procedure ensuring armament of the Czech Armed Forces with an aim to achieve and develop their operational capabilities. It conceptually specifies achieving of the goals of both national and Alliance policy and related strategies by means of identified complex of means, methods and tools within a certain time period.
51. At the same time, the strategy involves a set of processes that are organized to be able to affect future conditions in the direction towards the outlined goals.
52. The strategy is based on the political conception defined in the Security and Defence Policy of the Czech Republic, which projects national interests, ambitions of the state and assessment of security situation, international commitments, possibilities of the state and society. Moreover, the strategy follows from Military Strategy of the Czech Republic and from the implementation document titled Concept of Development of Professional Armed Forces of the Czech Republic and Mobilisation of the Czech Armed Forces adapted to the changed framework of resources. The document of strategy is further elaborated into concepts and methodologies in the sphere of armaments.

ARMAMENTS STRATEGY OBJECTIVE

53. An objective of the armaments strategy is to achieve material resources within the Czech Republic armament that are necessary for the implementation of the operational capabilities with an aim to fulfil the mission and tasks of the Czech Armed Forces while making use of both international and national industrial and economical base. Moreover, it concerns the elaboration of strategic approaches given by the security and defence documents of the Czech Republic for ensuring the material resources within the Czech Republic's armaments.

IMPLEMENTATION OF THE ARMAMENTS STRATEGY

54. The tasks and targets set for achieving of both initial and target operational capabilities and implementation of the armaments policy require:
- Application of principles of effective acquisition;
 - Enforcement of the support and evaluation of costs of military material within the whole life cycle;
 - Deepening of friendship of the public and private sectors;
 - Development of new forms of involvement of private sector in the support of the programs.

PRINCIPLES OF EFFECTIVE ACQUISITION IN THE ARMAMENTS SYSTEM

55. Effectiveness in the armaments system should be ensured by a close interconnection of the armaments system and defence planning system, logistic support system and defence industry base. Implementation of modern principles of the processes and technologies should enable acquisition of military material that would enable achieving of the new operational capabilities for the needs of future crises and conflicts as well as identification and mobilisation of the resources necessary to secure development and activity of the Czech Armed Forces within the whole life cycle (design, development, production, use and liquidation).⁹
56. Achievement of consensus in optimising the processes and organisational structures of MOD department, which exploit their connections in the departmental, national and international environment and using their functions they secure implementation of all the necessary processes leading to achievement of the required operational capabilities, should be considered as a condition of the effectiveness of the armaments system.
57. The armaments system should be secured by the following aspects:
- Optimisation of the “supplier – customer” connections determining the subject within MOD that requires concrete operational capability (who is responsible for an unambiguous and clear definition of what is required) and the subjects that is responsible for its ensuring (for the effectiveness by which the task will be accomplished).
 - Participation in the analyses of the required operational capabilities (by a form of “trade off”³⁵ analyses, preliminary marketing analyses and alternatives) and hence defined requirements for the missing or insufficient capabilities in a form of a user's study and programs (it is implemented in defence planning process – it is a necessary output for the armaments system).
 - Planning of armaments within the defence planning system and its effective control.
 - Management of armaments programs and projects on the principles of project management (the integrated project teams and project teams should be considered as a basis of the process of effective acquisition).³⁶
 - Proposal of logistics support system and its optimisation through the life cycle of military material (including the resources for operation, maintenance, training and schooling).
 - Taking delivery processes.³⁶
 - Defence technology development.
 - Implementation of defence standardisation and cataloguing.
 - Government quality assurance.
 - Introduction of military material into use in the Czech Armed Forces.
 - Support in the process of use of the military material in the Czech Armed Forces.
 - Proposal of the way of material liquidation after its life cycle termination (technology of liquidation, costs).

³⁵ Trade off – a compromise based on the balance of advantages and disadvantages of different possibilities and selection of the possibility that will avoid the worst combination of the effects. (Collection of Business Activities and Management, Published by Management Press, 1955). In the MOD conditions it concerns an early executed and thorough analysis of all the alternatives and compromises connected with achieving concrete operational capability with an emphasis laid on investments to the works aimed at the reduction of risks since the very beginning. It guaranties that when deciding about the way how to satisfy the requirement to achieve a certain capability, they will take into consideration the widest possible set of alternatives. Before the work on the project reaches the main milestone, the integrated project team manager must be sure that he is able to secure the project within exactly defined performance, costs and time parameters.

³⁶ ISO/IEC CD2 Life Cycle Management – Life Cycle Processes, Chapter 6.2. Process of taking delivery leads to conclusion of an agreement concerning system products or services; it controls the customer-suppliers relation during the taking delivery and ensures reception of the system products or services supplied by the supplier.



58. The following principles should be observed at the armaments system management:

- Value orientations;
 - economic efficiency;
 - effectiveness;
 - expediency;
- Organisation cultures in the armaments;
- Minimisation of risks;
- Effective acquisition;
- Definition of requirements according to target capabilities;
- Marketing support;
- Technological development monitoring;
- Use of integrated project teams;
- Evaluation of costs within the life cycle;
- Integrated logistic support;
- Responsibility of suppliers for the quality;
- Training and schooling of personnel;
- Support to equipment by information technologies;
- Application of the best procedures.

59. The processes in the armaments should be **“value oriented”** at economic efficiency, effectiveness and expediency while ensuring sufficient flexibility and aiming at achieving the highest value of combat efficiency for the money (utility value). Ensuring of their transparency should be a condition of effectiveness of the armaments processes.

- **Economic efficiency and effectiveness** of the armaments processes should be implemented by selecting the solution with the ratio of the highest possible utility value of the property and services and the lowest costs of the whole life cycle. In the sphere of armaments, the attention should not be aimed only at the lowest acquisition price of the offered commodity or at searching for savings at all costs but at maximisation of the resulting effect for the development of capabilities of the Czech Armed Forces.
- **Expediency** in the acquisition of property and services should be ensured by depositing the financial resources in the values that finally result in increasing operational capabilities of the Czech Armed Forces. Ordering of required capabilities and output capacities enables the supplier ensuring of the best way to satisfy the required result.
- The best **value acquired for money** (utility value) should cover the solutions that satisfy the ordered requirements at the lowest costs for the whole life cycle.³⁵ However, when evaluating the lowest costs for the whole life cycle of the acquired property or service we should necessarily weigh up even the best solution in the given frame of resources – MIN/MAX principle. It may become evident in case of development of relations within PPP when private sector offers some invention and innovation approaches to the solutions which are not necessarily the cheapest (MIN) but they will show the best acquired value (MAX) for the spent (even higher) amounts of financial resources. Invention and innovation potential of private sector is just this factor which makes the PPP approach a tool of an effective acquisition. Existence of competitive environment on the market, open tendering, transfer of responsibility and risks to the supplier as well as strengthening of control is a condition of achieving the most advantageous value for the spent financial resources.
- **Transparency** in the armament process means achieving of transparent, clear and intelligible communication between state administration and civilian sector at the implementation of business relations. Communication should be understood as a transfer or mutual exchange of information between two or more subjects while observing the rule of law, protection of sensitive information and principles of equal and non-discriminatory approach. Provision of necessary information for the entrepreneurial orientation of civilian sector is an interest and duty of the state administration. On the other hand, the state administration may co-operate only with the subjects that are reliable, credible, financially stable, possessing transparent ownership and managerial capabilities.

60. **Organisation culture** in the armaments should be supported by the principles of communication, consultations, co-operation and co-ordination.³⁷ The armaments management should make use of modern management approaches (leadership) and matrix organisational structure based on quite uniquely defined competencies. Relations among people in the armaments process should be based on honesty and willingness to share different or discordant opinions.³⁸
61. **Minimisation of risks** should consider the less risky and, from the viewpoint of resources, less demanding options of solutions; it should consider the optional solutions with an aim to minimise the risks of a failure from the viewpoint of time, finance and capacity. Achievement of the required capabilities of the Czech Armed Forces and satisfaction of their needs do not necessarily require implementation of material solution. Priority is given to the solution of non-material (organisational, doctrinal, methodological) nature the implementation of which is connected with the lowest risk level.
62. Using the principle of **effective acquisition** requires creation of such conditions in the state administration that would put it to the role of a demanding customer that is able to orient itself in the market conditions. It should be based on the knowledge of its own needs and the capabilities of suppliers (analysis of their research, development and production capabilities). It requires creation of equal conditions for transparent competition with an aim to minimise its costs in the whole life cycle and to select the best option to satisfy its own requirements. The effective and purposeful acquisition of the operational capabilities should always be considered as the reason of the effective acquisition.
63. Definition of **the requirements according to the target capabilities of the Czech Armed Forces** should be made in a form of functional quantified parameters. The definition of the requirements should not limit the possibilities of their solution (Creation of sets of tactical-technical parameters elaborated in the period of the project⁹ preparation and thus in the period of supply of morally obsolete and, in many cases, mutually eliminating each other parameters should be excluded). On the contrary, supply of military material satisfying the trends of technological development in the time of its delivery should be enabled. Optimisation of the requirements should make use of the most modern tools of simulation and modelling (solved by suppliers).
64. **Marketing support**³⁹ in the armaments processes should be used as one of the decisive tools to determine the time frame, costs, performance factors (functional characteristics, technical-tactical indices) and the degree of logistic support at the decision concerning actual ways of accomplishing the target operational capabilities. Communication with market and its individual subjects should be directed towards cognition and verification of production and technological capabilities of the Czech defence industry and towards opening a comparison with foreign suppliers. Mutual exchange of information executed in harmony with clearly defined rules decreases the probability of misusing the information; it limits corruption, deepens the transparency and flexibly supports the decision-making processes in the armaments. Concerning the future intentions of the armaments, the Czech defence industry is oriented in the above mentioned way; it has necessary reaction time at its disposal and it can direct its business plan in harmony with the needs of the Czech Armed Forces. Conclusions of the marketing analyses and studies serve the “capability administration bodies” and the project management for coordination of their decisions within MOD department while respecting the following views:
- Setting of the final necessary requirements. Their feasibility must be ensured in an approved time limit with required capacity within the price frame. Changes of the requirements should be avoided in the course of implementation;

³⁷ Organisational culture represents a sum of moral values, traditions and habits that create a basis for the labour activity; it affects the relation to work, discipline and quality of results. Currently it is oriented expansively and in a pro-innovation way.

³⁸ Milton D.: Project Management; Computer Press, Prague, 2000, page 179–180.

³⁹ Kotler, Ph.: Marketing Management; Prentice Hall, Inc. 1991, page 4. Marketing is a socially controlled process used by individuals and groups to achieve what they need and require through the creation, offer and exchange of valuable product with other subjects.



- Ensuring of minimisation of the implementation risks, which consists in a comprehensible market analysis, research, studies and simulations;
- Requisition of evidence concerning the capabilities and abilities of implementation (fabricability) in a form of submitted demonstrators, simulations and prototypes;
- Consolidation of decision-making processes and procedures. Time is a decisive factor within the process system. Therefore, the administrative effort should be reduced to necessary minimum. Intervention in the processes should be pointedly removed. It should be achieved by continuous effective control and by ensuring the customer's (user's) participation in the process;
- Earning of the support of industry till the level set by the law in the following form:
 - timely introduction of industrial know-how and capabilities;
 - independent implementation of modern solutions;
 - use of the possibilities for outsourcing the services;
- Requisition of the use of available products and services. The available components should be used for new products with an aim to avoid price risks and high-risk developments. Capabilities of market should be used at maximum in considering the possibilities of logistic support and availability of services from the viewpoint of requirements;
- Refraining from specific design requirements limiting the standards and test for the benefit of generally valid regulation that are defining it. It enables the producers more freedom at supplying the military material in order to satisfy the required operational capabilities. Possible irrefutable exceptions should be justified;
- Ensuring of integral planning of activities and consideration of the system relations (before starting the project);
- In case of strategic projects – strict requisition and performance of analyses of the life cycle costs (LCC⁴⁰ analyses).
- Analysis of the required capabilities should be concluded by an assessment of all the aspects of the project (technical and economical elements, organisational, training, security, reliability, command, control, logistics, infrastructure, environment,...).

LIFE CYCLE COSTS

65. Developing a new weapon system we should predict a **technological development** with a perspective up to 30 years supposing that the development will last 10 years and use of the system – 20 years. In case that we are not able to involve the perspective requirements during designing the system, it will require expensive changes in the later phases of the project, in production, or to start early upgrading, which would result in the increased costs and delay of the project.
66. **IPT**⁴¹ should be established with an aim to support certain capability. The IPT should be used to ensure interconnection of decisive function of the armaments process in horizontal level of the organisational structure, which would enable enforcing of the resource, military, logistical, acquisition and industrial aspects in defining the requirements in the final solution of the functional and technical configuration of the system. The use of IPT removes duplicity and creates conditions for support of the system in its whole life cycle. The IPT should consist of the workers ensuring the key specialisations including the specialists defining the requirements and the specialists for technical and financial matters, agreement drafting and logistic support. The IPT may consist of public functionaries, representatives of individual services of Armed Forces or industrial enterprises. Extent of knowledge and multidisciplinary nature of the IPT accentuate the “whole-life” approach. Participation of defence industry representatives is sensitive and before conclusion of contract it is usually limited only to the consultations concerning technical solutions. Actual cooperation and firm participation of the industry representative in the team is allowed only after the tender is executed and the contract is concluded.

⁴⁰ LCC – Life Cycle Cost

⁴¹ IPT – Integrated Project Team

67. Functional **system of logistic support** should be analysed and prepared at the project preparation already and it should be optimised in the course of the project implementation for the whole period of operation of the military material while making use of the software tools based on the Alliance standards applied on the strategic, operational and tactical levels.
68. Setting of the **life cycle costs** requires using modern software and modelling tools supporting international standards and procedures.⁴² In case of strategic orders, application of the life cycle costs analysis of military material should be involved in the process of taking delivery as its integral part.
69. **ILS**⁴³ should be planned as a part of project solution with an aim to optimise the costs of logistic support in the whole course of the life cycle. Measures and objectives of the ILS should be proposed with the use of logistic support analysis.
70. Responsibility of suppliers for the quality in accordance with CSN EN ISO 9001:2000⁴⁴ and certification of producers according to this standard should be considered as a key requirement in case of the strategic orders. Applying its requirements the MOD department observes the law⁴⁵ and NATO standards⁴⁶.
71. High quality **selection, training and schooling of personnel** should be ensured for an effective armaments system of the Czech Armed Forces.
72. **Support of the armaments processes by information technologies and simulating devices** with an aim to speed up the information processing and their use in practice should be ensured. Important progress in the development of integration technologies (Internet, SW product development, simulating technology) enables significant increase of effectiveness of the armaments processes of the Czech Armed Forces and its organisational culture. The information systems that enable transmission of relevant information in real time should be used as an instrument. Using their integration with the surroundings we should create complex information flows that are necessary for the support of the wide spectrum of armaments processes and, in this way, significantly promote their transparency.
73. We should use the **application of the best procedures** of effective acquisition in the armaments system recommended by NATO, EU and WEAG bodies and tested in both the public administration and private enterprises. Within the acquisition process, we should also consider the use of methods of gradual acquisition or a compromise solution of the parameters of efficiency, costs and time.

⁴² ČSN IEC 300-3-3 – Analysis of Life Cycle Costs. The Life Cycle Cost are understood as total (cumulative) costs of the product in its whole life cycle. The Analysis of Life Cycle Costs is understood as a process of economic analysis for an evaluation of the Life Cycle Costs of products in their whole life cycle.

⁴³ ILS – Integrated Logistic Support, IEC 60300-3-12:2001 Directions for Application – Integrated Logistic Provision. NATO Logistics Handbook (Brussels, 1997). ILS is a process of management and technical process that connects all the aspects of logistics support from the beginning, for the whole duration time of the project and which involves planning, acquisition, testing, timely and economical provision of all the logistics provision components.

⁴⁴ CSN EN ISO 9001:2000 Quality Management Systems – requirements.

⁴⁵ Act No. 309/2000 Coll. on Defence Standardisation, Cataloguing and State Quality Assurance of the Products and Services Designed for the State Defence Provision and on the Change of the Small Business Act.

⁴⁶ AQAP 2000 (Allied Quality Assurance Publication 2000) – NATO Policy – Integrated system approach to the quality through the life cycle.



PARTNERSHIP OF PUBLIC AND PRIVATE SECTOR

74. The Czech Republic's Government is aware of the strategic importance of the Czech defence industry for the security of our country and it is interested in using its services in accordance with the rules and principles of market economy.⁴⁷
75. Successfully implemented government contracts represent a prerequisite for the Czech defence industry for increasing its competitive strength on foreign markets and at the co-operation in international projects and thus, they lead towards promotion of innovation potential. The MOD department will create prerequisites and set the conditions for involvement of the Czech defence industry in the joint international projects.
76. There is a task within the partnership of the public and private sector to create close relations between MOD department and its suppliers, which would be a key element of effective acquisition process in the armaments. Optimising the relations in the supply chain we should ensure the advantages and incomes of the MOD department in a form of transferring the related risks from the MOD department to private sector, distribution of the costs in a time period or reduction of the costs and possibility to realise the savings expected for financing of other projects necessary to achieve the required operational capabilities. Partnership of the public and private sectors should be developed in the following areas:
- Mutual exchange of information and effective communication, confidence and honesty;
 - Methods of co-operation on the basis of general suppliers for the implementation of complex solutions;
 - Use of innovation capabilities of the industry in the modernisation of the Czech Armed Forces;
 - Implementation of compensations programs in procuring the armament from abroad;
 - Support to specialization of the Czech Armed Forces;
 - Strengthening of investment power of our industry;
 - Mutual effort to achieve maximum quality;
 - Support to involving our industry in the international cooperation;
 - Support to applying the production of our industry on foreign markets.
77. Partnership of public and private sectors should be developed as a permanently developing process the quality of which will grow on the bases of bilaterally acquired experience.
78. In connection with professionalization of the Czech Armed Forces and reduction of the number of personnel we should transfer the tasks that do not belong to the required military capabilities to the selected, certified partners from both the industrial and supply spheres. We should use modern forms of co-operation of joint working groups for this purpose.
79. The joint working groups of Ministry of Defence, Ministry of Industry and Trade, Defence Industry Association (DIA) and Aviation Producers Association (APA) should be aimed at the following activities:
- Mediation and ensuring of cost-effective and affordable support of defence capabilities and capacities;
 - Introduction of the proposal for promotion of acquisition process and namely the principles of effective acquisition process into practice;

⁴⁷ The CR Government Decree No. 259, dated 15 March 2000, on "The Principles of Co-operation of the State with Defence Industry in the Czech Republic".
Framework Agreement on Cooperation concluded between Ministry of Industry and Trade and Ministry of Defence, dated 9 March 1999 concerning creation of basic assumptions for the development of effective co-operation in the specified areas.
Agreement between Ministry of Defence and Defence Industry Association of the Czech Republic concerning Cooperation in the Sphere of Defence Industry, dated 13 June 2000.
Agreement between Ministry of Defence, Ministry of Foreign Affairs and Ministry of Industry and Trade on Cooperation at Presentation of Products of the Czech Defence Industry Abroad, dated 3 October 2000.
Concept of Cooperation of the Ministry of Defence with Defence and Aviation Industry of the Czech Republic, dated 17 October 2001.

- Submission of the proposal of the joint schooling activity;
- Solution of the way of involving the DIA and APA representatives in the Integrated Project Teams.

FORMS OF THE PRIVATE SECTOR INVOLVEMENT IN THE SUPPORT OF PROGRAMS

80. Necessity to cope with actual defence budget and concurrent effort to minimise the influence of the trend of defence budget reduction makes the MOD department extend the tasks of private sector in providing the services for the Defence and to apply strongly the commercial thinking. The above mentioned development should be solved in the following ways and methods:
- Integration of the processes of organisational MOD units dealing with the acquisition and operational logistics and transfer of the activity to private sector;
 - Involvement of private sector in ensuring the operation, maintenance and servicing of the basic equipment of MOD department on a contractual base instead of purchasing this equipment and services by MOD department;
81. Outsourcing and partnership of public and private sector should be used as actual possibilities of involving the private sector in the support of the programs concerning the achieving of required operational capabilities. Basic criterion for the use of partnership of public and private sector is the possibility to define the requirements in a form of service. The forms of outsourcing and partnership of public and private sector should be used in the purchase of services.
82. Cooperating with the defence industry we should always consider the requirements put on protection of classified information namely in the sphere of industrial security in harmony with the legal rules.⁴⁸

OUTSOURCING

83. Outsourcing should be used namely in the sphere of logistic and supporting functions where keeping of our own capacity is not effective. When planning the outsourcing we should analyse the conclusive evidence of saving of the financial resources. A key advantage of this solution is the transfer of risk from MOD department to private sector. With regard to higher level of effectiveness in the private sphere the outsourcing is sufficiently profitable for the private sector. Within the competition, the private sector is much more motivated to economic efficiency and it may offer possible free capacities to commercial use for the third parties and to increase its profit in this way.

⁴⁸ It is namely the Act No. 148/1998 Coll., on Protection of Classified Information and amendment of some laws as subsequently amended. Industrial security sphere should be solved in accordance with § 54 of the above mentioned Act. Provisions of § 50, 51, 52 and 53 should be observed within acquisition of individual projects. Acquisition of special foreign equipment should follow § 67 (International Relations) and C-M (2003) 49.



PRINCIPLES OF PUBLIC AND PRIVATE SECTOR PARTNERSHIP (PPP)

84. Partnership program of public and private sector may be considered perspective if it is based on the principle of honesty and cooperation, transfer of risks and sharing of incomes as well as on the analysis of strong and weak points of the public and private sector. It consists in close and long-term relations with partners from the private sector, which requires both sides' determination and effort to achieve common goal. An objective of the MOD department is always development of the relations built on mutual profitability and, at the same time, consideration of weak points within the responsibility of senior executives.
85. Implementation of the program of partnership of public and private sector will depend on a clear definition of risks and the subjects that are able to cope with them in the best way. Suppliers should be commercially motivated to revise and improve its implementation and their performance during the whole time of the contract duration.
86. With regard to the fact that the PPP methods are new and there is no experience with them in the MOD department, we shall use private consultation firms that have experience with the PPP transaction from abroad at setting up the first PPP transactions. The MOD department has to reflect the following specifics of the armaments market:
- Individual weapons and weapon systems should be in use of the Armed Forces for the period of several tens of years;
 - Dynamic development of new technologies necessitates and should intensively necessitate their permanent modernization and integration with newly acquired weapon systems;
 - Growing technological intensity of the weapons and weapon systems should enable implementation of modernization, updating and maintenance only by the producers or by the subject to which the producer transferred its technologies;
 - The costs connected with the maintaining the weapons and weapon systems in operational capability in the whole life cycle should outweigh the acquisition costs more than twice to four times.

It follows from the above mentioned characteristics of the armaments market that there is a long-term and natural linkage or even dependence of the MOD department on the producers (suppliers) of weapons and weapon systems without real alternatives. It can be stated that the producers of weapons and weapon systems may assume a monopoly position against the MOD department for tens of years (for the period when the weapons or weapon systems are used by the Armed Forces). For this reason, the acquisition conditions as well as the conditions of ensuring the operation of the weapons (supply of spare parts, services, etc.) for their whole lifetime should be established by an agreement. At the same time, the subject bearing the responsibility for the risks connected with the use (integration risk, risk of growth of operational costs, etc.) must be also clearly defined.

87. Ensuring of integration risks and the risks connected with the growth of costs used for maintaining the operational capability from the side of the suppliers requires that important part of the expenses connected with acquisition of weapons and weapon systems in the first phase should be borne by the supplier not by MOD. The supplier has to guarantee adhering to the life cycle costs and to bear the integration risks to the full extent. In case of standard transactions, the agreements concerning acquisition of weapons or weapon systems and the agreements concerning supplies connected with operation of the weapons or weapon systems are practically separated. With regard to the natural monopoly position of the suppliers, in these cases, all the risks connected with an unexpected growth of life cycle costs are borne by the MOD. The supplier is not motivated to decrease the life cycle costs in any way. MOD is bearing the bulk of integration risks and in case of legal processes it bears burden of proof. On the contrary, in case of PPP transactions, the risks connected with the growth of the life cycle costs as well as the integration risks are borne by the supplier. For this reason, the decisive weapons and weapon systems should be acquired within the PPP transactions.

88. Actual economical benefits for the use of civilian sector capabilities can be achieved only in case of concluding long-term contracts accompanied by favorable distribution of costs and by the creation of conditions for the return of the invested financial resources. Conditions of the concluded contract must also motivate the supplier to look for the best cost-saving solutions and for the compliance with the demanding requirements of the Czech Armed Forces. In case of implementing the PPP transaction the principles of free competition, non-discrimination and creation of conditions for public control over the transactions should be accented even in larger extent with regard to their long-term character.
89. Conditions for substantial reduction of costs of military material acquisition and logistic support should be created by consistent application of the principles of effective acquisition and evaluation of costs in the whole life cycle. Using the principles of the acquisition process we should also optimize the amount of supplies and the system of operation and maintenance and to create conditions for the application of new forms of involving the private sector in the support and implementation of armaments programs.



E. CONCLUSION

90. National armament strategy develops the following four key areas of the armaments policy: national and international co-operation, importance of defence planning for the armaments, effective acquisition⁴⁹ and strategic partnership of the public and private sector in order to achieve effective creation and use of material and intellectual abilities for the needs of securing the defence capability of the state.
91. The strategy identifies and develops the principles of armaments system and creates conditions for its positive long-term development with an aim to ensure equipment of the Czech Armed Forces with necessary material resources having the best utility value in order to secure the prescribed operational capabilities in an effective way on the basis of available resources. The strategy solves development of the following basic principles:
- Interconnection of the armament system with defence planning system, logistic support system and defence industry by means of implementation of modern principles, processes and technologies.
 - System deepening of co-operation leading to the development of the Czech Armed Forces in harmony with the directions of development of NATO and EU capabilities.
 - Balanced relation of the public and private sectors in providing the services for defence and application of commercial thinking. Enabling and development of private sector's involvement in providing the operation, maintenance and servicing of the basic means of the MOD department on contractual base instead of purchasing these means and services by the MOD department.
92. The strategy develops the possibilities of using the outsourcing and private sector as an actual possibility of involvement of the private sector in the support of the programs concerning achievement of the required operational capabilities.
93. The strategy induces the procedure to promote the effectiveness of armaments system of the Czech Armed Forces and ensuring of defence capability of the state in the Alliance environment.

⁴⁹ Defence Acquisition, the Ministry of Defence Policy Paper No. 4, Ministry of Defence United Kingdom, December 2001.

LIST OF ABBREVIATIONS AND ACRONYMS USED IN THE TEXT

English and French abbreviations and acronyms

AGS	Alliance Ground Surveillance System
CFSP	Common Foreign and Security Policy
CNAD	Conference of National Armaments Directors
DCI	Defence Capability Initiative
DEF STAN	Defence Standard
DTIB	Defence Technology and Industrial Base
EDA	European Defence Agency
EDEM	European Defence Equipment Market
EDIG	European Defence Industrial Group
ESDP	European Security and Defence Policy
EU	European Union
FMF	Foreign Military Financing
IEC	International Electronic Commission
ILS	Integrated Logistics Support
IPT	Integrated Project Team
ISO	International Standardisation Organisation
LCC	Life Cycle Cost
LCM	Life Cycle Management
LoI	Letter of Intent
MIL STD	Military Standard
MOD	Ministry of Defence

NAMSA	NATO Maintenance and Supply Agency
NATO	North Atlantic Treaty Organisation
NCS	NATO Codification System
NIAG	NATO Industrial Advisory Group
NPDM	NATO Product Data Model
NSG	NATO Standardisation Group
OCCAR	Organisation conjointe de coopération à l'armement
OSCE	Organisation for Security and Cooperation in Europe
PCC	Prague Capability Commitment
PFI	Private Finance Initiative
PPP	Public Private Partnership
RTB/RTO	Research and Technology Board/ /Research and Technology rganisation
SC	Science Committee
SNLC	Senior NATO Logisticians Conference
STANAG	NATO Standardisation Agreement
SW	Software
TLBM	Through Life Business Model
WEAG	Western European Armaments Group
WEAO	Western European Armaments Organisation
WEU	Western European Union



SUMMARY OF DEFINITIONS

- 1. National** – The term expresses relation to concrete conditions of state in the given time, security environment and social-economical conditions.
- 2. Armaments Policy** – It is a sum of basic requirements, interests, goals and the main tools necessary for their implementation in the sphere of armaments that are based on the security and defence policy of the Czech Republic and, at the same time, it is its integral and essential part.
An objective of the armaments policy is to ensure modern and progressive armaments systems that would be supplied to the Czech Armed Forces within a planned time, quality and price and that would correspond with the operational requirements from the viewpoint of performance, capability, logistic support and interoperability while using the allocated resources (human, financial and material).
- 3. Armaments Strategy** – It is a procedure that conceptually stipulates achieving of goals of both the national and Alliance policy and related strategies by means of identified packages of means, methods and tools in a certain period of time. At the same time, the strategy represents a complex of the processes that are organised to affect the future conditions towards the outlined objectives.
An objective of the armaments strategy is to elaborate strategic approaches specified in the security and defence documents of the Czech Republic in order to ensure the material resources within the Czech Republic's armaments that are necessary for implementation of the defined mission and tasks of the Czech Armed Forces while making use of both international and home industrial and economic base.
Armaments strategy is based on the political task defined in the Security and Defence Policy of the Czech Republic that projects the national interests, ambitions of the state and assessment of the security situation, international commitments, possibilities of the state and society. The strategy is based on the Military Strategy of the Czech Republic and on the implementation document titled Concept of Development of Professional Armed Forces of the Czech Republic and Mobilisation of the Czech Armed Forces Reviewed after Defence Spending Cuts. The document of strategy is further elaborated in the concepts and methodologies in the sphere of armaments.
- 4. Armament** – The term characterizes the sphere for which the strategy is elaborated. The armament is understood as equipping of the Czech Armed Forces with necessary material resources (weapons, weapon systems, military equipment, material and technologies of strategic character) that will ensure accomplishment of the expected tasks in order to achieve the prescribed operational capabilities within available resources.
- 5. LCC (Life Cycle Costs)** – It means total costs of direct, indirect, returnable, non-returnable and other related realised costs or estimations of realised costs during design, development, production, operation, maintenance, support and liquidation of the main system within its expected useful life.
- 6. ILS (Integrated Logistics Support)** – It means management and technological process during which the total principles of logistic support are implicated already in the structure of systems and equipment and considered through the whole life cycle. All the elements of logistics support are planned, purchased, tested and also provided in a timely and cost-effective way by the help of this process.
- 7. Acquisition Logistics** – It is a part of logistics relating the research, design, production development and take-over of the military material. Therefore, the acquisition logistics includes standardisation and operability, conclusion of agreements, assurance of quality of purchasing of spare parts, assessment of reliability and defence capability, security standards for the devices,

technical conditions and processes of production, examinations and tests (including necessary equipment), codification, documentation of devices, configuration control and alterations.

8. **Acquisition** – It is a process of defining the requirements, management of purchase, management of operation provision and setting out of operation from the viewpoint of the life-cycle approach.
9. **Effective Acquisition** – It is an acquisition evaluated from the viewpoint of the life-cycle process of the purchased military material involving the requirement definition, cost effectiveness and logistic support analysis, project management, research and development, quality assessment, purchase, entry into service, operation provision, training and setting out of the service. An objective of the effective acquisition is to promote the operational capabilities by procuring and subsequent provision of military material in the given time, with attributed cost and required performance.
10. **Life cycle of the system** – It is a period divided into phases beginning from the first consideration concerning the needs of the system/equipment through the development and operation stages downwards to its withdrawal and liquidation.
11. **Outsourcing** – It is a transfer of selected functions and activities, which are not effective to be maintained in the organisation, to outer commercial subjects. In case of MOD department, it is also transfer of risk to private sector, which is the key advantage of this solution. Outsourcing in the conditions of MOD department is understood as a provision of non-military activities and services serving to support the MOD units and facilities by other person (see “supplier” hereinafter) on a contractual basis.
12. **System** – It is an object consisting of mutually related or mutually acting elements.
13. **Process** – It is a system of activities that are changing the inputs into outputs by using the resources.
14. **Life Cycle** – It is a development of the system in a time period from its origin to liquidation.
15. **Activity** – It is a complex of the activities that are consuming the resources and means and the execution of which is necessary to move the system from one event to the other.
16. **Process Approach** – It is an application of a system of processes in the organisation together with identification of these processes, their mutual interaction and control.
17. **Life Cycle Model** – It is a frame of the processes and activities connected with the life cycle, which serves also as a common interface for communication and understanding.
18. **Principles of application of the Life Cycle methods** – The application of methods of control of the life cycle of armament systems, services and armament (including hardware, software, accessories, personnel and basic and initial processes) within NATO is based on the following principles:
 - **Commitment to the life cycle control**
The life cycle control requires the commitment of all the interested parties to an integrated approach and application of adequate procedures that would contribute to the accomplishment of the required goals.
 - **Cooperation and interoperability**
Individual member states and components of NATO are responsible for the provision of armament systems, equipment and related services necessary to ensure the Alliance capabilities and needs of interoperability.
 - **Effectiveness**
Execution and support of the Alliance military operations requires an effective and economical use of resources, both national and those of NATO.



- **Cooperation/partnership with industry**

The life cycle control requires establishment of close links with industry, use of civilian standards (where applicable), full use of new technologies and expert knowledge with an aim to make maximum use of the best market procedures and practices.

- **Quality**

Fulfilling of the defence capabilities depends largely on the quality of armament systems, equipment and related services. It can be best achieved through integrated system approach to the quality through the whole life cycle⁵⁰.

19. **Goals of the Life Cycle Control.**

Goals of the life cycle within NATO are as follows:

- To achieve a common view of all the aspects concerning armament systems, equipment and related services during the life cycle and to include operational and logistic needs, availability, time factor, planning, quality and risk in these aspects, too;
- To create a continual control of the processes beginning from the initial design up to the conclusion phase of setting the products out of operation.
- To establish partnership among participating parties for the whole period of the life cycle;
- To facilitate the modification of technologies, actualisation and assessment of ageing with regard to the principles of the life cycle (e.g. life cycle costs, modernisation);
- To define and apply the integrated system approach to the development and support of armament systems, equipment and related services with an aim to preserve the prescribed requirements and to minimize the life cycle costs and time at procuring the property;
- To provide such armament systems, equipment and related services that would satisfy the operational and logistic needs, have proper internal and external connections, possess specified logistic and operational support and minimize the production and operational impacts on the environment including the impacts during setting the products out of operation.

**National Armament Strategy was approved by the Czech Republic's Government
Decree No. 875 dated 15 September 2004.**

⁵⁰ AQAP 2000 – NATO Policy – Integrated system approach to the quality through the life cycle.