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Geneva Centre for the Democratic Control of Armed Forces (DCAF)
Rue de Chantepoulet 11
PO Box 1360
CH-1211 Geneva 1
Switzerland
Tel: +41 22 741 77 00
Fax: +41 22 741 77 05
E-mail: info@dcaf.ch

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Ukrainian Centre for Economic & Political Studies named after Olexander Razumkov
Vul. Lavrska, 16
Kyiv, Ukraine, 01015
Tel.: +380 44 201 11 98
Fax: +380 44 201 11 99
E-mail: info@razumkov.org.ua

MONITORING UKRAINE’S SECURITY GOVERNANCE CHALLENGES

PROCEEDINGS FROM THE SIXTH INTERNATIONAL CONFERENCE “SECURITY SECTOR GOVERNANCE: DEFENCE PRODUCTION, SALES AND ACQUISITIONS”

1-2 February 2017, Kyiv, Ukraine

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MONITORING UKRAINE’S SECURITY GOVERNANCE CHALLENGES

Proceedings from the Sixth International Conference
“Security Sector Governance: Defence Production, Sales and Acquisitions”
1-2 February 2017, Kyiv, Ukraine
This publication offers the proceedings of the Sixth International Conference “Security Sector Governance: Defence Production, Sales and Acquisitions”. Conference Six provided a platform to discuss state policy and the market economy; governance and oversight of the defence sector; and defence industrial cooperation with foreign countries. In addition to identification of the reform challenges and priorities, one of the main objectives was to propose solutions based on lessons learned and international best practices relevant to Ukrainian realities.

General assessments, conclusions and proposals are those of the participants and do not necessarily coincide with the positions of DCAF, the Razumkov Centre or the official position of the Ministry of Foreign Affairs of the Netherlands.

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INTRODUCTION

The ‘Monitoring Ukraine’s Security Governance Challenges’ programme funded by the Kingdom of the Netherlands and implemented by the Geneva Centre for the Democratic Control of Armed Forces (DCAF) and the Razumkov Centre jointly to which this publication owes its existence aims at raising public awareness and wide discussion and communication on democratic oversight and good practices in the management of the security sector of Ukraine.

The programme’s objective is to facilitate a public discourse on and public access to Ukrainian and international best practices in security governance while making pertinent information in both the Ukrainian and English languages available in printed publications, a dedicated website www.ukrainesecuritysector.com, and through Mass Media coverage of public events. Two opinion polls are designed to establish whether and to what degree democratic governance of the security sector is understood, and implemented.

The 6th Conference attended by many concerned parties discussed current problems and prospects of improvement of the military-technological policy and management of Ukraine’s defence industry. The main subjects of discussion included the state and prospects of development of the defence industry, challenges of introduction of good governance in the field of development, production, marketing and procurement of arms and military equipment, public-private partnership and military-technological cooperation with foreign partners, parliamentary supervision of the defence industry complex.

Domestic and international experts, MPs, government officials, representatives of private companies, civic activists, representatives of regional and international organisations shared their views of the key problems.

The Conference participants hope that recommendations generated by them for Parliament, the President, the Government, concerned state authorities, the public sector will not be left unattended, will be implemented and will promote the efficiency of Ukraine’s security sector in general and its defence industry in particular.

Dr. Philipp H. Fluri, Head, Eastern Europe, South Caucasus, Central Asia Division, DCAF

Oleksiy Melnyk, Foreign Relations and International Security Programmes, Razumkov Centre
Dear colleagues! At the dawn of the New Year, we continue our cooperation within the framework of the project “Monitoring Ukraine’s Security Governance Challenges” in the format of conferences with financial support provided by the Kingdom of the Netherlands. What do we want to achieve? It is the project’s tradition – to join efforts of all concerned parties for creation of a platform for a free and square discussion of pressing security issues.

Two days will be dedicated to the issues of development of the defence industry: production, marketing and procurement arms. We are trying to do this in the traditions of a seminar – considering the best international experience of control and cooperation and discussing Ukrainian practices. Discussions will focus on the key priorities and problems in this field: production of defence items, maintenance and logistics for the security sector structures, drawbacks in the control structure and practices.

On day two, there will be an opportunity to discuss in working groups in more detail the issues of Ukraine’s military-technological policy, international experience and tools of independent oversight of arms production, sale and procurement, identify bottlenecks and problems, generate recommendations for their possible solution.

At the beginning of the second day of the Conference, Razumkov Centre will present the new, 16th Ukrainian edition of SIPRI Yearbook 2015 “Armaments, Disarmament and International Security”, carrying a lot of information about armed conflicts, including Russo-Ukrainian, peacekeeping operations, military expenditures, development and supply of arms, arms control and export arrangements, and many other interesting things.

The project objectives include study of the best experience of the NATO countries and Ukraine and, very importantly, identification of the lines and opportunities of assistance. All this should be done publicly, honestly, democratically, and transparently.
In the conditions of current security challenges and threats, shared with Ukraine by the whole civilised world, the issues planned to be discussed at the Conference are vital and pressing.

Now, security and defence of Ukraine are undisputable priorities in the economy and policy of this state, as provided in the relevant legislative acts and other bylaws.

With account of these priorities, the key defence planning documents were passed or updated: the Military Doctrine, the Strategic Defence Bulletin, the Concept of development of Ukraine’s security and defence sector. The State Target Defence Programme of Development of Arms and Military Equipment through 2020 has been approved.

Interagency approval of the State Target Programme of Reformation and Development of the Defence Industry Complex through 2021 is over, and it is to be adopted in the near future.

That said, international cooperation is important for attainment of objectives under the set priorities. Ukraine ratified the Agreement of Association between Ukraine and the European Union. The international regulatory-legal framework in the field of military-technological cooperation with foreign countries is being developed. Our state is a party to all export control regimes. Ukraine assumed obligations in the fields of security, control of production and non-proliferation of arms, and fighting terrorism under international treaties.
With account of the above, a set of reforms is consistently implemented now, in particular, in the security and defence sector, built as an integral system of protection and defence of Ukraine. The main lines of those reforms include:

- reliable provision of Ukraine’s defence capabilities;
- reformation of the Armed Forces and other structures of Ukraine’s security and defence sector with account of the experience gained while repulsing the Russian aggression in the East of the country;
- development and technological renovation of the Ukrainian defence industry for best satisfaction of the demand of uniformed agencies of the security and defence sector for advanced weapons, military and special equipment;
- production of military technologies, arms and equipment competitive on the world market, their promotion on foreign markets;
- import of defence products not manufactured in Ukraine for the Armed Forces, other military formations and enterprises of Ukraine’s defence industry within the framework of military-technological cooperation with foreign states.

A key role in the most critical strategic decisions on implementation of reforms in the national security and defence sector belongs to Ukraine’s National Security and Defence Council (NSDC).

For instance, on the 27th of January, 2017, the Council approved the draft guidelines of the state defence order for 2017 and 2018-2019, for the first time introducing a three-year period of planning procurement of arms and equipment to secure rational employment of production capacities of defence enterprises.

The same decision also set the task to raise the volume of state guarantees of credits for development of arms, equipment and production facilities of defence enterprises, and to streamline the mechanism of state guarantees.

Coordination of measures at reformation of the sector of arms production, development and technological modernisation of the domestic defence industry in line with international standards, its integration in the world market rests with the Interagency Commission for Defence Industry under the NSDC.

Said Commission provided a platform for discussion of pressing problems of development of arms and military equipment, production facilities of Ukraine’s defence industry, introduction of practical mechanisms for their solution, drafting of the “road map” of the defence industry complex development.

The Interagency Commission for Defence Industry reviews drafts of all ruling documents in the field of military-technological and military-industrial policy, coordinates activity of central executive bodies, defence enterprises and their associations. Much attention is paid to establishment of fruitful cooperation between state-owned and private defence enterprises.

Essential lines of implementation of reforms in this sector currently include:

- restructuring of enterprises of the State Concern “Ukroboronprom”;}
• corporatisation of the Concern enterprises in line with international standards;
• creation of branch clusters for production of arms and equipment;
• promotion and perfection of public-private partnership in the field of development and production arms and equipment, etc.

The issues of sale of defence products to foreign partners and procurement of arms and their component parts not produced in Ukraine but badly needed for the security and defence sector structures and defence industry enterprises are not left unattended either.

Coordination of export and import of military and dual use items rests with the Interagency Commission for Military-Technological Cooperation and Export Control Policy at the NSDC.

To work out the state policy in those issues, the Commission takes measures for perfection of the legislative and regulatory framework in the field of arms and military equipment and export control. In particular, recommendations were generated for finalisation of draft Laws of Ukraine “On State Control of International Transfers of Military and Dual-Use Goods”, “On Introduction of Amendments to the Law of Ukraine “On Foreign Economic Activity”, etc.

The Commission pays much attention to the issues of expansion and deepening of cooperation with NATO in the field of defence technologies, in particular, in the Joint Working Group Ukraine-NATO on defence technical cooperation, NATO Conference of National Armaments Directors and in other NATO structures, available for partnership.

To ensure observance of Ukraine’s obligations assumed under international treaties, agreements and export control regimes, mechanisms of effective coordination were introduced within the framework of the activity of the Interagency Commission for Military-Technological Cooperation and Export Control Policy, covering:

• toughening responsibility at all levels for substantiation of needs in arms import, as well as efficient target use of state funds intended to meet them;
• political support for and control of performance of critical foreign economic contracts in the field of arms and military equipment by Ukrainian enterprises;
• exercise of state export control of international transfers of military and dual-use goods and perfection of its system in line with international standards together with foreign partners;
• promotion of the international image of Ukraine on world arms markets as a reliable manufacturer and exporter of high-quality arms and equipment, already combat-tested.

To sum up, I would say that today, the following is needed for successful reformation of the security and defence sector and the system of its governance:

• joint efforts and concerted actions of all branches of power, civil society, international partners, expert community and business;
• creation of favourable conditions for developers and manufacturers of arms through state deregulation of the sector, while toughening responsibility and control of the quality of arms and equipment;

• rational use of state resources and greater transparency in the field of state procurement of arms. Despite the difficult economic situation, it was decided in Ukraine to fund the needs of the security and defence sector in the amount of not less than 5% of the GDP.

This Conference is a good opportunity to exchange opinions about the security and defence sector governance and work out practical proposals for further development of this sector.

We are very grateful for that to the organisers, and especially – to international partners: the Geneva Centre for the Democratic Control of Armed Forces and the Ministry of Foreign Affairs of the Kingdom of the Netherlands.
Today’s event gives us an opportunity to share our recent experience. Let us not mention now that we inherited the Soviet defence industry that was consistently destroyed for a long period. Let us take it for granted that our country has changed and that the war waged in the East is a terrible misfortune. In such conditions, development of the defence industry should be the powerful driver that will take us forward.

Ukraine’s Government now pays utmost attention to building and development of its defence industry, provision of the Armed Forces with high-quality arms and military equipment, vesting the task of drafting the programme of the defence industry reform through 2021 in the Ministry of Economic Development and Trade (MEDT). We believe that the year of 2017 will mark the beginning of a systemic reform of the defence industry, as envisaged by our draft programme.

Today, main efforts of the Ministry are concentrated on prompt solution of the defence industry problems, in particular, regimentation of operation of defence enterprises. In 2016, our task was to develop key programme documents in the sector, and to draft Ukrainian bills on military-technological cooperation and production of arms and equipment, already submitted to the Verkhovna Rada for consideration.
MEDT secured facilitation of the production and managerial activity of defence industry enterprises through:

- approval of the procedure of pricing for defence items;
- creation of the framework for enterprises to get credits against state guarantees;
- measures to support aircraft building industry;
- reduction of the rate of deductions to the state budget from 75% to 35% of net profit of the State Concern “Ukroboronprom” enterprises.

All this laid the basis for Ukraine’s defence industry to reach a qualitatively new level of production of arms and equipment.

On the pricing policy: this issue has long been a problem in relations between state customers and contractors within the framework of state defence orders, including the work with military representative offices and other controlling bodies. In 2016, thanks to relevant decisions passed by the Government, we managed to balance the system that will give a clear idea of how the price of defence products is set as part of planning and performance of the state defence order, how the state customers will accept those products, and what demands will be made on contractors.

Significant funds are allocated to defence industry needs, including procurement of arms and equipment. However, in the conditions of an armed aggression, this financial resource is not sufficient. To solve this problem, we opted to raise bank credits against state guarantees. The 2017 budget for the first time envisaged payment of interests for the use of such credits out of the state budget. This let us draw additional financial resources. In 2016, they totalled some UAH 4 billion.

In 2016, legislative acts were also passed in support for the aircraft building industry. Aware of the difficulty of operation of defence industry enterprises, the Government took a decision to charge interest on net profit. This decision also applies to the 2017 budget and will give enterprises an opportunity to additionally raise some UAH 1 billion this year for modernisation and creation of new production facilities. Therefore, the measures taken in 2016 created kind of a basis for defence industry development. We continue moving in that direction. I am sure that the forthcoming years will be decisive for implementation of the required systemic transformations.

The main tool will be presented by the State Programme of defence industry reformation and development through 2021. The Programme rests on the following priorities:

- perfection of the defence industry management system;
- strategic management and financial recovery of defence enterprises, support of their sustainable development;
- development of the scientific, technological and manufacturing base of defence industry enterprises;
- growth of opportunities for international cooperation;
- scientific support for reformation and development of the defence industry.

The Programme contains an exhaustive list of measures, implementation of which will ensure, first, the organisational basis for efficient management at the state
and at the enterprise level. Second, the focus was on the most urgent objectives. Examples include introduction of the mechanism of mid-term defence planning, offering the following advantages:

- for state customers – advanced planning of needs and resources;
- regarding preparation for production – creation of conditions for sustainable development of production facilities and, as a result, capabilities of enterprises;
- for defence contractors – planning of even workload for enterprises over a three-year period.

Additionally, three-year planning will be another step towards introduction of the system of strategic planning in the defence sector.

Within the framework of mid-term planning, the state defence order for three years has been drafted and after interagency approval in the near future will be submitted to the Government for consideration and approved in line with the relevant legislative and regulatory requirements.

On production facilities. Fixed assets and equipment at defence enterprises, including enterprises of the State Concern “Ukroboronprom”, are worn out to a very high degree – 60-80%. Support for the ability of such enterprises to produce advanced weapon systems and military equipment alone will give impetus to more efficient work to meet the needs of the Armed Forces and other military formations.

Indeed, it is high time to part with the practice of pragmatic reaction to directives of the state leadership and to introduce defence planning as an element of the state system of strategic planning.

It is also necessary to adopt planning with account of the capabilities of public-private partnership, which will make it possible to attract not only state-owned but also private enterprises and joint ventures in the defence industry. This is what we are doing right now.

Another promising line is presented by automation of managerial decisions, streamlining of monitoring and control procedures in some fields. The Programme provides for implementation of three automated systems. First – creation of a national register of replacement of imports of products previously supplied from the Russia Federation. Second – an automated export control system, thanks to which, an electronic licensing system of state export control will be introduced in 2017 and risks inherent in the process of ordering will be diminished. Third – the system of planning, monitoring and reporting of defence industry enterprises, being developed with account of the experience of advanced countries of the world, is to be available to and open for all defence industry actors.

Furthermore, the Programme envisages implementation of two pilot standardisation projects: development of enterprise standards, and implementation of NATO standards (STANAG). Both projects are to be implemented at enterprises of the State Concern “Ukroboronprom”.

Optimisation of state export control procedures deserves particular attention. The Ministry plans to introduce the Single List of dual-use goods and reduce the list of goods subject to state export control in 2017.
The next step intended to improve Ukraine’s position on the world market and remove barriers for Ukrainian exports of dual-use goods to the EU internal market will be presented by further harmonisation of state export control rules and procedures with the relevant EU norms and standards.

Furthermore, technical re-equipment of production facilities of Ukrainian defence industry enterprises will be continued.

MEDT as the state customer in 2017 will organise development and introduction of advanced technologies and materials for production, repair and upgrade of arms, equipment and ammunitions; production of missile systems, ammunitions, powders and special chemicals, armour and aviation equipment, artillery weapons, warships and missiles is to start in 2017. Last year we successfully launched missiles that have high performances and can compete on world arms markets. The Ministry jointly with the State Space Agency organises small-scale production of solid rocket fuels and explosives.

Therefore, all preconditions are present in Ukraine now for development and efficient operation of the defence industry, which will let Ukraine become a global actor on the markets of arms and military equipment and first of all, will make it possible to meet priority objectives – provide the Armed Forces and other military formations of Ukraine with advanced arms and equipment, field new systems, necessary for performance of the set tasks of national defence.

The Ministry does its best to ensure publicity and transparency in its work. We are ready for a dialogue and discussion of the Programme and perfection of the legislation and regulatory-legal framework, the drafts of which will soon be submitted for consideration to the Government, Verkhovna Rada and the public.
Economists of many countries of the world have long been trying to find the answer to the vital question – how to secure crisis-free development of society and ensure the sufficient level of defence capabilities of the state. Problems of economic development and military security are closely interrelated. On one hand, provision of military security requires from the state significant investments for provision of the Armed Forces with modern weapons and maintenance of their combat readiness; on the other, heavy expenditures on national defence may lead to deformation of the national economy, undermine development of civilian industries, cause a fall of living standards for a large portion of the population. This gives rise to the problem of the optimal balance between military-strategic and economic issues for the sake of national security.

The dominant opinion in independent Ukraine was that in connection with the end of the cold war, signing of the Budapest Memorandum in 1994 and the Treaty of Friendship, Cooperation and Partnership between Ukraine and the Russian Federation in 1997, which reiterated inviolability of the existing borders of Ukraine, the need of maintenance of a strong defence potential became irrelevant, and the available defence industry production facilities should have been used mainly for the manufacture of civilian products, after conversion.
That said, the simplest way of reform was chosen: military procurements dropped by several times, the defence industry complex (defence industry) was actually deprived of state support in a hope that market will correct and put in place everything. This resulted in a dramatic decline of production, loss of critical technologies, deterioration of competitiveness of hi-tech enterprises, sharp aggravation of social problems in some cities and regions of the country.

The war in the East of Ukraine became a heavy stress for the economy. Some branches related with the consumer market sustained substantial losses, but restoration of the lost defence potential, requiring recovery of the defence industry, may promote economic growth, development of production of dual-use products and branches servicing the army. Forced “remilitarisation” of the Ukrainian economy should be seen as a key driver of economic growth.

Sharp growth of expenditures on the security sector in 2014-2017 is just one step towards restoration of the national defence capabilities. The state leadership passed decisions raising budget funding of the security and defence sector, in particular, production and procurement of arms and military equipment, other military materiel, funding of state target defence programmes. Some decisions were taken, aimed at development of the defence infrastructure, for instance, the system of Ukraine’s Navy stationing.

Although resources will be spent not only on containment of the current threats but also on defence industry development, there is a potential danger of imparity between military and civilian sectors of economy. It is clear however that with time, defence expenditures will grow.

Meanwhile, forced “remilitarisation” of the economy gives Ukraine vast opportunities due to the growth of production of military goods and enhancement of the related export potential. With time, development of military technologies and their use for the civilian sector can give a strong impetus to economic growth and produce some positive macroeconomic effects.

1. Intensification of development of the scientific and innovative potential of the national economy

Science and high technologies are rightfully considered the basis of Ukraine’s national security. Scientific institutions and enterprises of the national defence industry creating science-intensive products of military, dual-use and civilian application can be the engine of mastering advanced technologies of the 21st century and implementation of large-scale industrial projects contributing to innovative development of the Ukrainian economy. In this respect, it makes sense to follow the national science and technology priorities adopted at the top state level.

For instance, in 2015, State Concern (SC) “Ukroboronprom” signed memorandums of cooperation with 44 national educational and scientific institutions from 21 regions of the country. The effort involves the National Academy of Sciences of Ukraine and design bureaus of the Concern. The next stage will involve participation of higher educational establishments in designing and working out of financial and organisational models of cooperation.
2. Encouragement of development of civilian sectors of the national industry by the principle of “chain reaction” through the increase of budget expenditures on defence

The risk of escalation of the armed aggression in the East of the country prompts the need of maintenance of a high level of defence expenditures (5% of the GDP).

With the rise of prices on the world commodity markets traditional for Ukrainian export, demand on the domestic market also went up. In particular, products of machine-building, especially transport machine building, precision engineering and light industry were demanded.

3. Active replacement of imports of Russian technologies, services, goods, component parts, products and materials

To make Ukraine’s defence industry independent from imports of goods from the Russian Federation, SC “Ukroboronprom” initiated a relevant localisation programme. Critical dependence on Russian products is to be overcome at the expense of both the capacities of the Concern companies, and through development of cooperation with other Ukrainian industrial enterprises.

Cooperation with industrial enterprises of most regions of Ukraine is growing within the framework of memoranda of cooperation signed between SC “Ukroboronprom” and regional state administrations on expansion of cooperation at performance of the state defence order and programmes of economic development.

According to “Ukroboronprom” that unites the majority of Ukrainian defence enterprises, over 100 private enterprises from different regions of the country are involved in production of component parts. They have organised production of some 300 articles. Some component parts are still procured from former Warsaw Treaty countries that still have the relevant systems of arms and equipment in their inventory and in stock, retain Soviet technologies and produce them.

By and large, 300 Ukrainian enterprises produce component parts, in particular, in Lviv, Ternopil, Kherson, Khmelnytskyi, Zaporizhya and Cherkasy regions. For further unification of efforts and soonest solution of the problem of localisation, SC “Ukroboronprom” issued a Catalogue of defence industry articles. The first edition of the Catalogue presents data of 50 enterprises, including those of the State Space Agency of Ukraine, and contains over 6,000 items. The data contained therein are badly needed for manufacturers of component parts. According to “Ukroboronprom” estimates, the measures taken so far made it possible to reduce the demand for imported component parts: in production of armoured vehicles – by 72%, in radio electronics – by only 15%, in other branches – by 35-54%.

Meanwhile, successful operation of the Ukrainian defence industry in the market conditions is impossible without long-term crediting of the relevant investment projects, a vibrant stock market, where shares of science-intensive enterprises are traded, and without long-term state orders for defence items (at least for three years). Hence, attraction of investment, credit and other resources in the defence industry should be viewed as a priority line of the state policy.
However, today, foreign (private) investment in the national defence industry encounters a number of problems associated with imperfection of the regulatory-legal and organisational protection of investor interests. In particular, legislative restrictions strongly complicate the procedure of establishment of joint ventures in the field of defence industry with a foreign interest and rule out participation of Ukrainian enterprises not subject to privatisation, which strongly impairs the investment attractiveness of domestic manufacturers.

To raise the efficiency of the investment process as a factor of development of the national defence industry and its positive effect on growth of Ukraine’s economic potential, it is necessary:


• Organisational support for the investment process may rest on reformation of Ukraine’s defence industry, centred on creation of clusters uniting allied enterprises. Say, last June, the first cluster – Ukrainian Aircraft Corporation – was established on the basis of the legendary Aeronautical Scientific-Technical Complex “Antonov”. Relying on the Law of Ukraine No. 1475, passed in July, 2016, Ukrainian aircraft builders now can establish joint ventures with foreign companies abroad.

• With time, more clusters need to be created, uniting state and private enterprises with specific specialisation. Each of them will have a closed production cycle, will be able to develop advanced equipment and manufacture state-of-the-art products.

Hence, institution of uniform, commonly accepted and clear rules of the game for international investors, protection of their interests will contribute to attraction of foreign capital for enhancement of Ukraine’s defence capabilities, which will help, first of all, to slow down the rate of decline of the national economy, and later, contribute to its growth.
Today, I represent not just “Praktika” Scientific-Production Association but the newly-established nongovernmental union of Ukrainian enterprises and organisations – the League of Defence Enterprises.

Over the 2.5 years of war, many firms that dealt with defence or dual-use products managed to rearrange the whole product range and to start manufacturing of products that may be used for military purposes. We have developed more vehicles, supplied to the ATO area for two years now, than all other enterprises of Ukraine. “Praktika” Scientific-Production Association may be less known, but it is also a serious enterprise.

Concerning the League. Our first and main slogan is “Buy Ukrainian”. Second: principles of the League. We stand for honest partnership and should work within the League, first of all – buy at home, establish cooperation within this country. Our only rivals are foreign companies that are much stronger today. So, the task of the League’s private enterprises is to join our efforts, to make inventory and audit of what we have in Ukraine in the private sector.

We will not invite and admit to the League just anyone to manufacture joint products. We have displayed such products at many exhibitions and presentations. I call upon all other market participants to take part in such presentations. Now we intend to perform a broad review of the product range and capabilities of Ukrainian manufacturers and invite other participants.
Concerning public-private partnership. Now, at the initial stage and especially in the conditions of aggression, we should think of avoiding internal competition and efficient cooperation of defence enterprises. We have neither money nor time to engage in counterproductive competition. At a military exhibition our enterprise presented 10 types of military vehicles from 4 to 24 tonnes. Experts could note that not a single vehicle competed with “Ukroboronprom” products. Ukraine badly needs such vehicles. Competition is out of the question. This position is also shared by state enterprises. Only in cooperation we can achieve something, and win.

Now, one more question, more than once raised at different meetings, but given the status of this Conference, I would like to mention it again. A lot is being said about Ukraine’s transfer from GOST to NATO standards. I would like to warn experts: it is a time bomb. If we only speak about it but do not try to do this, in 2020, we will see neither Romanov nor Vysotskyi or the League at such conferences, because no one will be able to pass certification. Ukraine has no laboratories and certification bodies. This is the most critical issue, now faced by our defence industry.
I also represent the League of Defence Enterprises and head “Atlon Avia” company, producing and supplying unmanned aerial vehicles for optical reconnaissance, radio intelligence and other specific missions to the Armed Forces, National Guard and Security Service of Ukraine.

Since we now speak about public-private partnership, I would like to say in the first place that it has two dimensions. On the one hand, it is an attempt (made in the bill by National Deputy Yaroslav Markevych) to regulate the processes of creation of joint ventures with the state, transfer of state enterprises to private investors into management. On the other hand, there are great many private companies in Ukraine that turn out finished products, see themselves as independent, self-sufficient manufacturers of military equipment and possess rather a serious science and technology potential meeting the needs of this state in defence systems.

Our company, performing not the first state contract, encountered a number of problems, and I would like to remind you about them. The first thing that hinders the development of such companies as “Atlon Avia” is the lack of confidence in the future, a vague idea of the demand for our products in concrete terms of quantity, cost, etc. We needn’t talk much about attraction of investments into one or another sector. Private companies should be aware that in the next three years, the state is ready to buy some equipment in certain quantity at a certain price. Then, the problem of finding a partner (including foreign) that will invest money and finance all scientific research, production and development activities turns a usual task for the company management. The state should not suggest that only private companies must invest in the sector development. The state should create conditions, in which private companies will be able to find investors on their own.

Such a mechanism has been discussed with Deputy Minister [Ihor] Pavlovskyi, and NSDC Deputy Secretary Oleh Hladkovskyi. The League of Defence Enterprises has worked out a concept that, after some improvement, could provide an efficient mechanism for intensification of development of new weapon systems. That said, this mechanism does not require a penny of budget funds.

At present, performance of state contracts is also related with a number of local but very serious problems. To be sure, the mechanism, legal framework and
the very paradigm of relations of state and private companies performing state defence orders rest on the regulatory-legal basis shaped yet in the Soviet times, when there were no private, commercial companies. Respectively, private companies now act within the same regulatory-legal framework as state enterprises and scientific research institutes.

One cannot deny the absolutely different nature of private and state enterprises. As a result, no uniform mechanism can be used in relations between such enterprises – at least because private enterprises did not and do not perform research and development or make specimens for budget funds. All intellectual property in those products belongs to the enterprises.

The very fact of effective control of manufacturing of such products by representatives of the customer already presents a violation of commercial secrets, interference in the issues of know-how. To be sure, military acceptance is necessary, but the scope of its functions should be limited and strictly regimented. Many members of the League believe that military acceptance is needed, but only to control product quality. Financial-economic indicators are beyond the competence of military acceptance.

Meanwhile, military acceptance bodies are very interested in pricing. Setting the profit rate for private enterprises using its own circulating funds in the amount of 1% of value of component parts and 20% – of all other expenses leads to kind of a paradox. If, say, an enterprise’s products contain many foreign component parts, it cannot enter wages of all employees in the calculation of prime cost in the full amount. Until recently, the Defence Ministry has calculated monthly salaries in the amount of UAH 3,400. But programmers and engineers do not work for this money. Even if they are officially paid UAH 15-20 thousand, only UAH 3,400 are accounted in the calculation, while the difference is covered at the expense of the portion of the profit that can be earned with the mentioned 1% and 20%. If we look at the structure of prices with purchased component parts and the problem of wages, it appears that the more hi-tech products are manufactured, the lower the profitability of production is. This paradox hinders technological development and must be resolved immediately.

The issue of pricing during the development and acquisition of new weapon systems is very serious and requires a change of the paradigm, the approach to pricing. “Atlon Avia” Company proposes that the value of systems should be set on a competitive basis with account of the value of available world analogues. If we take a look at unmanned aerial vehicles, the closest foreign analogue is three times more expensive than the domestic system. The logic prompts that the national manufacturers should be supported and let earn more than 2% or 5%, since no company can make progress with such profit rate.

These are two fundamental problems that require solution. But the main thing that contains the development of defence companies as the lack of clarity regarding the demand for products in the long run. The League of Defence Enterprises was created exactly in response to such problems, and we readily joined activities at creation of mechanisms that would be more efficient and more acceptable in the current conditions.
Defence-Industrial Cooperation with Foreign Countries: Best Practices of Ethics

Introduction

In the decades after the end of the Cold War we witnessed a fundamental reshaping of the defence industries of all leading countries. Both shrinking domestic markets and rapid technological advancements had a role to play. Mergers reduced dramatically the number of main defence contractors, or primes, while in the process of globalisation these primes had the opportunity, and many used it, to pursue global presence.

On the other hand, sound economic interests, along with security of supply considerations, found a political expression in government’s requests to relate major defence procurements to offset or similar cooperation programmes leading, in many cases, to integration of smaller industries into the supply chains of primes. This paper briefly introduces the main considerations in cross-border defence industrial cooperation and then focuses on one often neglected dimension of such cooperation – the issue of ethics. It outlines ethical standards and integrity policies of leading defence industrial associations. In conclusion, we underscore the role of integrity and ethics as a key prerequisite for cross-border defence industrial cooperation.

Key Considerations in Defence Industrial Cooperation

The end of the Cold War brought significantly reduced demand for defence products, globally, and triggered a process of acquisitions and mergers, that characterized the defence industrial landscape in the 1990s and beyond.¹ The

number of main defence contractors, or primes, came down considerably, while the market opportunities they were pursuing expanded. Many clients, on the other hand, demanded offset (or similar) arrangements that in turn facilitated the expansion of the geographical base of suppliers, with supply chains crossing national boundaries.

Political considerations and legal requirements may facilitate defence industrial cooperation, e.g. the inclusion of a company in the supply chain of a prime. Sustainable relations, however, are based on two main factors:

- the competitive advantages of the cooperating companies; and
- trust.

The latter factor accounts for, inter alia, compliance with anti-bribery norms, so that the risks of reputational and legal damages of the improper behaviour of a partner in the supply chain, e.g. an intermediary, are reduced to a minimum. This aspect is examined in the remaining sections of this paper.

**Codes of Ethics in the Defence Industry**

To reduce the vulnerabilities and provide a “level playing field” on the international markets, Western defence companies and their associations have set in place a set of policies and standards aiming to free the defence market from corruptive practices. Salient among these are:

- The *Global principles of business ethics for the Aerospace and Defence Industry*, developed jointly by the Aerospace Industries Association of America (AIA) and AeroSpace and Defence Industries Association of Europe (ASD); and
- The European Common Industry Standards for the prevention of corruption in the Aerospace and Defence sector, set by ASD.

The key underlying principles of business ethics are:

- Each company has an explicit integrity policy;
- There are procedures in place to make company personnel aware of this integrity policy and the demand to comply with it;
- The leadership encourages reporting of improper behaviour and provides appropriate reporting channels;
- Sanctions for such behaviour are also appropriate, proportionate and dissuasive;
- Payments, gifts, political contributions, and charitable donations shall be duly accounted for and traceable;
- There are internal control procedures that provide for enforcement of the integrity policy;
- The principles of the company’s integrity policy apply as well to business partners, including advisors, majority-owned joint venture entities, subcontractors and suppliers;
- Conflicts of interest are properly managed;
- Proprietary information is adequately respected.

The standards clearly define the cases when rules of fairness are broken by seeking “improper advantage,” a term described in a comprehensive manner:

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2 Competitive conditions, allowing all participants in the international market to compete on an equal and fair basis.
Companies will not offer, promise, or provide any undue pecuniary or other advantage (e.g. payments, gifts, hospitality, as well as political contributions or charitable donations), to public officials, political parties or political candidates, or to any private party, in order to obtain or retain business or gain any other improper advantage in the conduct of their business.³

The common industry standards also envision:
- Compliance with laws and regulations;
- Largest possible scope of application;
- Prohibition of corruptive practices,
and provide guidance in regard to:
- Gifts and hospitality;
- Political donations and contributions;
- Business partners (due diligence; legal provisions; agreement; fees to intermediaries; verification programmes);
- The design and implementation of integrity programmes;
- Sanctions.

Many defence companies already have well established integrity policies and ethics’ codes, and mechanisms for their enforcement. The NATO-DCAF Compendium of best practices in building integrity and reducing corruption in defence outlines good practices in the institutionalization of integrity policies of leading defence companies.⁴

**Defence Companies’ Integrity Index**

In the beginning of the current decade, the UK branch of Transparency International (TI) started monitoring the levels of corruption risks associated with the functioning of defence companies from around the world.⁵ TI-UK uses a methodology looking into five groups of criteria, as follows:
- Leadership, governance, and organisation;
- Risk management;
- Policies & codes;
- Training; and
- Personnel and helplines.⁶

In its assessments, TI-UK asks respondents to address 41 questions, using a respective set of model answers. Their views are then complemented by evidence from publicly available information, company reviews, internal information and external peer review.

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⁵ [http://companies.defenceindex.org](http://companies.defenceindex.org).
TI-UK published the first integrity index in 2012. The current, 2015 Company Index covers 163 companies, grouped in six clusters from A to F, respectively from lowest to highest corruption risks. The Ukrainian companies covered fit into group F, that is, as facing highest corruption risks.

In conclusion, I would like to emphasise once again that ethical corporate behaviour is not just a desirable addition to what companies do, and are, but in fact is a pre-condition for solid defence industrial cooperation with Western defence companies. In that respect, this paper aimed to raise the awareness among interested stakeholders and provided examples on existing policies, standards, and good practices in corporate ethics of defence companies. Implementing these principles by Ukrainian defence companies, even in a basic manner, would facilitate the movement up the TI Company Index’s ladder and make them more attractive for technological and industrial cooperation with leading Western corporations.

References


Aerospace Industries Association of America (AIA) and AeroSpace and Defence Industries Association of Europe, Global principles of business ethics for the Aerospace and Defence Industry, Issue 2 (Arlington, VA & Brussels, October 2009).

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According to the programme I have to speak on the Role, Powers and Practices of Parliamentary Oversight of Defence Production, Sales and Procurement – International Best Practices. To me that sounds more like a title of a book, but for about 12 minutes I will try to highlight key issues and a couple of what is considered ‘good practices’.

First, I will remind the audience what are the general roles of the parliament. Then I will split the presentation on three issues of the oversight: defence procurement, production, and arms related exports. The good news is that there are books already written and published. First, I would recommend “The Parliamentary Dimension of Defence Procurement” by Willem van Eekelen. Then, there is a very influential publication done by DCAF “Parliamentary Oversight of the Security Sector”, the last two chapters of which deal with the oversight of procurement and arms transfer. Finally, a handbook “Civil-Military Relations and Democratic Control of the Security Sector” can refresh your knowledge on different regimes on limiting the export of certain weapons systems and their related products. All three publications are freely available from DCAF website and they are available in Ukrainian as well.

So, reminding ourselves on the general roles of parliaments and tools available to parliamentarians, the most influential one is the so-called ‘Power of the Purse’. If the parliament does not give money for certain procurement, then it is not going to happen. But the issue later will become: will the parliament have the information what the budget they vote on is for?

The second one is that the parliament can oversee policy implementation, for example, to discuss audit reports. It can hold the executive powers responsible for
adherence to norms but also whether they have acted in an effective and efficient manner. And the tools parliamentarians have available are: to pose questions, to hold hearings, organize visits to units or factories. It is up to their wish to conduct special investigations, create special investigative committees if necessary or resolve certain issues. And I would recommend one the Van Eekelen paper “What you can do as parliamentarian” if some of you are interested.

So, now – on the oversight on the procurement process. My experience tells me that no one can oversee a process that is not well designed. And it is designed in the executive manner. That process has to be policy and capability oriented. We need to understand how certain procurements support the delivery of capability that is demanded or some other reasons. The process needs to be structured, it needs to be transparent. It needs to be transparent from the mission needs to capability requirements, to the product that is acquired at the end.

Transparency also means that we have to take into account all capability components when we think of ‘capability’. And that is not only the technology, not only the weapon systems. We need to think about infrastructure, the people, the training of the people, the training ranges (facilities), and everything necessary in order to produce that capability. Of course, all that costs money and all that has to be put in a certain budgetary framework. And here I already see some of the difficulties, which you face, because, if I understand Ukrainian system, the MoD and the General Staff are responsible to produce the capabilities, but another ministry, the Ministry of Economy is responsible to produce a good portion of the material component of that capability.

It is extremely difficult to synchronize this process, especially now when you are spending 5% of the GDP on defence. You have a lot of money and you start producing a lot of equipment. Maybe you already start facing the challenge of having the equipment, but not having the people trained or the infrastructure prepared, or other components needed. So, for you it is more challenging that for others to take into account all capability components when decisions are made, including decisions of procurement. Also, you need to account not only for the so-called ‘upfront costs’, or what you pay to get the equipment for the weapon systems, but for the life-cycle costs: how it is maintained and overhauled, who does that, how much that costs, how much each hour of operation costs, etc.?

Then the next thing is that parliament is not responsible for everything that happens and does not oversee everything that happens. Neither does the Defence Minister. Basically, you need to have an appropriate assignment of the decision-making responsibilities in a project. I give an example a little bit later.

You also need to have a good system for distribution and delineation of responsibilities. Usually there is one entity that defines the demands or the capability requirements- the military most often. Then you have someone else who decides on the allocation of resources and someone else who actually manages the delivery of capability. And finally, you cannot have a good procurement process if you do not have an effective project management. But I am glad that in one of my previous visits here I listened about the introduction of the Princeton Project Management Methodology.
(PPMM) in the MoD, which is kind of a current standard worldwide on project management. But then you need people trained to do that appropriately.

Regarding the process, each country has something like the UK MOD acquisition life-cycle.

Example: UK MOD Acquisition Lifecycle

<table>
<thead>
<tr>
<th>Concept</th>
<th>Assessment</th>
<th>Demonstration</th>
<th>Manufacture</th>
<th>In-Service</th>
<th>Disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Gate</td>
<td>Main Gate</td>
<td>Business case required for investment approval</td>
<td></td>
<td></td>
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</tbody>
</table>

There is also a NATO standardized process. Therefore, there is no need to invent something: take the respective NATO publication and see where your process differs and then adapt your process accordingly. That would be my recommendation. Not the least because the NATO process in itself also corresponds to the ISO standard. There is nothing unique to be created specifically for the military. When you have this process, you can see where the key decision points in the procurement phase are.

Obviously, parliamentarians for certain projects need to be informed or their sanctions (as in official permission or approval for an action) need to be taken before proceeding further. There is a good example from Norway on the approval processing levels. If a project costs under about 8 million Euro (NOK 75 million), then it is the managerial decision on a director level in the MoD. If the project is between 8-60 million Euro, it is the Defence Minister, and if the project costs more than 60-70 million Euro, then it needs to go to the Parliament. Many countries have similar approach. In Bulgaria, by a change in the amendment in the Law on Defence, the project above 25 million Euro are to be approved by the Council of Ministers and above 50 million Euro is a decision of the Parliament.

How this role of parliament fits into the whole managerial process of delivering capabilities? To do that many countries have a document of the sort of 10-15, sometimes more, years acquisition plan or modernisation program. It is adapted annually or bi-annually in order to be realistic, because there are so many uncertainties in the process: you may get the money but not be able to spend them and then you need to be allowed to spend that money on another project that proceeds.
appropriately. You need clear prioritization. Then the parliament either approves the plan as a whole when it looks at the budgeting process, but that is in countries which have very solid instituted program-based budgeting. The US is the only example that comes to mind that has this. The Pentagon proposes its budget structured along programs and those programs have also projects inside. So, parliamentarians can look in great detail and they know what they approve. In most countries the executive seeks the sanction of the parliament before proceeding with the ‘big ticket’ procurement cases or projects. It is a kind of a norm as far as I am aware.

As for the oversight on the arms production, I initially found this question a little strange, because most defence companies in Europe and North America are private. And for the private company it is the market that regulates its existence and its work. If it is not effective, if it is not efficient, it will die. If a country has both private and state-owned defence companies, then the regulatory framework should be the same for all. The only difference is the defence. Sometimes the defence companies may have to respond to urgent requirements and then the state controls the distribution of their products. If you want to learn more how the state manages the process of production of state-owned defence companies, you may want to talk to France, which still has a certain portion of its defence industrial base state-owned. Many other countries just do not have state-owned defence companies.

In Norway, it is obligatory to use an external auditor for all projects with the value of more than approximately 80 million Euro. This is mandatory with a couple of exceptions in their cases like gas and oil. This process is governed by the Ministry of Finance, which selects consultant companies that perform the audit. The auditor goes through all the decision documents and comments on all aspects of the documents. They have special focus on cost estimates, identified risks in governance issues, and recommend different cost buffers.

On arms exports, there are a number of international norms, codes of conduct, non-proliferation regimes. The oversight of arms exports is largely in the hands of the executive. This oversight typically involves licensing, the organisation DART rate (“days away, restricted or transferred” – ed.) in armaments, military equipment, dualistic technologies and products. In the Bulgarian case, that is exactly how the system works: the licensing of organizations is done by a committee that is co-chaired by the Ministry of Defence and the Ministry of Economy, and is supported by a central staff in the Council of Ministers. When we come to individual deals, it is again co-chaired by Deputies Ministers of Economy and of Defence. For specific roles in parliament, we expect that the parliament is to legislate the enforcement of all international norms, defines responsibility and procedures for licensing, manufacturing, storing, transit, import, export of arms, as well as requirements to keep records and to report. And as good practice is considered when the executive reports at least annually to the parliament on all companies licensed, all arms imports, exports, etc. And in certain cases, parliament may decide to make the respective information public.

In conclusion, it is a sensitive area, but involves large amounts of public funds and the oversight role of parliament has to be there.
Bad Experience Of Parliamentary Control Of Perfection Of The Defence Industry Complex Governance

BAD EXPERIENCE OF PARLIAMENTARY CONTROL OF PERFECTION OF THE DEFENCE INDUSTRY COMPLEX GOVERNANCE


Over the eight years of my parliamentary activity and more than ten years afterwards, I took part in at least two dozen events like the one we have today. Every time, the problems were actually confined to that of governance. The first hearings in Parliament on reformation of the defence industry complex (defence industry) were held as far back as 1999. Then, it was noted that the complex as such had not been created, while ruination of the defence industry took place at a slapping pace. The report stressed that the National Security and Defence Committee more than once appealed to the President and the Government, requesting them to regiment this issue. There was no reaction.

Six years passed, the state had a new President, a few governments changed. On the 27th of September, 2005, there was a conference, like today, that discussed the role and place of Ukraine’s defence industry in the European and North Atlantic security structures. It was noted that the defence industry as a structured integral system continued to fall into decay, many enterprises and defence institutes of the world level were deadened. There was no reaction again this time. More than that, some strategists and structures connected with the President actively pushed the idea that “the Ukrainian Government is to come to the conclusion that Ukraine needn’t develop the defence industry, if it becomes a member of the North Atlantic Alliance”.

Another seven years passed. The country’s President, the Government, Parliament changed once again. In July, 2012, new parliamentary hearings on the state and prospects of development of the military establishment and security sector were
held. Panellists worriedly noted the dangerous scale of impairment of the military potential in course of many years, due to absence of an executive body vested with appropriate powers that could pointedly, efficiently and fully coordinate implementation of the defence industry policy. The generated recommendations proposed the President to provide for creation of a body in charge of those issues in the Government. Panellists spoke out in favour of enhancement of the role of Ukraine’s National Security and Defence Council (NSDC) in those issues.

Parliamentary hearings held in July 2014 – under the present authorities – showed, how the situation had changed. The recommendations approved by the parliamentary Resolution on 12 August 2014 read: “The decisions taken on those issues are implemented were slowly, some of them are not implemented at all”. There was a special reference to the Resolution following the parliamentary hearings of 2012. It again noted the lack of political will of the national elite, corruption, mess in the human resources policy. We should add so-called lustration, poorly implemented by the imperfect, as President Petro Poroshenko put it, law that has never been revised – despite promises given by Ukraine to the Venice Commission. This step delivered a ruinous blow to professionalism in the sector. Panellists admitted (and the Verkhovna Rada agreed) that immediate tasks included “organisation of proper operation of the defence industry, priority satisfaction of the needs of security and defence sector bodies for material, technical, financial resources, arms and military equipment”.

It was proposed to the Cabinet of Ministers to set up the State Commission for Defence Industry led by the First Vice Premier, and the State Agency for Defence Industry as a central executive body reporting to the Ministry of Economic Development, Industry and Trade (it was also proposed to set up or, rather, reorganise the latter by adding industrial policy issues to its term of reference). Support was also extended to proposals introducing more efficient parliamentary control of that sector, including on the part of the Verkhovna Rada Commissioners, which must have been taken into account during the amendment of the Constitution. But as far as I know, amendments to the Constitution proposed in the past two years did not touch those issues. If we treat important issues of state governance in such a way, with such attitude, the problems will not be properly regulated.

Another question is presented by human resources management in the defence industry sector. It was actually left unattended. Losses that took place in the sector over the past quarter of a century strike the eye. According to trade unions, in course of 10 years (1993-2003) the number of employed in the sector fell by 68%, in that, in space engineering – by 71%, in machine tool building – by 72%, in radio electronics – by 88%. Due to total deindustrialisation, we actually lost skilled workforce, called the “upper crust” of the working class. Having effectively destroyed the system of vocational education, the state did not care to organise training of skilled personnel for the defence industry.

It seems to me that all those issues should be covered in the Conference’s recommendations.
NEEDS AND PROBLEMS OF REFORMATION OF THE SYSTEM OF UKRAINE’S DEFENCE INDUSTRY MANAGEMENT

Oleksiy SKRYPNYK, Deputy Chairman of the Verkhovna Rada of Ukraine Committee for Science and Education

I am not a great expert in the defence industry sector but spent quite a long time, working in the expert group for the defence industry reform, and would like to state some important points.

The first one is public-private partnership. Neither corporatisation nor other measures will produce results until there is a working tool of public-private partnership in place. This is especially true for advanced equipment. Yes we can produce some models, units, parts, referred to as “hardware”. But if we speak about modern management systems, we catastrophically lag behind in the public sector there. Meanwhile, thanks to private sector companies, Ukraine is in the Top-10 countries of the world producing electronic devices, including for military purposes. A bit of a paradox. That is, in fact, the whole intellectual potential employed by the defence industry in 1980-1990s moved to the IT sector, and if we do not change the situation, we’ll get nothing but the equipment of ’80s.

Second – regarding the establishment of a Defence Industry Agency. We already had it here in Ukraine. Now we face one of the most terrible problems of defence industry management – we actually have no body responsible for the policy in that sector. Furthermore, we have no external structure, as the case is in many countries, that would agree interests of public and private entities and let them compete and in this way promote domestic arms development.

Furthermore, we should answer the question: who is the customer of equipment? Is the Ministry of Defence (MOD) the real customer, or just a place to order military products? This is a fundamental question we must answer and understand that the MOD and said Agency have substantial differences related with different interests and responsibilities. The MOD seeks to get state-of-the-art equipment and is responsible for its fielding with the Armed Forces. The Agency seeks to organise production of equipment and will be responsible for formation and execution of the state defence order. This would also bring “competition” encouraging normal development of the sector.
Third – regarding Concern “Ukroboronprom”. It is the entity I respect, supposed to be most of all interested in its own reformation, since the non-reformed nature of “Ukroboronprom” makes it non-competitive. This is one of the biggest problems, since “Ukroboronprom” as a monopolist, on the one hand, actually cannot make world-class equipment, on the other, it bars competition. So, its functions should be transferred to the Defence Industry Agency, taking from “Ukroboronprom” all functions of import, export, control, etc. and making it a usual concern that has the right to existence – as far as it intends to corporatise its enterprises. “Ukroboronprom” will have to do a large piece of work, since, judging by my knowledge of some enterprises, I realise what “Augean stables” it will have to clean.

The level of some enterprises dealing with military products fell dramatically, but the problem is neglected, probably, unreasonably. “Ukroboronprom” deserves credit for what it did in course of a couple of years – bring enterprises about, made them profitable, appointed normal managers. But here, a critical issue arises – “Ukroboronprom” should not become an obstacle for development of the enterprises falling within its structure and for the defence industry, including in terms of competition.

For some reason, we don’t mention that we have State Enterprise “Ukrkosmos” and many other enterprises and institutions subordinated to the State Space Agency. With the purpose of optimisation it makes sense to unite managerial structures in one Agency working with “Ukrkosmos”, “Ukroboronprom”, and many other enterprises, including private. Serious reorganisation is needed for that.

During the first session we mentioned NATO standards. A number of very important points concerning the European integration and hopes that Europe will save us deserve attention, too. If we look at the experience of our colleagues from Bulgaria, Poland, Hungary, we will see that they very responsibly and practically introduced NATO standards: implementation of standards was strictly timed in line with political (NATO requirements, own needs) and technological (complexity, needs and availability of resources) priorities, allowing some time for adaptation.

Regarding competition, military acceptance, quality control. If one looks through the new law on licensing, there is an impression that with one hand, we try to put the market of development of arms and military equipment in order, while with the other one, we do everything to monopolise it and to bar normal competition.

Now, a few words on Parliament. As exemplified by our Committee for Science and Education and its review of defence issues, one may see that its discussions are very difficult for many reasons, including the effects of the human factor, always present. The main likely reasons are, on the one hand, the fear of change and errors, and on the other – the inadequate attitude of some ministries and agencies to parliamentary control, like: you understand nothing, and we will do our best for you to never understand. But in the end, it’s all about taxpayers’ money, not always used efficiently. I do not want to look for a conspiracy or corruption here. It seems that the reason often lies in usual slovenliness, which, of course, does not release from responsibility.
In the conditions of aggression against Ukraine, the main task of the defence industry sector is to meet the needs of the Armed Forces of Ukraine and other military formations for advanced hi-tech arms and military equipment.

Despite the general situation in the country, the Concern managed to produce some gains in 2016. It handed over to power structures over 6000 weapon systems. In terms of figures:

- the net income of the Concern enterprises totalled UAH 18,536.7 million (in the same period of 2015 – UAH 14,431.8 million);
- over UAH 3 billion transferred to budgets of all levels;
- capital investments hit UAH 527.7 million (in 2015 – UAH 475,9 million);
- average wages rose by 28% and reached UAH 6,897.

Pursuant to the Government ruling, in 2016, state enterprises transferred 75% of their profit to the state budget, which barred the enterprises from investing those funds in production, upgrading and renovation of production lines, development of new products, etc.

It produced or upgraded for Ukraine’s Armed Forces and other military formations and fielded 1,362 pieces of military equipment, missiles and ammunitions, communication and navigation means, repaired nearly 1,389 pieces of different military equipment.

The Concern fulfilled the state defence order for 2016 by 100%. That said, the share of “Ukroboronprom” in the total state defence order amounted to 38.9%. 61.1% fell on other Ukrainian enterprises. For comparison, in 2015 the Concern’s share in the state defence order made 67%. On the one hand, it may be viewed as not the best indicator
for “Ukroboronprom”. But since it is the real indicator of engagement of enterprises from all over the country in provision of defence capabilities of Ukraine, this is certainly a good development.

State Concern “Ukroboronprom” takes systemic measures to get rid of the traditional cooperative dependence of the Ukrainian industry on imports of goods from the Russian Federation. After the termination of military-technological cooperation with the Russian Federation, Ukraine’s defence industry had to urgently find the ways of production, upgrading and repair of military equipment for the sake of defence and security of the state. At present, the most critical kinds of products that require replacement of imports include:

• radio-electronic devices;
• bearings;
• ferrous and non-ferrous metal products;
• rubber items;
• standardised and unified sets, component parts, units and articles of arms and military equipment.

This list is far from exhaustive and may be changed dependent on production needs.

For reference. Today, “Ukroboronprom” is the biggest state concern, the standard-bearer of Ukraine’s defence industry. “Ukroboronprom” united over 130 entities that may be divided into five branch clusters:

• armour;
• aircraft building and repair;
• shipbuilding and naval equipment;
• precision weapons and ammunitions;
• radar, radio communications and air defence.

The Concern includes 31 design bureaus and scientific research institutions engaged in scientific research, development and designing.

The Concern currently utilises 9 million square metres of production areas.

The Concern employs over 80 thousand highly skilled and experienced specialists (368 labour dynasties, 262 war veterans, 400 persons detached on temporary duty to the ATO area).

“Ukroboronprom” includes six state companies authorised by the Ukrainian Government to perform export/import operations involving military goods.

“Ukroboronprom” is among the Top 10 innovative companies of Ukraine.

In 2014 we launched a large-scale programme of engagement of Ukrainian industrial enterprises in production cooperation. Say, while in 2014, 55% of parts in armoured personnel carrier BTR-3E1 were domestically-made, 35% – Russian, and 10% – from other countries, in 2015, Russian parts were no longer used. The share of
Ukrainian parts reached 70%, foreign – 30%. In 2016 the share of domestically-made parts and components in BTR-3E1 reached 87%.

The situation with production of BTR-4E is similar. In 2014 Ukrainian and Russian parts and components made 45% each, of other countries – 10%. In 2015, 65% was made in Ukraine, 35% – foreign. In 2016, the share of Ukrainian parts and components reached 85%.

Implementing the programme of import substitution, the Concern has made 19 memorandums of cooperation with regional state administrations. Other regions are to join the programme soon.

Over 350 small and medium companies take part in the programme of import substitution through joint efforts. To support cooperation with information, Ukraine for the first time issued an item directory of defence products, to be used by enterprises in course of import substitution activities.

As of the end of 2016, over 3,400 key components, parts and elements necessary for production and repair of weapon systems have been substituted.

I wish to draw your attention to the following critical point. Arms and military equipment are specific products, the quality of which is subject to special requirements. By contrast to civilian products, the quality of military products is always controlled by the military acceptance service acting on behalf of the customer.

To ensure the required quality of products, the Concern set for itself the task of raising the efficiency of the quality management system and introduction of mechanisms of project management resting on international, European, and NATO standards.

Now, 75% of the Concern enterprises hold certificates of compliance of quality management systems under ISO 9000 standards, three enterprises – certificates of compliance with NATO standards AQAP. As the experience of NATO countries shows, availability of a certificate of compliance of the quality management system of enterprises with AQAP requirements is necessary for participation in tenders for supply of defence products to the order of uniformed agencies of member countries.

Another important issue is currently presented by the need of professional development of enterprise employees. For this purpose, the Concern considers creation of a system of permanent professional development courses – first of all, for managers, designers, process engineers and other key specialities – using its facilities. Such courses may be open for all concerned parties.

The new management team of State Concern “Ukroboronprom” worked out measures at prevention and countering corrupt acts within the Concern and subordinated enterprises. In particular, for creation of transparent working conditions, the Concern for the first time in Ukraine introduced an advanced procurement system using electronic trade platforms. Implementation of this initiative made it possible not only to bring to naught corruption and manipulations in procurements but also saved nearly UAH 476 million. Over 27 thousand tenders were held, almost 17.5 thousand new suppliers found. The average amount saved per tender in 2016 made nearly UAH 18.0 thousand.
In 2016, the Concern increased military exports by a quarter – to $756 million. The share of military export by the Concern made 2% of Ukraine’s total exports.

By and large, in 2014-2016, the Concern enterprises concluded export contracts totalling $3.8 billion. The backlog of export orders of the Concern totals $1,446 billion. Enterprises-special exporters signed more than 65 memorandums of new lines of cooperation with 20 countries of the world, including Belgium, France, Canada, the USA, Great Britain, Germany, Poland, UAE, Israel, India, Turkey, Saudi Arabia, China and others.

The Concern continuously organises activities for promotion of the Ukrainian defence industry products on the world market and lobbying interests of the defence industry in relations with foreign partners. In 2015-2016, it organised numerous presentations of the capabilities of Ukraine’s defence industry at leading international forums. It took part in many defence exhibitions, including:

- **IDEX** – International defence exhibition (Abu Dhabi, UAE);
- **DEFEXPO** – IX International Land, Naval & Internal Homeland Security Systems Exhibition (South Goa, India);
- **EUROSATORY** – International exhibition of weapons, security and defence technologies (Paris, France);
- **FARNOBUROUGH AIR SHOW** – International aerospace event (Farnborough, Great Britain);
- **MSPO** – International exhibition of defence industry (Kielce, Poland);
- **AIRSHOW CHINA** – International air show (Zhuhai, China);

and many others.

State Concern “Ukroboronprom” implements present-day approaches in advertising and exhibition activities. Its priority tasks include familiarisation of our partners with the present product line and capabilities of the national defence industry enterprises, technologies possessed by Ukraine, which it can share. Thanks to participation in such events and presentations of the Ukrainian defence industry, new business contacts were established with foreign companies.

State Concern “Ukroboronprom” management is well aware that Ukraine’s defence industry development critically depends on a stock of orders with a view of utmost utilisation of production facilities, first of all, of the Concern member enterprises engaged in cooperation. Exactly this approach will provide for steady growth of financial indicators, create capabilities for renovation of fixed assets and innovative development of enterprises.

Furthermore, transition of enterprises from the state of survival to dynamic development, taking place now, gives new opportunities for commencement and implementation of international projects, making it possible to employ and develop the export potential of the Concern member enterprises in R&D.

In its turn, deepening and expansion of military-technological cooperation will make it possible to raise the share of new arms and military equipment produced in Ukraine in the export structure, missing which, one can hardly speak at least about
the retention of the current position on the world arms market, let alone joining the
Top 5 world exporters of arms and military equipment (a task set by the President).

Now, it is vital for us to use the available experience and best practices of the
national defence industry and establish cooperative ties with partners for creation of
modern arms and military equipment.

The most critical lines of broadening Ukraine’s defence industry cooperation with
partner countries, except pure export/import of arms and military equipment, in our
opinion, include:

• procurement and use of separate hi-tech systems and components for
improvement of the performance of Ukrainian defence products;
• technical re-equipment of Ukraine’s defence industry enterprises;
• establishment of joint ventures between defence enterprises and companies for
development, production and upgrading of new weapon systems and military
equipment;
• participation of Ukrainian enterprises in international projects of development
and production of military products;
• promotion of foreign investments for development and production of new hi-tech
products.

State Concern “Ukroboronprom” takes an active part in military-technological
cooperation between Ukraine and NATO. The Concern experts work in groups and
subgroups of the Conference of National Armaments Directors, in multinational
projects within the framework of NATO’s “Smart Defence” Concept, in cooperation
programmes of NATO Support and Procurement Agency (NSPA).

On November 30 – December 1, 2016, Ukraine for the first time in its history held
the Days of Ukraine’s defence industry in the NATO Headquarters (Brussels, Belgium)
and NSPA Headquarters (Capellen, Luxembourg), where “Ukroboronprom” presented
its products, including new projects.

With assistance from the NATO Office in Ukraine, “Ukroboronprom” plans to
establish a training centre for Ukrainian security and defence sector specialists to take
part in the Alliance’s programmes, using the Concern facilities. They are intended for
employees of the concerned ministries, agencies and state institutions.

Progress of the defence industry development is impossible without training
new specialists and employment of young people. So, we initiated a programme of
broadening cooperation with the leading Ukrainian higher educational establishments.
Memorandums of partnership and cooperation were signed with 50 national scientific
and educational establishments. That said, while in 2015, only eight memorandums
were signed, in 2016 – as many as 42.

In 2016, higher educational establishments offered us more than 500 advanced
development projects, 200 projects were offered by the National Academy of
Sciences of Ukraine, from which, 80 projects were implemented for the Concern at
30 enterprises in 2016.

Last year, nearly 4.5 thousand students passed internship at enterprises of State
Concern “Ukroboronprom”, 400 of them are already employed at our enterprises.
It should be noted that the Concern structure is changing continuously. The reform strategy developed by the Concern will make it possible to supply the armed forces with advanced arms and military equipment and join the Top 5 exporters of innovative weapons in the world.

The main goal of the defence sector reform strategy developed by us presumes integration in the global defence market. The Strategy was developed with account of the latest world trends – globalisation, and growth of defence industry influence on the civilian sector.

The Strategy provides for:
- determination of the Concern’s place and role;
- implementation of international standards of corporate management;
- corporatisation of enterprises by equipment type, and creation of clusters in the branch;
- audit involving international companies;
- launch of the innovation development platform;
- comprehensive actions for technology protection.

“Ukroboronprom” views the defence industry as an ecosystem, organically including not only the Concern and our enterprises but many other Ukrainian industrial enterprises of different forms of ownership. Our goal is to ensure efficient operation of the whole Ukrainian industry and economy.

Our key role:
- to act as the national industry integrator;
- to become the core of the ecosystem, laying down the general rules of partnership, standards, giving Ukrainian enterprises access to foreign markets, establishing international partnership for implementation of innovative projects.

Implementation of international standards of corporate management is to ensure:
- a transparent and efficient structure of management;
- supervisory boards, collective decision-making;
- transparent procedures for international investors;
- clear-cut mechanisms of funding and control of cash flow.

**Corporatisation** involves implementation of two pilot projects, launched as far back as in 2015, within the framework of which, the process of transformation into joint-stock companies is coming to an end. Corporatisation of the following five enterprises has been agreed with the concerned ministry. For corporatisation of 67 enterprises, amendments to the legislation of Ukraine were drawn up and now undergo approval by state bodies.

**Clustering.** The Strategy provides for creation of five production segments, establishment of efficient cooperation with private companies, optimisation of cooperative ties between manufacturers and researchers and so on. In June, 2016, the aircraft-building cluster was created. Creation of four more is underway.
Audit. The Concern specialists prepared and presented to the world-largest audit and consulting companies terms of reference of an independent audit. Furthermore, we invited Transparency International to take part in reformation of the Concern. We expect their proposals.

We believe that involvement of such companies in the sector reform will let the Concern and its member companies perform due diligence of its financial and legal standing, including financial, legal, technological, managerial and strategic review, corporate and production restructuring, monitoring of implementation of the generated recommendations.

An investment platform for innovative development is being created, uniting experts in defence technologies, developers, creators and startupper, representatives of investment funds and the military. The platform will make it possible: to promptly pass the way from the idea to manufacturing of a new product; to obtain hi-tech solutions; to provide an efficient tool for developers, investors and the military; to contribute to building of the scientific-technological potential for a powerful breakthrough in defence industry development.

We are also creating a Ukrainian Agency of Advanced Research Projects, similar to the Defense Advance Research Projects Agency (DARPA) in the USA. Great assistance in its creation is provided by the “Ukroboronprom” consultant on long-term development, former DARPA head Anthony Tether. The Agency will generate solutions boosting economic development and national security. Such a platform will enable pooling advanced scientific thought, investments, mechanisms of exchange and protection of technologies.

In the field of technology protection, our main tasks include: protection of intellectual property in line with international standards; conservation of the national intellectual capital; enhancement of competitiveness; promotion of greater innovative activity.

Implementation of the presented Defence Industry Reform Strategy will make it possible:

• to ensure national security, to strengthen international standing;
• to promote Ukraine’s defence industry reform;
• to further innovation, to involve all research and production units in cooperation and to establish partnership with enterprises of different forms of ownership;
• to ensure utmost productivity, strengthening of financial standing, development of the human capital;
• to do away with corrupt schemes, to promote transparent possession of assets, a favourable PR policy, transparency for investors.

Achievement of the set goals requires substantial support from the Government, in particular, perfection of the legislative framework. For this purpose, the Concern drew up 34 bills. It proposed 11 amendments to priority legislative acts in the fields of corporatisation, establishment of joint ventures, support for the aircraft building industry, taxation of defence industry enterprises and others, and submitted them to the Verkhovna Rada of Ukraine.
We have achieved some progress in this direction: on the 14th of July, 2016, the bill creating conditions for international cooperation of aircraft manufacturers and development of the national aircraft building was approved. On the 20th of October, 2016, the Law “On Restructuring of Indebtedness of “Antonov” State Company” was passed. On the 26th of October, 2016, the Government let us return the rate of profit deduction to the state budget from 75% to 35% (since 01.01.2017).

We are ready to offer our potential partners broad opportunities:

• for creation of conditions for the most efficient use of the potential of private business;
• for practical implementation of promising projects;
• launch of new ambitious projects;
• establishment of joint ventures;
• conduct of joint scientific research;
• implementation of innovations and advanced technologies;
• attraction of investments.

All this may contribute to restoration of the strategic role of the defence sector in the national economy.

Summing up, I would like to stress that we seek to utmost efficiently use all available capabilities of the national defence industry and science, establish cooperative ties with our partners for creation of weapons and military equipment capable of opposing the Russian aggression.
Because the topic is governance, I can say a couple of words about what NATO is trying to do with together Ukraine in the area of governance in the area of security and defence and how it relates to the defence industry. We do not have very strong engagement with Ukraine on questions of arms industry. It is a little bit outside of our focus. NATO’s mandate here is to help Ukraine develop the capabilities to defend itself. Of course having a strong defence industry is a big part of that particularly when you have restrictions on what you can get abroad.

But, our first concern is about the Ukraine’s ability to defend itself and here is one thing that I have not heard very much from speakers so far is what Ukraine really need in terms of armament and how this question is addressed and how this question is answered. There is an issue I would like to focus on and draw your attention to, and it is defence planning.

Defence planning is absolutely a priority area for NATO’s advice and assistance to Ukraine. We have a very elaborate system, very formalised system for defence planning that basically all NATO nations follow and we have very defined methodology called Capability Based Planning, which all NATO countries use. Every nation has its own system for capability based planning, but the basic principles are all the same. Maybe the most important principle is that the system has to be based on a clear policy and a clear procedure.

So, the system is very formalised. You have to write it down, you have to have papers approved. This is not something for ad hoc decisions. It has also a very clear order. You start with a threat assessment – what exactly is the threat and what capabilities you need to repeal that threat. Once you have the threat assessment, then you develop a list of requirements – what you need in terms of military capabilities
(forces, structure of forces, armaments). Then, when you have your requirements, you develop a plan for developing those capabilities and acquiring of equipment needed.

These all sounds very basic, but the point is that there should be the formal process you start with defining the threats followed by the defining of requirements and then you develop the process of acquiring these capabilities.

In Ukraine this process is not properly formalised. That is not surprising, the system in Ukraine evolved over time. Faced with the sudden aggression of Russia you had to react to the certain circumstances. Everybody in the system, based on their experience and knowledge did their best to react quickly without necessarily making things very formal and going through any formal process. That is completely normal and acceptable. But now after almost three years it is really time for Ukraine to develop a more formal system, which I think is necessary if Ukraine is to go beyond the level of achievement reached now in to really accelerate a development of capabilities.

The reason why formal process is needed is because when you only formalise the process, you really establish who does what and whether the process is really delivering outcomes that you need.

We have seen a lot of information about how much was done. A lot of things were done, but I have not really seen much that says: well, this is what we needed and we have met those requirements. I think, if one asks: “Does the Ukraine’s Armed Forces have what it needs?, very few people would say that it has.

The formalisation of the process is not something that could be expected last couple of years, but this is where we are putting our focus now. Through a development of the defence planning process, we think that the MOD first of all will become a more predictable customer for the defence industry. It would be able to define its requirements now and for the future and thus creating a policy basis on which the defence industry would be able to know what kind of requests would be over the next several years. On that basis industry will be able to make its own plans.

Again, it is all a sort of basic and simplistic, but that process is not there. We heard about a state defence order, which is taking place every year and which in theory could result in a very organised and comprehensive set of purchases for defence forces. At the same time if to look at what actually is procured, it seems though there is not a lot of coherence in any order. What is purchased for the National Guard – you have one sort of transportation equipment – is different from what is procured for the Armed Forces. There is no obvious coherence in the end-result, in the output of the process. There is a question: “What kind of planning went on the first place?”

Here we understand that there is not much coordination between the planning processes of the Armed Forces and of the National Guard, for example. So, basically I think that the answer to a lot of the questions been raised here about how to provide a predictable and consistent demand for Ukrainian industry to supply, solutions to those problems have origins in a defined planning system. Over time it needs to be formalised if it is going to work because you are dealing with a complex structure with a lot of different players. The only way to coordinate, to bring some coherence to their actions is through a sort of process.
I would also like to highlight the importance of the need for the state agency, which will define Ukraine’s policy in the defence industrial area. As the representative of the Ukroboronprom said, there is a quasi-regulatory agency and the people there are to do several things, they initiated 30 laws. But obviously you need a real state agency to define state policy that governs the activity of the industry.

So, it is clear that Ukraine is in the transitional stage, the roles and responsibilities of all actors are not well-defined. It is equally clear that tremendous amount of work has been done over the past two-three years to respond to the extremely difficult situation. Our position is that this is the time now to step back and look at how the process works as the whole, try to redefine and clarify the rules for the different actors. I am encouraged by the words of the Deputy Minister of Defence about the year 2017 as the year of structural reform. I think it is really necessary if Ukraine is to brake ahead and to make some really significant improvements in this area, in terms of meeting the needs of the Armed Forces, and also developing the kind of transparency, rules and procedures which are necessary for cooperation with international partners.
I am a barrister, which is a type of criminal lawyer and I have lived for a number of years in the Republic of Georgia working for Transparency International, and with the NATO Defense Reforms there. Interestingly, for all the reforms that Georgia did, they left the defence sector last. And the incoming Defense Minister committed to cleaning up corruption. But they were defence specialists used to doing what they’ve always done, not anti-corruption specialists. And they weren’t quite sure where to start change. The specific anti-corruption implementation plan in Georgia pinpointed exact individuals with deadlines and specific responsibilities, so that you couldn’t evade that very thing. And what the defence reformants (reformists) in Georgia showed is how a very small, very inexperienced team with very few resources could achieve so much in a short amount of time. And I have a copy of that anti-corruption plan if anyone would like that.

I also led the government defence anti-corruption index. An assessment we designed has now been taken on by NATO as part of the self-assessment peer-review process, which assesses 136 countries across a number of risk areas from procurement, operations, finance, parliamentary oversight to see where the controls are strong and where they are weak, including with MoD interviews and information. That assessment, all 156 pages, and a summary are online if anyone would like to see that.

The government anti-corruption index consists of five risk assessments: political, finance, personnel, operations, and procurement. They are sub-divided into different assessment criteria. So overall there are 76 indicators.
Then we have a map of the results across NATO and partner states. So, you have the highest scoring in green colour. Moving down and we see Ukraine in category ‘D’: high risk of corruption. Procurement was actually lower, in the very high risk of corruption, which is where the weakest controls were. So, we see Ukraine scored higher for political controls than financial and lowest for procurement and operational controls.

So, we need to be realistic about where we are. It’s going to take many years to build the equivalent transparency, controls and institutions that we see in some of the other NATO member states. Meanwhile, we have illegal and uncompetitive business practices, which are pulling things back to the status quo. How do we stay focused on what is important?

I would argue it’s the simple market truth: corruption thrives because it is profitable. That’s how defence companies win contracts. So, what is your main counter-attack to that? Making it unprofitable by denying or threatening to deny market access to defence suppliers. And this is something that the United States Department of Defense has been doing for about 20 years now as their main anti-corruption tool for cleaning up the supply chain. And it’s something that the European Union started to implement about a decade ago. More actively, more recently. Exclusion, debarment, as it is otherwise known, (or) blacklisting. Basically, it’s excluding corrupt contractors from public contracts.

And an illustration of how powerful this is was shown to us last week when Rolls-Royce, one of the UK’s largest defence contractors, one of the world’s largest defence company settled with enforcement agencies in the USA, UK, and Brazil. The settlement meant that they were devoid a court case and avoid prosecution and a conviction for bribery. The allegations against the company had been wide-spread and systematic use of bribery to win defence contracts over more than 20 years in multiple countries. Rolls-Royce paid an enormous fine to avoid court. Over 700 million pounds and agreed to far-reaching governance changes. Overall, the cost to the company of settling this case was about 1 billion pounds.

So why would such a large, rich, powerful company like Rolls-Royce self-report, come forward and admit criminality? It paid an entire year’s worth of profits to settle
this case. Its share price plummeted. It gave individual employees, including senior managers, up for individual prosecutions. One reason alone— a conviction might have led to debarment.

The UK, the USA, EU States, and Ukraine have legal powers to exclude convicted suppliers. If a company, which relies on public sector contracts, is excluded, the consequences can be catastrophic. If it’s not bankrupt, it would be close to. Last week my team met with the head of the Serious Fraud Office, the UK’s main anti-bribery enforcement agency. And we asked him, “Rolls-Royce could have spent this 1 billion on legal teams. It had the legal team 10 times bigger than the enforcement agency. I’m a criminal barrister, I’ve seen the state take many cases to court and lose them. It’s a huge risk for them. They could have legitimately take in this case and fought it. Why didn’t they?” He said, “One reason. Because of the mere possibility of being convicted and the possibility of being excluded was too great of a risk for the company to take.”

Why is debarment so powerful? Because it’s the only tool we have that makes bribery unprofitable. The defence companies’ denial or possibility of denial of contracts is enough to change their behaviour and start to clean up the supply chain. This is why the US Department of Defense has been using debarment as one of their primary anti-corruption tools. And which is why the EU has brought in similar rules.

Looking at how Ukraine has implemented debarment, it’s actually already beyond the EU average. It’s got debarment laws, it’s started to implement debarment, it has a ‘corrupt suppliers’ blacklist, which is adding convicted suppliers to. It just needs to do more and more in defence.

I want to end by saying that at the UK Anti-Corruption Global Summit in May last year, Ukrainian government committed to more actively implementing to exclude suppliers, get details on their beneficial owners, and start sharing that information among procurement agencies and defence procurement agencies in Ukraine. So, my perspective to add to this conference is simply to do that and more of it and start reversing these economic incentives, because if all the reforms that can, should, and are being put in process, denying companies access is proven to get you there significantly faster.
My presentation will deal with organisational problems of performance of the state defence order and issues of secrecy in the defence industry, in the field of procurement of arms and military equipment.

Concerning the management body, to be responsible for formulation and implementation of the defence industrial policy. In March, 2016, the President of Ukraine signed the document titled “Concept of Security and Defence Sector Development”, providing for creation of a central executive body with this function. One year will pass soon, but the body has not been created yet. Policy formulation in the defence industry sector is currently vested in the Ministry of Economic Development and Trade (MEDT). But the Ministry is responsible for various industries, including the defence industry, which, in my opinion, is so specific that it requires a separate body.

I believe that the way, in which MEDT formulates policy and draws up regulatory-legal acts in the defence industry sector, looks somewhat awkward, since it has no subordinate enterprises to manage. Respectively, it does not have enough information about what is going on at those enterprises, what problems and needs they face and what they can produce. Lacking information, how can the Ministry formulate its policy and correctly determine rules of the game in that field?
In my opinion, the actions of “Ukroboronprom” are logical and correct. It’s commendable that the Concern assumed this role. It possesses all information and has the vision where to go. Respectively, policy-making now mainly rests with “Ukroboronprom”.

On the other hand, it is very good that the private sector takes initiative and tries to put forward legislative initiatives of policy-making. The state and the private sector and their roles in arms production and supply should be effectively balanced.

Now, a few comments on licensing. In the middle of 2015, a big de-regulatory package of laws was passed, and licensing to production, manufacturing, repair and disposal of weapons, military equipment and ammunitions was cancelled. On the one hand, it’s very good. On the other – I personally stand for regulation in that field. Stories still circulate in the corridors of MEDT that used to issue relevant licences about to whom licenses were issued, how many, and what for. This was the fact, indeed, and there is a huge risk of more such stories, if licensing is restored in its previous form.

What did MEDT do? It took from entities the required documents, checked their authenticity and issued the final document. This is not enough, so, this approach is not quite correct. This sector is specific in that actors must abide by certain norms, since manufacturing, use or disposal of arms and military equipment involve risks for society. Control of the end use of military products is also required, since violation of the principle of end user bears the risk of uncontrolled proliferation and circulation of weapons – moreover when ownership rights to small arms and ammunitions in the country are not regimented. Therefore, I stand for state regulation in this sector – but “with a human face”.

Regarding access to manufacturing and supply of arms and military equipment. MEDT is responsible for monitoring, maintenance of a register of manufacturers and suppliers of military goods and services, information about which is secret. They include the companies authorised to take part in the state defence order. How can one appear in that register? Companies simply submit documents, MEDT checks their authenticity and enters in the register. At that, the Ministry has neither the capacities nor the proper human resources for verification, to what extent those companies can perform one or another order. Maintenance of such register is declarative and involves a great corruption risk that people responsible for maintenance of the register can influence its content. So, such registers should be liquidated. We can leave a certain classified register of companies that can take part in highly sensitive activities dealing with nuclear technologies, in secret projects, development of advanced weapons. But regarding manufacturing, supply, repair of conventional arms and military equipment, access to participation in works and services should be utmost simplified, as I see it.

On the one hand, secrecy of some issues of the state defence order is justified, especially at a time of war in the country, fighting by our neighbour. But there is a certain limit, common sense, principles followed by countries that can serve as a model. Now, all information about procurement of arms and military equipment is classified, including the value of procurement, stock list, participating
companies, etc. Part of that information may really be classified, but the bulk may be opened for the public. This will let defence enterprises – both state-owned and private – and outside actors take part in procurement of arms and military equipment and plan the utility rate of their production facilities and capabilities of development in advance.

So, the existing secrecy mode brings about the risk that the defence industry is not developing, advanced projects are not implemented. Why should companies invest in research or capacity development, if they are unaware of the real demand for their products? The state defence order should make a large part of it, in terms of profitability and national security.

Meanwhile, the classification procedures and the levels of secrecy should be reviewed and revised properly. State budget expenditures on defence and security should be specified in greater detail – down to targets, rather than sectoral programmes and plans. This will contribute to efficient development of the defence industry and control of use of taxpayer funds.
Ukraine is in a unique position now. On the one hand, the new quality of civil society that arose during the Revolution of Dignity requires a new quality of government, deep and far-going transformation of the entire society and state system, prompt and efficient reforms in many domains. The efficiency of reforms will serve as a measure of efficiency of government, public confidence in the authorities and, respectively, their future will depend on their results.

On the other hand, the need to win the fight with militant separatism and the Russian aggression requires mobilisation and concentration of the main resources in this domain, prompt and adequate measures at security sector strengthening. Survival of Ukraine as an independent state depends on that.

Revolution, war, reforms

In this connection, and from the viewpoint of the defence industry, it is important to strike a balance among different, sometimes controversial requirements:

• prompt supply of arms, military equipment and materiel to the uniformed agencies demands reduction of the time of performance of orders, which can be done through use of the available production and repair capacities, rather than creation of new ones;

• creation of something new (building new facilities, development, commencement of batch production of new systems, etc.) cannot influence today’s situation, but given the invariance of the Kremlin’s strategic goals and the possibility of a prolonged aggression, some of such decisions (especially regarding precision weapons, ammunitions, etc.) may be considered as a single option;
• the same refers to the defence industry reforms – now, they can be implemented, provided that they contribute to immediate strengthening of the national defence capabilities or at least do not harm it;

• if the need of relevant changes really exists today, then in addition to the current effect one should keep in mind that on their basis, further reforms will take place, the efficiency and pace of which, especially in the conditions of tough resource and time limitations, will depend on the need or no need for such restructuring; to limit such restructuring, one should have a vision of the future model of the national defence industry now.

Management

Management is the domain where reforms now and in the longer run arouse no doubts. It is important to understand however, management of what? One can often hear the expression “management of defence enterprises” (objects). But isn’t it better to speak of management of the process of achievement of the required results? Imagine two airplanes, one flying, the other standing in a hangar. In both airplanes, crews similarly pull the joystick, switch keys, use other steering equipment. But the first airplane is flying, the second – stands still. So, what is being managed – an object (airplane), or a process (flight)?

Another demand is on trend now – “to create the line of defence enterprise management” – mainly meaning creation of some managerial offices. When bureaucrats speak about it, it is no wonder. But specialists should be aware that any set of managerial bodies is a “projection” of processes, in particular, of formulation and implementation of the military-technological policy, lifecycle of weapons and military equipment, their management, etc. on the institutional environment, organisational and executive system that implements those processes into life.

Lack of due attention to this (or, rather, overt neglect) results in creation of bodies and institutions, whose functions and powers are devised “on the fly” – devised is the right word, since instead of the vision of processes, technologies (procedures) of their implementation, a clear scheme of their management, emotional perceptions thereof are being implemented. In particular, if, for instance, institution of the post of a Vice Prime Minister in charge of defence industry is discussed, he will be mainly vested with the function of coordination of activity of different actors in that sector. Long experience of many countries proves – and NATO standards provide – that target programmes present the best mechanism of such coordination. A programme offers a detailed algorithm of strict allocation of resources and tasks among doers for achievement of certain results and progress towards the end result – the programme goal.

Unfortunately, Ukraine lacks an efficient mechanism of development and implementation of state programmes. If such an algorithm is absent, you can introduce as many positions as you want, but the result will be far from the desired. On the other hand, if such an algorithm is developed, implemented and made obligatory, it will be more reasonable to institute the position of not a “general” (Vice Premier), but a “sergeant” (programme administrator), at the same time reducing to minimum the number of state programmes through their merger by the principle
**PROCESS**

**Complete Lifecycle of Formulation and Implementation of Military-Technological Policy**

**Domains (lines)**

- Creation, maintenance, development of military-technological potential (scientific, production, process, human, resource).

- Optimisation of the stock of arms and military equipment and technical support for the processes of functioning, use, development of the armed forces and other military formations (standardisation, unification, volumes, quality, survivability, durability, efficiency).

- Development of military-technological cooperation with foreign countries.

**Process elements**

- Audit of the situation (financial, technical, economic, HR); analysis of problems; reporting.

- Conceptualisation (building of vision): forecasting, building of the future model in the form of key requirements to its parameters, determination of the general principles, rules of functioning.

- Strategy: determination of the ways of implementation of the future model, stages, intermediate results, political priorities, main limitations.

- Programming: development of the algorithm of attainment of intermediate and end goals, determination of the organisational-executive system, ties among contractors, assessment of resource requirements, technological priorities, risks of the programme implementation.

- Budgeting: pooling of all budget needs in one cost-estimate, optimisation of distribution, volumes and terms of allocation of funds.

- Current management: coordination and monitoring of implementation of plans and programmes, current tasks, their adjustment, control of intermediate and end results, guarantees of responsibility.

- Norm-setting: creation of a system of rules and norms or relations among actors engaged in management, performance, control, consumption.

**Organisation and functioning**

- the list of bodies, institutions, enterprises necessary to push processes towards the set goals, their functions and tasks, direct ties and feedback …

**Human resources**

- quantitative and qualitative requirements to personnel, requirements to their skills, conditions of employment…
**STRUCTURE**

**Full lifecycle of arms and military equipment**

- Marketing: study of the need for a technical system, demand and prospects of marketing, formulation of general requirements (technical, ergonomic, operational, economic, financial, etc.).

- Designing of a technical system: development of technical concept (including operational infrastructure), R&D, development of technical specifications.

- Preparation of production process: development of production technology, production of prototypes, testing.

- Batch production: provision with all required resources, launch, perfection and implementation of production technology, storage of finished products.

- Delivery: loading/unloading, transportation, acceptance (check of compliance with terms, requirements as to complete set, quality, end use).

- Operation: intended use, manufacturer’s servicing, maintenance, current repair, current and long-term storage (mothballing).

- Midlife and capital repair, upgrading: categorisation, decommissioning, performance of the required works, recommissioning.

- Disposal: categorisation, decommissioning, change of designated purpose, dismantling, destruction.

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**PROJECTIONS**

**Regulatory-legal framework**

- the list of laws, bylaws, norms and regulatory documents necessary for proper support of processes...

**Resources**

- needs for material, financial, process resources, priorities and terms of their allocation...

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* The quoted list of lifecycle processes in the concerned sector is not exhaustive and only intended for illustration of the proposed approach.
of the “tree of goals”. Of course, this “tree” should include the goals of efficient employment of the security sector structures (e.g., factors of victory over the enemy), and of its development (the desired parameters of the security sector and its elements, including the defence industry).

Therefore, if the defence industry reform is tackled in a systemic way, one can in principle avoid conflicts in requirements of long-term planning, fast reforms, and immediate strengthening of defence capabilities of the state, or at least neutralise them. Anyway, the time required to stop the Russian aggression and stabilise the situation – when large-scale reforms are impracticable – should as much as possible be used for preparation of the rational strategy and programme of reforms, so that when their start is announced, there are no questions: with what to start, what to do, where to take resources. Meanwhile, we can advise those who want “immediate results” measures, invariant to any model of defence industry: fighting corruption, introduction of efficient mechanisms of crediting, taxation, licensing, pricing, etc. that do not require urgent investment of significant funds.

Analysis of the Concept of State Target Programme of Reformation and Development of Ukraine’s Defence Industry through 2020

The Concept was approved by the Cabinet of Ministers of Ukraine order No. 19 dated 20 January 2016. It should make the basis for drafting of the relevant programme as a document that provides a clear algorithm of activity and interaction among actors for achievement of the planned results and end goals.

If the development of a relevant strategy is not planned, the Concept should set strict parameters of the future model of defence industry, key requirements to the ways and methods of its implementation, political, socio-economic, technological, resource limitations, under which the set goals will be attained.

The approved Concept outlines in general terms the lines of the reforms but, unfortunately, does not fully meet said requirements and therefore, requires serious adjustment with the purpose of systematisation, specification, more detailed description of the ways of achievement of goals, and economic substantiation.

The Concept was developed in absence of a thorough audit of the sector, as a result of which, the picture was insufficiently complete. In particular, problems with ordering, contracting, licensing and trade in defence products were insufficiently covered; hence, the attempts of reformation of this domain look insufficiently comprehensive and systemic.

As an excuse for the Concept authors, they worked on it under old legislative principles of state programme development, focusing not on strategic systemic approaches but on budgeting – certainly important but the last stage of strategic planning. By the way, the Concept authors rightfully stress the need of introduction of strategic management mechanisms in the system of the branch and enterprise management.

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The Ukrainian expert community, let alone representatives of the executive and legislative branches, quite often demonstrate misperception and false ideas of the essence, spheres and kinds of strategic planning, the role of programmes, mechanisms and tools of their development and implementation. Unfortunately, many of those mistakes already had an impact on the existing regulatory-legal framework,* while their inadequacy to more complex realities bars their efficient implementation in the practical activity of management bodies, further complicates that activity, leads to inconsistency of the obtained results with the set goals.

The main bottleneck in the process of strategic planning inherited from the Soviet times is the inability (or reluctance) to align strategic goals and tasks at their achievement. It results in disconnection between programme measures, i.e., actions of the actors, which requires additional efforts for coordination of such actions and seemingly prompts the need for establishment of relevant bodies. As a result, instead of the announced programme-target management, the old (post-Soviet) sectoral management is reborn, which, given the need to remove its inherent drawbacks, inevitably leads to “manual” management.

Another important drawback of the Ukrainian practice of strategic planning is presented by disdain to differences in political and technological priorities (resources may be considered not at the beginning of planning but only after the assessment of the workload in the process of achievement of goals), which, in turn, leads to idealisation of budget planning – a very important, but the last stage of target programme development. (Of course, it makes it easier to “saw the budget”– but what does it have to do with the national interests?) This approach not only runs contrary to the ideology making the basis of the Budget Code (goal – method of implementation – resources) – it a priori shifts the whole system from the mode of development to the mode of stagnation, bars any innovative inputs.

These drawbacks lead to extra steps that deteriorate rather than improve the situation, complicating planning and management processes. A striking example is presented by introduction of triennial budget planning and formation of the state defence order, allegedly giving enterprises an opportunity to see the future. But this function is performed by mid-term planning – of course, not formally but constructively, creatively, by rule. Furthermore, there is current planning, presuming adjustment of short- and mid-term programmes for the rest of the planning period, while preserving their target nature. And if there is a task of advanced funding of contractors, there is terminal crediting against state guarantees on the basis of the same target programmes.

Furthermore, when speaking about the state defence order, one should keep in mind that it is nothing but an “extract” from the existing plans of functioning and programmes of development of power structures dealing with acquisition of arms and military equipment, property, materiel, services for defence needs. Hence, its separation means additional complication of the processes of planning and management of development of arms and military equipment and arming of the Armed Forces.

*In particular, the Laws of Ukraine “On State Forecasting and Drafting Programmes of Economic and Social Development of Ukraine”, “On State Target Programmes”, “On Organisation of Defence Planning”. The author suggests replacement of those laws with one – “On Principles of Strategic Planning”, with Standard Regulations of the procedure of planning in the national security sector and regulations of mid- and short-term planning in each of the concerned ministries (agencies), paying due regard to their specificity.
When reading the Concept, the following drawbacks (except stylistic ones) strike the eye:

**General**

- The title is methodologically faulty. This drawback is inherent in the traditional Ukraine approach to planning, set out in the Law on state target programmes, with the first stages being “initiation of development of the programme” and “approval of the concept of the programme” (as its element) – instead of drafting a “concept of development” (as an idea of the future look, model of a certain object or system), a strategy (as a way of building the conceptual model, i.e., outlining strategic goals and the methods of their achievement), a programme (as a strict algorithm of measures for achievement of strategic goals). By contrast, “the concept of the programme” has the structure of a document titled “programme”, which was more than once used by dishonest doers to escape responsibility for development of the relevant documents.

- Lack of concrete data. None of its sections, except “Expected results…”, contains concrete data of the goals (parameters of the chosen model), measures, ways of problem solution. From this viewpoint, the document may hardly be considered sufficient for drafting a creative and realistic programme of defence industry development on its basis, and the approach cannot be termed “target”.

- Absence of any substantiation of proposals. Some provisions of the document are questionable and take into account neither the latest common patterns and trends in the defence industry, nor the concrete state of the Ukrainian defence enterprises, the branch, the economy and the country as a whole. For instance, corporatisation is announced the only principle of restructuring of Ukrainian defence enterprises – disregarding the possibility of emergence of the phenomenon of so-called “synergy of problems” after their merger in absence of fundamental economic and political reforms, instead of a positive cumulative effect and expected results.

**Main drawbacks per section**

“Analysis of reasons…”

In terms of structure and content, the reasons of problems are described not in full detail, which complicates their comprehension and planning of the ways out. Say, it names as the main reason “growth of the needs of the Armed Forces of Ukraine and other military formations…”, while the real reason lies in the inability of the defence industry to respond to such growth. Most reasons fall within “inefficiency of the existing system of management…” or stem from it. However, solution of this main problem is described incompletely and piecewise.

One of the reasons is cited as “absence of closed process cycles…” , hinting at their creation as one of the lines of reforms. However, the world experience shows

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that this approach is highly resource-intensive and was rejected by the absolute majority of countries, except maybe Russia and China – “conventionally”. By the way, Russia could rely on closed cycles as long as it considered the Ukrainian defence industry an annex to the Russian one.

Some defence products really demand closed process cycles due to their strategic importance for defence – but the Concept does not specify them. By the way, neither does the Strategic Defence Bulletin, which may partly excuse the Concept authors and put the blame on the defence agency.

“A set of programme-target measures...” for problem solution covers almost the whole domain of formulation of the defence industry policy, but is misdefined and misleads the authors and performers of the would-be reform programme. For instance, it is unclear how the legislation should be improved, what “implementation of investment-innovative policy” means, what obstacles should be removed for transfer of advanced foreign technologies, for what types of arms and military equipment closed process cycles will be implemented, if the “integral state system of production organisation” will be confined to “manufacturing, upgrading, repair and disposal of military, civilian and dual-use products”, etc.

“Programme goal”

The goal is defined as an “equation”, where the function (creation of conditions) and arguments (level of functioning, needs, integral system of the defence industry) are unknown. But such an equation with all unknown has no solution, or vice versa – any decision is acceptable and entails no responsibility.

The principle of emergence of the three options of problem solution is unclear – each of them is not sufficient (i.e., undoubtedly leading to the achievement of the set goal) and therefore admits (demands) introduction of extra elements that may also relate to the other options. Most probably, devised pros and contras (their list is also incomplete) were adapted to the necessary “optimal” (with unclear criteria) option.

“Ways and means of problem solution, programme implementation term”

The list of the ways basically repeats the second part of the section “Analysis of reasons...” (“A set of programme-target measures ...”) with all its drawbacks. The means of solution – as a totality of methods, techniques and resources – are not defined at all.

The terms of stages of implementation of the programme (still absent) and their content are unrealistic, since they do not take into account the existing capabilities and workload of the tasks. Definitions of the tasks lack concrete data, in particular:

• what percentage of the Armed Forces of Ukraine and other military formations is to be provided with restored, repaired and upgraded arms and military equipment?
• how many newly-developed and fielded systems of arms and military equipment are to be prepared for batch production?
• what will ensure the efficiency of the system of defence industry management – creation of a central executive body alone?
• how many projects are to be firmly funded by the state?
Monitoring Ukraine’s Security Governance Challenges

- what is the planned growth of domestic production of arms and military equipment?
- and so on, for actually all items of the section.

The concept (not the programme) authors themselves were to examine the possibility of creation of closed cycles, measures and the mechanism of import substitution. For instance, tasks of application of advanced methods of labour organisation and improvement of the system of standardisation, unification and quality management constitute everyday activity of enterprises.

“Expected results…” and “Assessment of… resources for the programme implementation”

The cited results and financial requirements look unrealistic, given the forecasts of the military-political and economic situation. First of all, in absence of results of a comprehensive audit of the sector, it is impossible to estimate the cost of:

- provision of industrial production growth by 12-15%;
- reduction of labour-intensity of products by 10%;
- growth of wages by 10% a year and creation of 20 thousand new jobs;
- reduction of energy intensity of products by 20%;
- raising the share of innovative products to 40%;
- technical re-equipment of 90 enterprises (in the draft Mid-Term Plan of Priority Actions of the Government through 2020–67);
- annual average export growth by 10%.

If we add the overburden of the economy in the conditions of a crisis and the urgency of reforms, growing needs of the Armed Forces of Ukraine and other military formations in the conditions of aggression or reformation (when they will be armed with not old but advanced arms and military equipment, much more expensive), the Ukrainian budget will not cope with it even under the most favourable forecasts. The situation does not look much better even if we assume that half of the required resources will come from extrabudgetary sources.

Proposals

The main requirements to the defence industry reform include: adaptation to the Armed Forces’ needs for soonest upgrading of the stock of arms and military equipment; strengthening of the national defence industry base; removal of negative social effects; involvement in outsourcing, international cooperation and transnationalisation of defence industry; strengthening of Ukraine’s position on international arms markets.

Reformation of the defence industry requires, first of all, generalisation of the results of assessment of the financial and technical state of enterprises, the real potential of the sector, determination of the lines of their development.

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The main priority lines of defence industry reforms should include:

1. Gradual and balanced transition to the model of state management of defence industry functioning and military-technological cooperation (including arms export and import), whereby the state leaves to itself the functions of formulation, implementation and coordination of the military-technological policy, drafting, approval and general administration of programmes of development of arms and military equipment and defence orders, overall management of the investment and credit policies, licensing and export control. Another important line is presented by encouragement of creation and functioning of formal professional associations of arms producers that could draw up and implement codes of conduct on the arms market, translated into regulatory-legal acts with their spreading (expansion of associations).

Implementation of an alternative model, whereby all defence industry enterprises (highly varied by their specificity) are subordinated to a certain state body, continues the course of centralisation of the branch management, does not solve defence industry problems and leaves room for corruption.

Given the complexity and duration of the process of defence industry restructuring, it is important to determine an acceptable future model of management (regulation) of processes of production and supply of arms and military equipment, stages of gradual transition to it with the proper mix of managerial mechanisms at each stage.

2. Restructuring of the defence industry in line with the priorities of technical modernisation of the Armed Forces (development of arms and military equipment), trends on domestic and foreign markets and changes in the Ukrainian economy. Restructuring should be comprehensive, multilevel (encompassing the state, sector, enterprise levels) and touch not only forms of ownership but also financial and commodity markets, management, human resources at all those levels. Creation of integrated entities (vertically integrated, project-oriented) in some segments is the most acceptable option but should not be the principle of restructuring of the whole defence industry.

In particular, rather an efficient and flexible form of defence companies is presented by multifunctional (system integration, repair and upgrading, resource management, etc.) but multidisciplinary (by types of arms and military equipment, kinds of services) enterprises, being the basis for their subsequent integration within the framework of specific projects.

Project-oriented entities consist of a “cooperation core” (design bureau, main contractors) and the “project infrastructure” designed for specific projects of production of arms and military equipment (contractor companies, research institutes, repair and corporate servicing centres, marketing and consulting agencies).

A decision to use one or another organisational form should be taken solely after substantiation of such need with account of the specificity of concrete segments and enterprises of the defence industry (strategic plans; market situation and trends in specific segments; requirements to profitability; real technological, HR, financial capabilities of independent development; the state and prospects of domestic and international cooperation; investment outlook).
3. Introduction of stable rules and efficient incentives for defence industry operation by the state. It is high time to consider, finalise and adopt the prepared bills (amendments to effective laws), regarding the mechanisms of:

- exercise of the right of business entities of all forms of ownership to own, use and dispose of arms and military equipment during their creation and manufacturing;
- employment of offset schemes for import/export of military and dual-use products;
- raising credits and foreign investments for the national defence industry, guarantees of their protection;
- supply of arms and military equipment, etc. on lease.

4. Direct state support aimed at preservation (restoration) of traditional and creation of new scientific-technological schools, promotion of a rational structure of staffing defence industry enterprises, mitigation of disparities on the marker of skilled labour – in line with the prospects and results of reforms, real development of the defence industry. The world practice shows that those tasks can be effectively solved through public-private partnership, which contributes not only to economy and target use of resources, but also to expansion of the range of reform drivers, and therefore, growth of their support and joining efforts in priority domains.

5. Introduction of efficient schemes of military-technological cooperation (offset, licensing, leasing, cooperative, etc.), enabling both technical modernisation of the Armed Forces and development of the defence industry base.

The level of problems existing in the defence industry, the critical state of Ukraine’s economy, uncertainty of trends in the world economy, international relations, security environment complicate tasking at reformation with clearly determined results. In such conditions it makes sense to implement pilot measures in specific domains at the initial stage of reforms, with analysis and subsequent sharing of best practices, implementation of compensatory measures associated with job cuts (infrastructure development, retraining, social security, etc.).

During pilot restructuring of enterprises and at subsequent stages due regard should be paid to:

- real needs for renovation of the defence industry base (fixed assets, technologies, human resources), as well as resources for such renovation;
- prospects of enterprise employment to meet national security need within the limits of the real scope of the defence order;
- needs for training and social security systems for dismissed workers;
- economic efficiency (current and future) and competitiveness of enterprises with account of the situation on arms markets and interests of potential investors.

Ukraine’s defence industry requires deep reformation, the success of which will depend on the political will, correct assessment of the situation, realistic strategic and intermediate goals, efficient military-technological policy, joint efforts, observance of core principles and, of course, on the results of transformations in the national economy as a whole.
PROBLEMS AND WAYS OF IMPROVEMENT OF MANAGEMENT IN THE FIELD OF PROCUREMENT, EXPORT/IMPORT WEAPONS AND MILITARY EQUIPMENT IN UKRAINE

Valentyn BADRAK, Director of the Center for Army, Conversion and Disarmament Studies

Key problems

Ukraine, despite the significant potential of its defence industry and deeply rooted traditions in that sector, has long been moving the road of loss of that potential. The long-standing problems are related with defence industry management, poor employment of the private sector initiative, restrictions on foreign and domestic private investments, and drawbacks of privatisation of some facilities. There is a striking disparity in defence industry development, caused by its non-transparent, too secret rules, mainly favouring state enterprises.

Its main negative effects include non-competitive conditions for private companies and negative appeal of the Ukrainian market for foreign companies. According to the Ministry of Economic Development and Trade (MEDT), 95% of all arms and military equipment is procured under the state defence order on a non-competitive basis.

One should note the paradoxical situation in the Ukrainian defence industry: according to all canons, the Ukrainian defence industry within two years of a war must have got billions of investments, but, contrary to the logic, the authorities made no real steps to create a new system of the military-technological state policy. The Ukrainian philosophy of rearmament and, respectively, the system of procurement of arms and military equipment has some limitations: lack of resources, reluctance of foreign (in particular, Western) companies to transfer technology and sell arms and...
military equipment to Ukraine, incomplete readiness of the Ukrainian authorities for broad military-technological cooperation with foreign states and import of arms and military equipment. As a result, the Armed Forces of Ukraine and other military formations get mainly what domestic defence industry enterprises can offer.

At that, a large portion of the state defence order goes to State Concern “Ukroboronprom”. Meanwhile, in the recent years (especially after Russia unleashed a war against Ukraine) the number of private companies, that previously numbered not more than 40, tripled and now exceeds the number of state-owned defence industry enterprises. According to official data, while in 2015 “Ukroboronprom” accounted for over 60% of the state defence order, in 2016 — only 38%. “Ukroboronprom” reported that in 2016, it used UAH 4.4 billion out of UAH 13.5 billion allocated to procurement of arms and military equipment.

Noteworthy, there is a system of concealed lobbyism in the country, favouring a number of private companies owned or controlled by representatives of the authorities. Meanwhile, there are a dozen or more private entities that proved their ability to produce competitive and rare types of arms and military equipment. Such works at state enterprises often cost much more than at private ones. In particular, according to unofficial reports, in 2016 the cost of similar upgrading of a tank at a state enterprise was estimated at UAH 17 million, at private — at just UAH 7 million.

Another feature of the Ukrainian defence industry is that it cannot meet the lion’s share of the Armed Forces of Ukraine demand for some critical types of arms and military equipment and services (in money terms — not less than 60-70%). For instance, Ukraine has never produced combat aircraft, air defence systems, naval weapons, operational-strategic and operational-tactical strike unmanned aerial vehicles (UAV), attack helicopters, many types of guided airborne weapons, most types of ammunitions, small arms and many other.

This means that the method of provision of defence forces with those arms and military equipment should be chosen by an interdepartmental body with account of priorities set by the General Staff of the Armed Forces of Ukraine, reasonable conclusions of the institute of general designers and the scientific and technical council (the latter may include directors of defence enterprises, economists, leading scholars in the relevant domains).

One should add to that problem the mentioned shortage of resources and the practice of funding defence needs out of the special fund of the state budget, normally filled by not more than 30% at the end of the financial year. For instance, in the middle of 2016 the Minister of Defence of Ukraine Stepan Poltorak said that defence might get UAH 6.5 billion less than it needed, as a result of which, nearly UAH 500 million were transferred from the state defence order to maintenance of the Armed Forces personnel.

Hence, the system of procurement and the way of formation and performance of the state defence order depend on a core drawback in the triangle “Armed Forces of Ukraine (development) – defence industry (efficient use of capabilities) – export/import of arms and military equipment (state activity on the world arms market)” built by the Ukrainian authorities. Ukraine still abides by the
old principle, whereby the triangle is topped by proceeds from export of arms and military equipment, not development of the Armed Forces of Ukraine. In particular, in de facto wartime, Ukraine still has a situation where some advanced arms and military equipment are first of all supplied for export and only afterwards — to the Armed Forces of Ukraine. For instance, such is the situation with deliveries of new tanks “Oplot”. Only in January, 2017, the Cabinet of Ministers of Ukraine took a decision to finance manufacturing of new aircraft, guided missiles and “Oplot” MBTs for the Armed Forces of Ukraine under the state defence order against state guarantees (for the first time in Ukraine’s history).

Another area of tension: there are signs of a conflict of interests of the defence agency and State Concern “Ukroboronprom”. Under the current procurement system, the defence agency orders arms and military equipment via State Concern “Ukroboronprom” (or, rather, via special exporters within its structure).

The above-mentioned lobbyism, itself being a result of “manual management” of the security sector, also plays a role. In particular, many experts argue that the National Guard of Ukraine and KORD special unit of the National Police are supported (and financed) much better than the Armed Forces of Ukraine. At that, the lack of transparency in procurement tenders and of proper oversight (parliamentary and public control) of procurements give room for abuses.

One typical example: 10 armoured vehicles “Varta-2” procured in May 2016 for KORD were rejected and returned to the manufacturer for rework. Meanwhile, that military equipment was procured for state funds from the “Ukrainian Armour” company that has no production facilities of its own. More than that, the National Guard signed a contract for another 40 vehicles “Varta-2” — on unprecedented terms, disadvantageous for the country, with a 100% prepayment. The state treasury pays for the delivery of that equipment UAH 286 million. Strangely, but according to unofficial reports, despite huge technical problems with “Varta” and non-performance of obligations by the “Ukrainian Armour” company, at the end of 2016 the National Guard made a new contract with it against state guarantees for delivery of another 39 vehicles before the end of March, 2018. Experts consider the cost of one vehicle (approximately UAH 7,150 million) somewhat overstated.

Similar situations repeatedly arise with enterprises connected with influential politicians or officials. In particular, mass media reported about a direct connection between the “Ukrainian Armour” company and national deputy, Chairman of the Verkhovna Rada National Security and Defence Committee Serhiy Pashynskyi.

Other private enterprises of the defence industry have to increasingly concentrate on arms export, since their abilities to deliver equipment to the Armed Forces / National Guard remain cloud-built. Before 2017, preference here was without elaboration and due regard to the quality of arms and military equipment given to state enterprises.

1 The Government of Ukraine furnished a state guarantee for a credit to “Malyshev Plant” State Company (Kharkiv) in excess of UAH 1 billion for manufacturing “Oplot” tanks. According to the Cabinet of Ministers Resolution No. 1083 dated 25 December, the fee for the guarantee makes 0.001% of the annual amount of warranty obligations.

For instance, the Ministry of Defence of Ukraine (MOD) in its time opted for the armoured fighting vehicle “Dozor-B”, largely because it was developed and produced by state enterprises. Although “Ukroboronprom” assured that state-owned “Lviv Armour Plant” (primary manufacturer of AFV “Dozor-B”) was ready to produce over 100 such vehicles a year, the Armed Forces of Ukraine received only 10. At the same time “Praktyka” private company rolled out its upgraded armoured vehicle “Kozak-2” that passed trials (including of blast resistance in line with NATO standards). The trial results proved a high level of soldiers’ protection. Noteworthy, the Ministry of Internal Affairs procured 70 AFVs “Kozak”, while the MOD did not do it. Given the non-transparency of decisions, it looks like lobbyism, disregarding the AFV quality. In such conditions initiatives in the field of development of new and upgrading existing arms and military equipment become questionable for private companies.

Non-transparent, non-competitive rules still dominate in Ukraine’s defence industry. According to MEDT, 95% of all arms and military equipment is procured under the state defence order without competitive procedures. That is why managers of Western defence companies who consider working on the Ukrainian market remain reserved, regarding possible investment. They rather cautiously listen to proposals of projects, in which the Ukrainian state holds 51%. Western partners are surprised that Ukraine does not bother to pay royalty to developers of arms and military equipment. Protection of investments is another unpredictable process. These problems illustrate why joint projects of arms production on mutually advantageous terms still remain clouded prospects of military-technological cooperation – there are simply no conditions for them.

Instead of using the flexibility of private companies, the state puts on them the unbearable burden of requirements. In particular, the Cabinet of Ministers of Ukraine Resolution “On approval of the Procedure of pricing for defence products, works, services in case that choice of contractors for supply (procurement) of such products, works, services is made without employment of competitive procedures” No. 517 of 8 August 2016 reads: “During calculation of the price, profit is determined by the business entity on the basis of the estimated profit rate providing conditions for efficient operation of the business entity with account of expenditures on payment of taxes and duties, as well as interests on credits. At that, the profit share in the price cannot exceed 5% of a business entity’s expenditures on acquisition of component parts (semi-finished goods), works (services) from other business entities, and 30% of other expenses in the self-cost of products (works, services), except cases provided in Paragraph three of this Item”.

Meanwhile, not a business entity, as required by the Cabinet of Ministers of Ukraine Resolution No. 464 dated 27 April 2011, but the MOD on its own, without any coordination set the profit rate equal to 1% in a document signed by the Defence Minister – “Methodological Recommendations of Uniform Approaches During Application of Some Provisions Introduced by the Cabinet of Ministers of Ukraine Resolution dated 08.08.2016 No. 517 “On approval of the Procedure of pricing for defence products, works, services in case that choice of contractors for supply (procurement) of such products, works, services is made without employment
Problems and Ways of Improvement of Management in the Field of Procurement...

of competitive procedures”. In particular, Item 1 provides that during conclusion and performance of agreements (state contracts), the profit rate should be set:

- “...for performance of research and development activities, procurement of new arms and military equipment, repair of arms and military equipment, their upgrading – 1% of the value of expenses on acquisition of component parts (semi-finished goods), works (services) from other business entities, and up to 20% of other expenses in the self-cost of products (works, services);
- for procurement of arms, military equipment and spare parts for them imported via authorised organisations – up to 5% of the product manufacturer’s price (as the supplier’s fee)”.

For instance, the director of private enterprise “Atlon Avia” (the designer and manufacturer of UAV “Furiya”) says that its profit from the delivery of a batch of UAVs to the MOD in 2015 amounted to 2.8%, taxes – 5%. In this way the state makes cooperation with it in the field of delivery of arms and military equipment economically unprofitable.

According to MEDT, in the middle of 2016 Ukraine had 166 state and 92 private enterprises, but the private sector demonstrated better results in production of arms and military equipment and delivery of services.

For reference: State Concern “Ukroboronprom” controls 133 defence enterprises, including six special exporters, that is, mediators in arms trade. Almost fifteen plants and design bureaus are situated on the territory de facto occupied by Russia. Quite many defence enterprises are subordinated: to the State Space Agency of Ukraine (SSAU) – 12 enterprises; MOD – eight specialised plants, mainly specialising in renovation of arms and military equipment; MEDT – four enterprises; the Ministry of Internal Affairs – two.

The number of new actors in the defence industry is rapidly growing exactly thanks to the private sector. MEDT put forward initiatives of granting equal rights to private and state-owned enterprises: in September, 2016, the draft Strategy of Defence Industry Sector Development till 2020 was presented to experts for review. It provided for liberalisation of export/import of arms and military equipment, privatisation of a number of plants, state support for applied research and public-private partnership. But experts see no opportunity to put those proposals into practice.

Now, ground is being prepared for “total importation”, while decision-making remains non-transparent. For instance: in 2015, the MOD acquired five foreign UAVs for €270 thousand each. Experts argue that domestically-made “Furiya” surpasses the procured UAVs by its technical specifications by an order of magnitude, while its cost is twice lower. Despite that, “Furiya” that proved remarkably effective on the front was not procured in 2016. In amendments to the state defence order for 2017 approved by the General Staff UAV “Furiya” was entered on the list of procurements at the expense of the special fund. This means that the chances for those unmanned aerial vehicles to be fielded are minimal, despite the extremely high demand for them. Meanwhile, managers of private companies say that as soon as it comes down to procurement of domestic arms and military equipment, a row of endless delays, inspections, verifications, etc. starts immediately.
A few words should be said about the rearmament priorities. The main goal of the Armed Forces of Ukraine should be their ability to wage a contactless war, which requires both targeting and detection means, and means of destruction. By and large, in the field of rearmament the Armed Forces of Ukraine should concentrate on the following tasks: heavy upgrade of air defence systems, aviation engineering and multiple launch rocket systems, provision of the Army and the National Guard with state-of-the-art C3 systems, creation of multipurpose unified mobile missile systems with the range of over 500 km, advanced arms and equipment for special operation forces and special services, and creation of conditions for industrial production of various UAVs, including strike vehicles. The leading role in priority-setting should belong to the General Staff that should stay strong on guard of the interests of the Armed Forces of Ukraine, not always consistent with the interests of industry. The military-political leadership of the state should also take a firm, sound, balanced stand, insistently demanding implementation of the approved programmes, plans, the state defence order and providing conditions for that. This requires political will, the lack of which is consistently criticised by the performers of armament programmes and their recipients.

Using the current methods of rearmament, Ukraine can provide its Armed Forces with weapon systems by approximately a third of their needs. In practice this means that the Ukrainian Army will get armour, some precision weapon systems, artillery pieces, but the Ukrainian defence industry cannot provide the Armed Forces of Ukraine with new combat aircraft, new or deeply upgraded air defence systems. The reason is clear: Ukraine has never produced such weapons. Provision of such arms and military equipment is a task of military-technological cooperation with Western and other hi-tech countries – Israel, China, South Africa – including establishment of the relevant maintenance and, later, production facilities in Ukraine, employing both state and private enterprises. Say, China, that previously used to buy technologies from Ukraine, now surpasses it by a head.

Improvement of the procurement system should involve transfer of the right to manage the whole procurement cycle to the customers, not employing special exporters. According to expert estimates, if weapons are procured by the defence agency directly, arms and military equipment will cheapen by approximately 40%.

A separate element of procurement of arms and military equipment for the Armed Forces of Ukraine and other military formations should be presented by import contracts. By the way, one should keep in mind that some countries rather efficiently use them for achievement of concomitant tasks. For instance, Saudi Arabia through its major procurements of US and French arms and military equipment solves not only issues of military security but also of political support. Poland acts similarly, although its procurements of US arms and military equipment (a batch of combat aircraft and cruise missiles) are extended in time. Steady orientation to a strong ally let the parties agree on the use of the Polish soil for deployment of the US TMD system facilities, seen as a guarantee of Poland’s security. Ukraine may follow the pattern of the military-technological policy of Turkey that not just performs import operations but uses them to develop its own defence industry. Russia also chose this way after 2008, trying to solve the problem of technological backwardness.
at the expense of imports. For instance, thanks to procurements abroad, Russia managed to organise production of UAVs and thermal imaging devices.

Progress in technical modernisation of the army primarily and directly depends on funding of that item of expenses. In 2017, expenditures on the Armed Forces of Ukraine increased in next to all key sectors (in USD equivalent they almost equal those of 2016). At the same time, funding of development of weapons somewhat increased. 18% of the defence budget is allocated to research and development of advanced systems of arms and military equipment – UAH 11.7 billion (almost UAH 3.6 billion more than a year ago). According to preliminary estimates made by experts of the MOD Department of Military-Technological Policy, Development of Arms and Military Equipment, such funding will make it possible to field over 10 thousand pieces of arms and military equipment and 3.5 million ammunitions, including: man-portable missile systems, automated acoustic intelligence systems, upgraded aircraft, armoured recovery and medevac vehicles, wheeled tactical combat vehicles. In that, private companies are to produce 91 pieces of arms and military equipment, in particular: unmanned aerial vehicles, upgraded helicopters, armoured vehicles, landing craft, electronic warfare systems for use against unmanned aerial vehicles, jammers, radio relay stations.

**Ways of improvement**

Given some key features of Ukraine, solution of the existing problems and development of the defence sector require a number of changes and improvements. Russia’s war against Ukraine opened the door for such changes and galvanized domestic designers and manufacturers of arms and military equipment.

The first task here is to create an efficient line of defence industry management and coordination with a body on top of the pyramid providing for formulation and implementation of a realistic military-technological policy of the state. Unfortunately, this issue remains unsolved since the beginning of 2014, although even the coalition agreement of 2014 contained the item of creation of an interdepartmental body in charge of defence industry development under the Cabinet of Ministers, subordinated to the First Vice Prime Minister among the priority tasks.

So, the authorities should implement a number of steps. In particular, they should either liquidate State Concern “Ukroboronprom” or transfer functions of formulation of the military-technological policy, coordination and management of enterprises to the Cabinet of Ministers, creating a central executive body with a special status. At that body, a supervisory board and a public board should be established. All issues dealing with imports should be taken by the customer without any mediators, such as special exporters.

Up to ten badly needed laws must be passed, from the law on production of arms and military equipment and the law on public-private partnership to the troubled law on military-technological cooperation. The sensitive system of production and trade should be regulated solely by laws. The problem of production funding

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3 “Ukroboronprom” (after the withdrawal of special exporters) might be subordinated to the head customer – the MOD of Ukraine, as this was done in Poland (the performance of the similar concern PGZ immediately and fundamentally changed for the better).
requires a legislative solution: in 2016, the budget earmarked 1% of the GDP for that purpose, allocated – 0; in 2017, just 0.2% is earmarked – 0 is expected.

We should make utmost use of military-technological cooperation for establishment of joint ventures using advanced technologies on the territory of Ukraine, and to raise investments of the world leading companies, in particular, for access to third party markets.

Finally, equal conditions should be created for participation of private and state-owned enterprises in the state defence order and foreign economic activity. This will require liberalisation of the whole system of military-technological cooperation, transition from the prohibitive to the notifying system of export control. Additionally, the state should provide guarantees of private initiative by including them in the state defence order on the condition of compliance of the claimed performance to the set requirements. One may add to those measures proactive and fully transparent privatisation of defence enterprises involving the world leading companies.

The issue of introduction of arms and military equipment into service and monitoring of trials should probably be resolved separately. The opinion of the head of the Central Scientific Research Institute of Arms and Military Equipment of the Armed Forces of Ukraine, Professor Ihor Chepkov deserves attention: “Since there will be sizeable cohorts of those willing to impress the military with their creative achievements, all costs of trials should be born by the enterprise. But if a system passes trials and is introduced into service, the MOD should repay those costs; if the trials end in failure, their cost remains on the expenditure side of the enterprise budget. Focused attention should also be paid to the procedure of approval of the process of batch production of fielded systems: either the enterprise keeps producing them, assuming some obligations for a definite period, including technical support during the entire lifecycle, also in a contingency period; or the MOD buys out the system documentation at an agreed price and places its batch production where it considers fit, leaving the enterprise with prospects of getting royalty from every manufactured piece”.  

Among other things, the problem of equal rights for state and private companies on the domestic and foreign markets should be legislatively resolved. The requirement of coordination of all issues of negotiations and export as such with State Concern “Ukroboronprom” and the State Export Control Service (SECS) should be removed. Such situation not only leaves to “Ukroboronprom” the monopoly right to sell armaments but kills sound competition on the market. MOD officials actually agree with this point: “Fully-fledged competitive environment cannot be created without non-state enterprises, missing which, market economic mechanisms are of little use, including in the defence industry sector, where the problem of lack of competition is much more pressing than in any other branch of industry. In fact, in the business practice, economically unreasonable advantage is given to state ownership. Paradoxically, this prerogative is also very often provided in the law”.  

So, if we speak about the road map of reformation of the system of defence industry management, according to the CACDS conclusions, it may look as follows.

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5 Ibid.
Perfection of the system of management (at the level of the executive branch)

1. Prompt adoption of a realistic State Target Programme of Defence Industry Development. It is important that the ideology of transformation of the Ukrainian Army pursues achievement of the Armed Forces ability of waging efficient contactless all-weather warfare day and night by 2020-2022. It should focus on: creation of new arms and military equipment, especially using new facilities, including jointly with foreign companies, with utmost employment of Ukrainian private defence enterprises; as well as major overhaul of Soviet-made arms and military equipment. Such a programme should, among other things, encompass: 1) building of an efficient chain of management and coordination of the defence industry; 2) creation of conditions for restructuring, corporatisation and privatisation of some defence facilities; 3) creation of conditions for large-scale military-technological cooperation.

2. The Government creates a central executive body with a special status (probably, the State Agency for Defence Industry and Military-Technological Cooperation), assuming the following functions of formulation and implementation of the military-technological policy of the state, management and coordination of the defence industry:
   1) gradual liquidation (change of functions) of the inefficient superstructure – “Ukroboronprom”, and creation of conditions for subordination of the chain of management to the First Vice Prime Minister of Ukraine;
   2) preservation and development of the system of responsibility by improving the performance of general designers and the scientific-technological board;
   3) creation of conditions for utmost employment of the private sector in defence industry development and designing of arms and military equipment through: initiation of adoption of a number of laws and adoption of relevant resolutions of the Government (see below). They will determine ownership rights, procedures of royalty payment, conditions for transparent participation in planning and performance of the state defence order, as well as simplification of private companies’ operation on foreign markets. Furthermore, resolutions should provide for creation of a special register of developments and conduct of public tenders;
   4) promotion of greater parliamentary and public (through relevant non-governmental organisations and mass media) oversight of the security sector in issues of rearmament and reformation of the defence industry.

3. The Government creates a proper system of oversight of planning and performance of the state defence order, in particular, enforcement of the quality of works and compliance with deadlines. That structure is integrated in the central executive body with a special status (the above-mentioned Agency); at the same time, the success its work depends on close cooperation with customers (MOD, Ministry of Internal Affairs, etc.). As a separate proposal, the Government is suggested to consider withdrawal of some strategic projects critical for defence capabilities of the state beyond the state defence order, in particular: implementation of missile programmes, creation and production of unmanned reconnaissance/strike systems, etc.
4. The Government should change the corrupt and obsolete system of ordering, whereby import is performed via special exporters (State Concern “Ukrspecexport” and subsidiary companies). Customers (MOD, Ministry of Internal Affairs, Security Service of Ukraine, State Border Service, Foreign Intelligence Service, etc.) should procure arms and military equipment directly, not paying commission to special exporters.

5. The Government should provide for deregulation of export of arms and military equipment, changing the existing system and allowing defence companies to perform foreign economic activity on the condition of licensing and notification of the State Export Control Service. Pursuant to the Government decision, the MOD should optimise pricing methods for defence and dual-use products and services and, among other things, perform military acceptance only at the final stage (finished products), without control of company expenses. Furthermore, the pricing methodology should provide for obligatory payment of royalty to designers of arms and military equipment.

6. To create proper conditions for attraction of foreign investments and technologies, the Government is to prepare a programme of restructuring, corporatisation and privatisation of Ukraine’s defence industry facilities.

7. While creating the above-mentioned central executive body with a special status, the Government should provide for creation of a supervisory board and a public board.

**Improvement of the legislative framework**

Upon analysis of the needs of defence enterprises, CACDS made a conclusion of the need of adoption of the following laws of Ukraine.

1. “On Production of Weapons and Military Equipment”. This bill is to determine the “rules of the game” on the domestic market, create equal and transparent conditions for state and private companies, provide the right to royalty for designers, on a case-by-case basis solve the issues of obstacles for independent exploratory development created by licensing, etc.

2. “On Guarantees of Investment Rights and Investments in Ukraine’s Defence Industry” (previously, the bill was titled “On Public-Private Partnership”). Adoption of the relevant law will provide for creation of a favourable investment climate, conditions and rules of repayment of investments, including to foreign companies.

3. “On Military-Technological Cooperation”. This law should not only regiment rules of creation of arms and military equipment jointly with foreign companies but also determine issues of export and import of such products. The law should also grant private companies the rights to free foreign economic activity. Furthermore, the law should provide the right of customers (MOD, Ministry of Internal Affairs, etc.) to import defence products directly, without mediators, and liquidate the prohibitive system of defence export, replacing it with the notifying system, along with the “Ukrspecexport”, to do marketing and enter into agreements, recognising the right of enterprises themselves to engage in foreign economic activity.

4. “On Offset Contracts”. The law will allow offsetting investments under contracts of import of arms and military equipment, and arrangement of hi-tech production or service lines at the exporter’s expense.
5. “On Specificity of Procurement of Goods, Works and Services for Guaranteed Satisfaction of Defence Needs”. The law will allow customers (MOD, Ministry of Internal Affairs, etc.) to promptly and transparently make the required procurement, bypassing lengthy procedures, in a contingency period.

Some experts suggest solving the problem by development and adoption of one “codified” law. The tasks of the bill drafting on the principles of development, production and sale of weapons, military and special equipment (WMSE) are to encompass the following domains.

It should be a basic bill that shapes the complete and integral system of regulation in the defence industry. It will be developed on the basis of the existing bill “On Development and Production of Weapons, Military and Special Equipment”.

The bill will lay down the principles of activity and development of the national defence industry. Implementation of the adopted law will contribute to enhancement of the defence capabilities of the state – thanks to establishment of a system of development, production, acquisition and sale of advanced weapons, military and special equipment, – and strengthening of the national economy – thanks to enhancement of the human and technological potential of defence enterprises, growth of their competitiveness on domestic and foreign markets, growth of proceeds from export of WMSE.

Requirements to the new bill:

1. Defence industry activity should, on the one hand, be utmost deregulated, except creation and production of specific weapon systems under national security projects. On the other hand, such activity should be regulated so as to guarantee security against unauthorised (unlawful) leakage of information or transfer of WMSE and technologies, including services, to states or parties that are not partners of Ukraine or partners of its allies.

2. Functions of determination of the need for WMSE, their procurement and orders for development should be vested in customers proper – central executive bodies that have subordinated military formations, e.g., the MOD, Ministry of Internal Affairs, and special services. Said bodies and agencies should be authorised to import WMSE directly. In this connection, the bill should specify the types of tenders, principles of their conduct and import procedures. In particular, the pricing policy should be built solely on a competitive basis by the criteria of cost-effectiveness, on the condition of meeting operational and tactical requirements or performance specifications (dependent on the status of works). Use of estimated calculation materials should be terminated; the materials as such may be left for the transitional period solely for unique projects developed by Ukrainian state-owned enterprises.

Functions of customers should comply with the approved lines of reformation of the MOD and the General Staff, other uniformed ministries and agencies to avoid duplication of functions of determination of the need for WMSE, their procurement, acceptance and orders for development, in particular: the budget administrator is the MOD as a body that serves and supports the needs of the military; the General Staff is the recipient and user of outputs that generates needs and determines them, using operational and tactical requirements (performance specifications) to specific types of WMSE, development, upgrading; WMSE procurement is performed and financed by the MOD.
3. Functions discharged by the state in the defence industry sector will be vested in the authorised central executive body in charge of defence industry. Such functions include, in particular, formulation and implementation of the state policy in the field of defence industry and military-technological cooperation, coordination of equal activity of defence industry enterprises of all forms of ownership and establishment of efficient public-private partnership in that sector.

At the same time, the bill should regiment the activity of “Ukroboronprom”, now possessing powers not inherent is a business entity. It is proposed to either totally liquidate “Ukroboronprom”, or to create cluster associations on the basis of its enterprises, or to reduce functions of “Ukroboronprom” to the level of a state holding that manages state-owned blocks of shares of defence industry enterprises.

4. The institute of general designers, created to fulfil the tasks of the former Soviet system, should be reformed with account of present-day business and legal relations. In particular, it makes sense to consider gradual transformation of the institute of general designers into a managerial body for development within the framework of the relevant state clusters, or as authorised under contracts (similar to the USA) during implementation of big orders related with WMSE development.

5. State monopoly on import/export of WMSE and the practice of granting one defence industry enterprise the right to control, approve or license import/export operations of other enterprises of the same industry should be liquidated. At the same time, the bill should enhance the system of export control in terms of technology protection and fulfilment of international obligations of Ukraine. It should also provide for the existence of one state special exporter (a certain system) to provide services to defence industry enterprises in matters of export and promotion of their products on foreign markets.

6. The adopted law is to introduce the principles of public-private partnership in the defence industry present in the existing bill “On Guarantees of Rights of Investors and Raising Private Investments, Employing the Mechanism of Public-Private Partnership in Defence Industry”: 1) powers provided to the MOD by the bill of MP Markevych should be extended to other bodies that in accordance with the legislation manage state property facilities, in particular, “Ukroboronprom”, State Space Agency, State Border Service, Ministry of Internal Affairs, State Property Fund (SPF); hence, said bodies will be able to independently organise tenders, set up commissions, prepare documentation, perform feasibility study, etc.; 2) property evaluation will be performed by SPF; 3) the list of facilities covered by public-private partnership will be submitted to the Cabinet of Ministers by each body independently; 4) the draft agreement with the Cabinet of Ministers will be endorsed by the state partner, not the MOD.

7. The adopted law should entail invalidation of some laws and amendment of other laws, in particular, the laws “On State Defence Order”, “On Specificity of Management of State Property in Defence Industry”, “On State Control of International Transfers of Military and Dual-Use Goods”. If amendments are required to the Tax and Customs Codes (e.g., introduction of preferential taxation of some activities in the defence industry, such as “Research and Development Activities for Circulating Assets of Enterprises”, “Creation of an Exploratory Prototype for Circulating Assets” and extension of preferential customs clearance to equipment necessary for production of WMSE, etc.) and other regulatory-legal acts amended by separate bills, such separate bills should be attached to the new bill for submission to the Verkhovna Rada in one package.
Furthermore, there is a need of **legislative support for the system of parliamentary control** and its expansion by involving not only the Verkhovna Rada National Security and Defence Committee but also national deputies from the Committee for Industrial Policy and Enterprise, Budget and other committees – with establishment of the relevant “inter-committee” structure.

The above-mentioned laws will change the attitude to the potential of private defence enterprises in Ukraine, the attitude of Western defence companies to investment in Ukraine within the framework of military-technological cooperation, will do away with non-competitive environment, absolutely non-transparent for the defence sector enterprises. But the main thing is that such legislative framework will create conditions for formulation and implementation of the military-technological policy of the state.
Ukraine, that inherited some 30% of the USSR defence industry, from the very beginning of its modern history was destined to be present and active on the world market of arms and military equipment – being a source of trouble for all the key actors there: Washington – due to the potential danger of weapons’ delivery to hot spots, Moscow – because of direct competition. That is why “Ukrspecexport” was set up in October, 1996. Then Secretary of Ukraine’s National Security and Defence Council (NSDC) Volodymyr Horbulin, who was in charge of that sensitive sector, noted that monopolisation was necessary to “put arms trade in order”. At that time, it seemed logical: an Ad Hoc Investigatory Commission of the Verkhovna Rada of Ukraine in its report (released in 1998) said that 113 companies traded in critical goods and services in this country (before the establishment of “Ukrspecexport”), and mentioned some violations.

Experts note that the core of the defence industry had been formed in Ukraine by the end of 2003. Enterprises that went through stormy times (sudden abolition of the state defence order, avalanche conversion, almost irreversible stagnation and hasty search of new partners on versatile markets), began implementing their own development strategies. The ones that survived were mainly plants relying on their own powers.

That said, the figures of export of arms and military equipment did not impress. According to then General Director of “Ukrspecexport” State Company Valeriy Shmarov, compared to 2002, the main Ukrainian special exporter increased its foreign trade turnover by approximately 8-10%. Total sales of military and
dual-use goods were not made public, although the most successful subsidiary of “Ukrspeceexport” – “Ukroboronservice” – was known to sell arms and services worth 756 million UAH, or over $140 million, in 2003.

At that time, there were several players active in Ukraine, apart from “Ukrspeceexport” and its subsidiaries, that were entitled to trade in arms and associated items on their own. For instance, manufacturer of air weapon systems State Holding Company “Artem” performed a contract of delivery of air-to-air missiles R-27 for Su-30MKI fighters, previously bought from Russia, to India. Another state company “Zorya-Mashproekt”, that had the status of an independent market actor, supplied gas turbines for warships to China, India, Singapore, the USA, and under Russian contracts – to Vietnam and Greece. The stories of success featured Aeronautical Scientific-Technical Complex “Antonov”, Kharkiv State Aviation Production Enterprise (KSAPE), “Motor-Sich”, Kyiv State Aircraft Factory “Aviant”, Machine-Building Plant “FED”, Malyshiev Plant, Central Design Bureau “Promin”, “Arsenal” Plant and some others. As we see, success on the world arms market was mainly with state-owned enterprises. According to estimates made by the Center for Army, Conversion and Disarmament Studies (CACDS), “Ukrspeceexport” accounted for more than 80% of all Ukrainian arms sales.

Meanwhile, somewhere around 2005 special exporters stepped up cooperation with a number of non-state scientific-production enterprises that began getting state defence orders (which was not the case previously), and some advanced systems were fielded with the national uniformed services. The year of 2005 saw especially fruitful cooperation between “Ukrspetstechnika” Holding Company and “Adron” Research & Development Company. For instance, at the end of 2005, the Ukrainian Armed Forces took delivery of infrared countermeasure station “Adros” KT-01 AVE that disrupts target engagement and misleads all types of infrared homing missiles, including man-portable air defence systems.

Another feature of the Ukrainian arms export is that Ukraine was and remains an important supplier of subsystems for arms and military equipment. In particular, “Motor-Sich” always had big orders for aero engines for helicopters and training aircraft.

Defence industry enterprises were also active in the field of technology transfer. The biggest suppliers included “Motor-Sich” and “Zorya-Mashproekt”, that transferred technologies to Russia and China, and Aeronautical Scientific-Technical Complex “Antonov” that transferred the technology of production of An-140 to Iran. Generally speaking, technology transfer was almost always performed without restrictions and obstacles. For instance, China received technologies for production of ion plasma engines for space delivery vehicles, gas turbines for warships, Vietnam – technology of powder production, etc. Meanwhile, the State Export Control Service (SECS) occasionally banned deliveries on political grounds. For instance, Venezuela was denied aircraft (on the US demand), and Pakistan – engines for cruise missiles (probably, because of the Russian position).

Ukraine has always been a serious player on the market of repair and upgrade services – at times, sales of maintenance services made 10-15% of the year total
arms exports. For instance, Ukraine took part in extension of service life of the Russian strategic missile systems RS-20 “Voevoda” (Satan, according to the NATO classification), repaired surface-to-air missile (SAM) systems S-300 for Kazakhstan. The latter case is demonstrative, since S-300 are manufactured by Russia.

Ukraine firmly established itself on the world arms market, and by 2009-2010 has shown its best-ever records, primarily due to contracts of modernisation of military transport aircraft An-32 for India (over $400 million), delivery of a batch of small air cushion landing ships of the “Zubr” type to China ($315 million), delivery of six An-32 ($100 million) and 420 new armoured personnel carriers BTR-4 ($460 million) to Iraq, and delivery of a large batch of armoured personnel carriers to Thailand, plus a Thai order for “Oplot” tanks, significant deliveries of gas turbines for the Indian Navy by “Zorya-Mashproekt” and delivery of 100 AI-20 engines for An-32 (worth nearly $110 million) for the Indian Air Force.

However, given significant changes in the geopolitical situation, a new ideology of military-technological cooperation of Ukraine with foreign states has been on the agenda since 2015. Let us try to substantiate the necessity of and preconditions for such changes.

First. Traditional markets and new opportunities. I will tell those who believe that during a war, all resources must be used to equip the [national] armed forces: when resources are limited, activity on the world market brings foreign cash giving circulating assets that can be used by enterprises to increase deliveries to the national security sector structures. Here is a real example – private company “Praktika”, active on the market for 20 years, rolled out armoured vehicle “Kozak-2M”, far surpassing “Dozor” pushed by “Ukroboronprom”. However, the Ministry of Defence (MoD) of Ukraine has not bought a single “Kozak-2M” – mainly due to lack of funds. In another case, of “Proximus” private company, 10 systems developed by “Proximus” and supplied to the Air Force under the state defence order will be enough for suppression of enemy unmanned air vehicles, but due to the distorted export system, the company has to move production to another country. Hence, intellectual capital flees, jobs are cut, and taxes are paid to foreign states.

Here is one more example, already mentioned. “Ukroboronprom” delivers new “Oplot” tanks not to the Ukrainian Army but to Thailand. To be sure, if the state had a real chain of command in the defence industry sector and a system of responsibility, someone would have been sentenced for the actual disruption of the terms of beginning of batch production of “Oplot” tanks – otherwise, tanks might have been supplied both to the army and for export. However, loss of a traditional partner on the foreign market is as much of a blunder as the delay of production. Traditional markets should be retained for many reasons.

Ukraine managed to keep Pakistan interested, and here is the result: a memorandum of maintenance of the tank fleet of that country was signed in Islamabad in 2016 – it includes delivery of engine transmission compartments and other component parts, and market promotion of the 6TD engine line. The order may exceed $600 million. Long-standing and generally efficient efforts on the market of Azerbaijan secured implementation of a large project of transfer of An-178
production technology to that country. The same can be said about Algeria, that signed a contract of purchase of Ukrainian portable antitank guided missile systems “Skif” this year – it was Algeria that brought the first (as far back as 1999) achievements of the Ukrainian design bureau “Promin” in precision weapon development. It was also not accidental that good prospects appeared on the market of Indonesia, with which, “Ukrspecexport” signed the first contract of repair of a batch of armour yet in 1997. Now, “Ukroboronprom” pushes the idea of licensed production of wheeled armoured personnel carriers BTR-4M there. Meanwhile, Kyiv lost the Iraqi market – due to both the quality of its products and the activity of Russian special services. Out of $2.4 billion promised by Baghdad, only $640 million have been drawn.

**Second. It is the right time to push Russia aside.** Indeed, the state hostile to Ukraine that unleashed a war on it and began confrontation with the West feels kind of a technology deficit. Ukraine should be more aggressive on the markets where Russia was traditionally active. First of all, they are India and China, as well as the markets of third countries, where the ex-Soviet weapons are in demand.

By the way, some steps have been made. For instance, the Ministry of Defence of India and several local companies signed with Ukraine 15 memoranda of production of 500 military transport aircraft and long-term deliveries of gas turbine units for Indian warships – all that against the background of the frozen joint Indo-Russian project of military-technological cooperation. To be sure, a lot will depend on the negotiating team – both in India and in Saudi Arabia, further discussed below, talks were conducted by the General Designer Dmytro Kiva, hastily removed by the “Ukroboronprom” leadership. India is a specific partner that needs to be persuaded long and with sound arguments.

Another bad news is that the “Antonov” brand was arbitrarily transferred to “Ukroboronprom”. This pernicious decision gives rise to great many new risks. Saudi Arabia made a stake on Ukrainian military airlift technologies, and this line may promise a breakthrough, up to participation in such large-scale projects as An-70.

The same can be said about Kazakhstan that bought the technology of upgrade of “Motor Sich” this year. The attitude of Kazakhstan to Ukraine was not shaped within one day – this success followed the choice of not only Ukrainian aircraft and armoured personnel carriers, but also capital repair of S-300 SAMs (although S-300 was produced in the Russian Federation). Noteworthy, Kazakhstan is cautious of Moscow, since the share of ethnic Russians in the country’s north is such that a hybrid war, well-known to us, can easily be waged there.

**Third. military-technological cooperation is a tool of turning Western partners into allies.** Even starting low. For instance, in 2016, “Ukroboronprom” signed with Grand Powers r.o. of Slovakia an agreement of cooperation in production of firearms, with Poland’s WB Electronics – in production of precision missiles. If successful cooperation goes on, it may facilitate launch of joint projects with Western companies.

Large-scale military-technological cooperation with the USA would be a much-wanted result. “There are more than 25 American companies, which are involved
in partnership with ANTONOV – whether as suppliers, technology sharers, or developers. ... I have said on several occasions, that I am very optimistic about the prospects and continued programs of US-Ukrainian defense technology co-production and cooperation” – said US Ambassador to Ukraine Mr. Pyatt in April 2016. It is clear however that without changing the rules of the game within Ukraine, “optimism” will not translate into military-technological cooperation.

However, we are not even in the middle of the road. For Western companies to come to the Ukrainian market, we should give up “manual” management of the defence industry, pass a number of laws necessary for protection of investments, liberalise foreign economic activity. The government can do that, on the condition of political will and resolve to forget about personal gains for the sake of the state development.

**Fourth. Research and development activities under contracts help rearm the national armed forces.** Some states are ready to include R&D in export contracts and pay for them. In due time (in 2005-2010), “Ukrspecexport” managed to make it a usual practice and solve many issues at the expense of foreign grants. Modernisation of MiG-29 fighters to be sold to Azerbaijan was a classic example.

Now, with only UAH 60 million allocated to R&D in 2016, cooperation with China may be of paramount importance for Ukraine’s rearmament. During Airshow China 2016, agreements of joint arms production were reached. Thanks to military-technological cooperation with China, real progress can be made in development and production of guided airborne weapons, badly needed by the Armed Forces of Ukraine. Additionally, great hopes are pinned to Saudi Arabia. This refers not only to the contract for An-132 aircraft but also to a possibility of building a national missile shield on the basis of operational-tactical missile systems “Hrim-2”, promoted on the market of that country. Such systems, along with the purely domestic project codenamed “Neptun”, can make up a non-nuclear missile deterrence shield.

**Fifth. Military-technological cooperation is a business, profitable for the state and enterprises.** By and large, export of arms and military equipment from Ukraine fell during the war. According to CACDS estimates, in 2015, it did not exceed $600 million, in 2016 – $756 million. The list of the main importers of Ukrainian arms and military equipment includes China, India, Saudi Arabia, Kazakhstan, Azerbaijan, Pakistan and a number of African countries, in particular, Algeria, Angola, Egypt, Ethiopia, Nigeria. New records are still far away, due to imbalances in the military-technological policy of the state. However, CACDS experts believe that given the upward trends in the defence industry, Ukraine can well exceed the record figures of 2009, hitting $3-3.5 billion.
Within the framework of international military-technological cooperation, Ukraine spares no efforts for development of cooperation with the Alliance. A key line of provision of defence is presented by the military-technological dialogue with partners that has demonstrated an upward trend and continues to gain momentum.

The goal of military-technological cooperation lies in pragmatic use of opportunities offered by international cooperation for development of arms and military equipment for the Armed Forces of Ukraine and development of the national defence industry. Ukraine’s participation in military-technological cooperation makes it possible:

- to use the best technical standards/methods of advanced countries of the world during the life cycle of arms and military equipment;
- to step up production and scientific-technological potential, along with competitiveness of the national defence industry enterprises.

The main forms of military-technological cooperation include Ukraine’s participation in:

- meetings of the NATO Conference of National Armaments Directors and its working groups/subgroups;
- activities of the NATO Standardisation Committee;
- development of technical standards and other NATO documents dealing with arms;
- activities of the NATO Council subgroups in charge of consultations, command and control;
• multinational projects within the framework of the “Smart Defence” Concept;
• research of the NATO Industrial Advisory Group (NIAG) and NATO Science and Technology Organization (STO);
• NATO trials and multinational research exercises.

Furthermore, Ukraine takes part in implementation of projects of the concerned NATO trust funds, NATO Support and Procurement Agency (NSPA), NATO codification system, Air Situation Data Exchange programme.

There are some gains in the field of logistics and standardisation in the Armed Forces of Ukraine, in particular, the existing internal control system in the Ministry of Defence (MoD) was audited. Immediate tasks were set. Today, the First Deputy Minister of Defence and the head of the MoD Standardisation and Codification Department, established in 2016, visit Brussels to discuss standardisation. A hardware and software suite for stock item record was obtained.

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Transition to the second level – Ukraine’s accession to the NATO codification system – is on the agenda. This work is actually over. All incoming items – arms, military equipment, materiel – are now codified in line with international standards.

Utilisation of the Command, Control, Communications and Computers Trust Fund has been intensified. The Trust Fund financed feasibility study of the command, control and communications system, delivery of an Iridium secure communications station is planned.

We have a military-political mission to NATO, including a military-technological cooperation unit. Military-political and defence issues are entrusted to a section, in which, the MoD is represented, interoperability during joint operations – to another section, where the General Staff is represented. With the establishment of a standardisation and certification body in the MoD, a permanent representative came to the section of military-technological cooperation, which facilitates consideration of the issues of development and management of the Trust Fund activity, etc.

To give impetus to Ukraine’s military-technological cooperation with NATO with account of provisions of the comprehensive NATO assistance package for Ukraine, a Roadmap was worked out and signed in December 2015. The paper lists the key measures aimed at attainment of the priorities set out in the Declaration of Intentions of September, 2015. The priorities include: improvement of resources and capabilities of the Armed Forces of Ukraine; cooperation in the field of standardisation and codification; reform of the Ukrainian defence industry; Ukraine’s participation in the NATO “Smart Defence” initiative; deepening of cooperation between NATO and Ukraine in the field of military research and development (R&D); development of skills of the Ukrainian staff involved in military-technological cooperation with the Alliance.

The majority of measures envisaged by the Roadmap concentrate on Ukraine’s participation in working groups of the Conference of National Armaments Directors (CNAD) – the NATO high-level committee responsible for cooperation in the development of arms. The Ukraine-NATO Joint Working Group on military-technological cooperation will work out its programme of action on the basis of the Roadmap.
There are design specifications of the automated control system, approved by all executives of the MoD. Its structure and implementation means have been determined. Air safety capabilities are being improved. Disposal of obsolete and redundant ammunitions and antipersonnel mines in the Armed Forces of Ukraine is actually suspended, we have scrapped nothing in the last two years. Meanwhile, ammunitions are repaired and upgraded, arms and military equipment are recovered, etc. An order of the Defence Minister has been prepared, providing for disposal of really hazardous elements and creation of the exchange stock of component parts for arms and military equipment and ammunitions with the purpose of their repair or production.

We have joint projects with our partners of national defence industry reform, creation of a national defence products’ quality management system. Ties between defence industries of Ukraine and NATO member countries have been restored.

To navigate in all those issues, we should realise where we are in terms of both import substitution and arms production. “Ukroboronprom” and private companies have many projects on a par with the best world standards, but we are desperately short of funds to launch batch production under those projects, to modernise production facilities. This is our problem. We should go to the international market with good results. Business should see competition and progress.

I agree with “Ukroboronprom” in that competitiveness is the main thing. The more closed cycles of production arms and military equipment we have, the more we can produce ourselves, the more competitive we will be on foreign markets. Issues of scientific research institutions, design bureaus, aerospace manufacturers are the hi-tech subjects that we should deal with. This refers to agreements made with other states and covering joint long-term programmes. If such programmes are implemented by at least 45-50%, this will contribute to the defence of not only this state but also our partners.

What special exporters do is mainly confined to meeting the urgent needs and current tasks of the Armed Forces of Ukraine. Meanwhile, we should deal with further-going programmes: development of Ukraine’s cooperation with NATO in the field of science and technology, improvement of Ukraine’s technical capabilities in the field of demining and dealing with explosive devices.

During a meeting of the Joint Working Group Ukraine-NATO on military-technological cooperation in Brussels in December, 2016, the parties highly praised the dynamic of cooperation and fulfilment of agreements. In 2016, seminars on the defence industry reform were started.

We often compare the defence industries of Ukraine, the USA, NATO countries or EU partners. The main difference between them is in the standards of organisation of equipment development, launch of production, etc, critical for the efficiency of technology use and equipment configuration. The list of those standards may be extended to include quality control. Those standards only need to be compared, brought together, adapted to the Ukrainian conditions, and implemented.

Much attention is paid to the assurance of quality of defence products, arms and military equipment lifecycle management. We have gained great experience of recovery of arms and military equipment, creation of the exchange stock of
components and assemblies, etc. Issues of improvement of the national legislation on customs clearance and taxation of goods procured through the NATO Agency still pose a problem. The National Security and Defence Council (NSDC) discusses uniform rules of provision of brokerage services, issues of legislative and structural changes in the field of export/import of arms and military equipment.

To sum up all that has been said, the priority tasks for 2017 include:

• a continued active role in the NATO Conference of National Armaments Directors structures;
• development of a quality assurance system for defence products;
• intensification of cooperation under projects within the framework of the NATO “Smart Defence” Concept and studies of the Alliance’s industrial group;
• furtherance of the national defence industry reform;
• arrangement of a seminar on this subject;
• establishment of cooperation with NSPA;
• use of NATO Trust Funds.

Partnership with the USA, stalled in 2008, gradually recovers. Five meetings on technology protection have been held, signing of a memorandum of cooperation is in sight – in March, it is expected to be approved by the US side, to be followed by finalisation of joint projects. That said, military-technological cooperation is restored and gains momentum.

Regarding the EU. In 2016, the Defence Minister and the Vice President of the European Commission signed an agreement to that end. An Administrative Agreement between the MoD and the European Defence Agency (EDA) has been signed, enabling Ukraine to take part in multinational Agency projects. On the 1st of December, 2016, there was a meeting with the EDA and exchange of letters on technical standardisation projects. Issues of standardisation and compatibility remain high on the agenda.

A lot is being done with partners in Europe. In particular, three sessions were held to discuss resumption of the “Corvette” programme involving 129 Ukrainian enterprises. Negotiations go on; four European companies have reported their readiness to join the project. In 2017, state funding of the programme is to exceed UAH 1 billion.

Are our partners interested? Yes they are. A similar project was accomplished by our Polish neighbours, but they built an offshore patrol vessel instead of a corvette. To be sure, states of the Baltic and Black Sea area, whose situation is similar to ours, are interested in joint shipbuilding. This is witnessed by the projects considered now and negotiated international cooperation agreements.
I am not going to address the broader issue of NATO-Ukraine cooperation. I think the speaker from the Ukrainian Ministry of Defence has given us an excellent overview and in any case I would not be the best qualified to do so. Mark Opgenorth who is in the room, as Deputy Director of the NANO Liaison Office has really the best overview of all the activities.

I would, however, very briefly mention the fact that there is a number of what we call joint working groups, which connect elements within the staff of the NATO HQ and specific ministries. Some of the things that were mentioned by the speaker from the Ukrainian Ministry of Defence are actually handled by the Joint Working Group on Defence Technical Cooperation which has a road map that was mentioned. There is also a Joint Working Group on Defence Reform. There is also the Building Integrity Program, which is not specific to Ukraine.

What I am going to do now is speak to you a little bit briefly about an “old-new” NATO-Ukraine Joint Working Group on Economic Security because that is the one I am working on. I am going to focus on something I am responsible for. The Joint Working Group’s counterpart on the Ukrainian side is the Ministry of Economic Development and Trade and the topics covered by that Group are economic aspects of security and defence policies.

On that note, and in particular with respect to some of the aspects of today’s seminar, we are still discussing with the Ministry of Economy exactly which issues we are going to handle, but certainly defence procurement is one important topic
that we are certainly discussing rather from an economic angle and rather looking at the Ministry of Economy’s perspective however also liaising closely with the Ministry of Defence of Ukraine.

Meetings of these Working Groups are principally designed to facilitate direct talks and exchanges of views and expertise between Ukrainian officials on the one hand and officials of NATO bodies, NATO HQs, and also representatives from allied governments themselves. But on top of that, experts from the independent sector, from civil society or from the industry can often play a crucial role in bringing some interesting perspectives. I am also looking myself to constitute a new pool of experts, persons from the nongovernmental sector industry, who have a strong interest in the areas of defence governance and reform.

This Working Group on Economic Security was unfortunately dormant for a few years. We are reviving it now, we have not even had the first meeting, so this is really underdevelopment. I cannot come to you with findings or conclusions because they do not yet exist.

I will illustrate a few points for discussion, just to demonstrate what economic analysis can bring to some of the questions that we discussed this morning. Basically, the general approach is when looking at defence reform in this region, but not exclusively, there are two major topics. One is the democratic control and the other is transparency/anticorruption. In addition, in that context, people often talk about the importance of introducing market competition, wherever possible, as a means towards achieving greater transparency and reducing corruption.

The point I would make is that my approach, as an economist, is to stress the importance of economic efficiency and of achieving what government economists typically call “value for money” or “good value for the money the taxpayers pay” and that is of course a key goal one should seek to pursue. Of course, market competition is a very powerful mechanism, but it is only available when it is available, so to speak. One needs to accept that in certain areas, in certain economic sectors, notably in defence, there are very special constraints and these have been mentioned this morning and they are very well-known. One, of course, is state secrecy but another is also the market structures that exist in the defence industrial base of various countries and defence industrial complex of Ukraine illustrates this very well. In certain cases, for certain types of equipment you may want to have much competition but it may not be available or possible, depending on the type of weapon system that you wish to procure from a governmental perspective. We have to admit that there is a whole range of cases, where we face what is called, a single supplier environment. In these cases, we need to find other ways of ensuring that we have good value for money.

How can we do that? From an economic perspective, economists have developed over many years, many decades a large number of analytical tools to address these issues and a number of, for example, cost modelling methodologies and cost modelling methods. They are used by various government departments across the world in order to enable a government ministry to judge whether the price that a monopoly provider is proposing is reasonable or not.
One well-known approach is the “cost plus” approach. In the UK case, just to take an example, even in government manuals there is a whole approach which is called “should-cost” model. It is an evaluation of what the equipment should cost if the market structure were more favourable and more competitive. There are analysts who try to bring in some industry knowledge and try to make calculations like these and then, once one has such an evaluation or such an estimate, one adds a reasonable profit margin and that is the price one is prepared to pay.

I note that this morning we heard a very interesting example from a private-sector supplier facing a state regulation that uses a “cost plus” model. I would simply mention without going into the details because I do not know the case, that there are many solutions to ensure all that such systems have the right kind of flexibility, are computed in the right way, are not too rigid and are also applied in right cases. Bearing in mind that normally the application of this type of model is usually, specifically because there is a lack of competition, is an approach that you use for the regulation of natural monopolies or state monopolies. This is just one example of the type of question which could be addressed in the context of the Joint Working Group on Economic Security.

Just one more note on the issue of a possible state regulatory body. I do not want to jump into the discussion that was in the in the previous panel, whether there should be a state regulator outside or within an existing ministry or using what is already there. That is really not for me to say, or to judge. The only thing I would note, is that in terms of regulatory bodies that they are designed to carry out competent economic regulation of specific industries, whether it is the defence industry, or other industries, where you also have certain similar structures: where you have, for example, a large state-owned company, which used to be a state monopoly and then you have some small private players; where you have a mix; where you cannot use exclusively the mechanics of competition, but you need some price regulation to make sure there are no abuses. In that case, there are examples in numerous countries of regulatory bodies, who have legal experts, economic experts, industrial experts on their staff, who work together in crosscutting teams in order to have a good handle on whether the incentives are right, whether the price signals are right, the price regulation is right. Things of that nature do exist and lessons can be learned from them.

Of course, with the example of this morning, it was clearly implicit that such efforts to regulate prices already exist. They already happened. The only question is whether they could possibly be tweaked, possibly be improved. This is just a little bit too illustrates some of the things that I hope I will be able to handle in the Joint Working Group on Economic Security which should be revived this year.
Before I became a semi-retired citizen of the world, I was at NATO for a number of years and, therefore, was very much involved in thinking about the big questions that we have been discussing today, dealing with the technical requirements of military-industrial cooperation and the transparency, integrity and accountability issues. I am very grateful to the Centre for the Democratic Control of the Armed Forces (DCAF) and the Razumkov Centre for bringing me out here to add some thoughts about how all these experiences have evolved and big questions that we are confronted with, in Ukraine particularly.

The Deputy Minister this morning gave us some interesting insight about standards, quality assurance, reliability and other important components. In a way we look at a contract or a weapon system, contractual complexities or how complex the system is, whether it performs at the very best standard, in other words, if it is a substandard system, or when we are thinking about the way in which agency design might take account of some of these big challenges, then we do really need to be sure that we have in place the right kind of mechanisms for accountability.

In fact, what I am saying to you this afternoon consists of what is known as the four “i”: innovation, institutions, incentives and integrity. All of these “i-words” are critical in coming together to meet the big challenges that we are facing. What are the biggest challenges that we face now in thinking about the main issues for this conference? Obviously, it is the speed of change of technology, disruptive technology
and the disruptive strategic environment in which we find ourselves, an environment which has been deteriorating over the last few years. With all of the strategic shocks occurring across the world at this time, with the new US President, we can expect more problems and should be thinking about how we organize ourselves to the best of our ability.

We are much more capable now and our military organizations and delivery systems are much more lethal. But actually, they are less robust, they are not as resilient as was the case previously. This is because of the tremendous changes in technology and the complexity of things. This means that there are new interdependencies in the way in which we deliver and manage weapon systems. We have leaner, less extensive bureaucratic systems and organizational structures. We have an increase in the operational tempo of our armed forces and we have these major funding constraints, the fiscal environment of our economies confronting all kinds of major challenges etc. It is not difficult to see why transforming the way that we function and manage our capabilities becomes extraordinarily difficult.

In fact, the key message here is that – when we think about institutional governance and the questions that are being raised, about what kind of agencies within ministries and without, what kind of ministry should be involved, we have increasingly the problem with managing organizational priorities and structures that are misaligned. They just do not kind of connect well together.

Let me just bring my remarks to a close by talking about a particular study which I think is very relevant for colleagues here, in Ukraine. It is the celebrated Chilcot report that came out in the United Kingdom in June 2016. This is the long-anticipated report inquiry by Lord Justice Chilcot into Britain’s involvement in the Iraq campaign of 2003. I am sure you will probably know that this was very controversial. Under Prime Minister Tony Blair, the British government committed itself to send forces into the southern part of Iraq, into Basra in combination with US forces. One can say a huge amounts about this particular story, but I would like to focus on the problems in the procurement arena with the way the British forces were able to operate in and around Basra, which are very well explained by the Chilcote report.

Chilcot’s point was – how quickly with the capability gaps or the deficiencies and capabilities for the British Armed Forces, who had a very difficult, terrible time, given the conditions in which they operated, given the rules of engagement and given the nature of the shortfalls in the equipment that they had. For example, in terms of protective patrol vehicles there was a distinct lack of these and this led to some very bad situations in which British Armed Forces were engaged. Eventually British Armed Forces couldn’t really patrol adequately at all because of the conditions imposed upon them.

In telling you all of this, I am very mindful of the challenges that have come your way and continue to come your way in the conflict taking place in Eastern Ukraine. The rate at which Ukrainian equipment has been used up in this fighting, the challenges that poses for decisions about whether you should meet urgent operational requirements or you should be thinking about balancing the allocation resources to medium-term and longer-term investment.
As I said, this means that there is a clash between what we think the original operational requirements are now compared with what might be our strategic needs in the medium-term and the longer-term. We can always argue, as Robert Gates, the former United States Secretary of Defence, would say, we always imagine that where going to never fight a war like this one again or we are always preparing for the last conflict. We are not really thinking ahead to what the implications for the future conflict are. The comments made by panellists earlier about how procurement works in France and Norway, Netherlands and the United Kingdom – all these comments are to be taken extremely carefully and seriously. But, I do compliment Ukraine on what it tries to do with the organization of the multiproduct huge structure which is seeking to provide the best possible competitive conditions with the subcontract supply chain.

To conclude, I would like to say that there is always going to be a major challenge when we have such large bureaucracies in government dealing with the traditional programmes confronted with digital disruption in technologies that really are going to be resisted by budget holders. But, I am sure that Ukraine can deal with its capability requirements and can best form relationships with the EU and NATO, taking into account these transformational issues and, indeed, recognizing the markets in which you seek to sell your products within the overall framework of accountability and integrity, and transparency so that budgets are used in the best possible and efficient manner to get the most effective capabilities that can be delivered in a timely manner.
It is very good to be back and and it brings back memories of work that has been done before. Valentyn Badrak was kind to mention the Defense Industry Forum that the NATO Liaison Office, Defense Express, and the Center for Army, Conversion and Disarmament Studies organized in 2008-2009. I also remember a work done in 2005 and 2006 at the government level bringing together defense acquisition experts to have discussions about how western experience could be useful for Ukraine. At that point I was very struck that there was no common language between the western experts and the Ukrainian experts. That is one of the reasons why we went to having industry meet. Today I am impressed with the common language that has developed. Ukraine understands the way that procurement is happening in other countries, the imperfections that, as my friend Adrian Kendry amply pointed out, and is worth still reforming, understands that that is the framework in which all cooperation is happening.

Since leaving NATO I have spent more time working at the industry level, often at a micro level, than I have at a level of policy. Today I want to speak more at that moment and in that question of defence industrial cooperation as an enterprise and what is important from that perspective.

In the events in 2008 and 2009 we found that there was a common language between defence industry and that was very practical sense of how to design
solutions that meet the customers’ needs, win contracts and earn money – that was very straightforward, and where Ukrainian and NATO countries’ industries could find a common framework to do that – very practical projects started.

There were at the same time some very clear barriers. The were two principle barriers: where is the money coming from and the second one was the added friction, the added risk of working across cultural barriers and not just linguistic or overall cultural barriers but business cultural barriers. One of the things that truly impressed me from Ukrainian colleagues at those events was how they focused on the problem and looked to invest in education, training, becoming more knowelegable about the way that their desired partners talked and worked. And the sign of great progress today is to be next to the Mr. Gurak, graduate of the National Accusition University, which shows that progress is happening in the form of Mr. Gurak and, I am sure, many of your colleagues. I hear that “Ukroboronprom” has its own programmes too to push ahead this process internally and it is a good sign.

In 2010 and 2012 I was involved with US-Ukraine Business Council in trying to activate their Airospace and Defence Industry Commitee and it was very interesting to hear that there is a similar project now with the American-Ukrainian Chamber of Commerce. What we found there was a general interest. If we looked at Ukraine’s export potential of around $1 bln per year that was a market that generally selling to places where US markets did not have strong links. It was a potential for sub-contracting or cooperation that was interesting for US partners. The problem was that it was very vague. It was a general opportunity not a specific opportunity. When US company looked at specific opportunities they tended to look at money they knew they can get their hands on and that was US government funding. At that time it was $17 mln a year.

Just o give you an example how large companies look at that. I was involved in the process to put together a tender for $5 mln project that the partner, the large US company, cancelled the work on because the administrative effort by their business development team was needed for a $500 mln project. These are the realities that the partners are dealing with. It is important in looking at developing these relationships to understand and to invest in the partner’s mindset and the partner’s interests.

Today there is a new platform, a new playing field. There is a larger Ukraine internal market. Unfortunately there is a war. That war drives demand and it drives accountability, and it drives accountability in the way that militaries traditionally have accountability driven and that is on the battlefield, so the real operational needs. Those operational needs are actually at the forefront of current operational challenges that western armies face too like hybrid warfare and the use of artillery and small UAVs, to give two examples, information warfare in combination with cyber, to give another. We see those not only here in Ukraine but in some elections in large countries. This drives a positive environment for cooperation. Also driving it is the fact that the US funding for security assistance to Ukraine is not $17 million, it is 350. And $350 million is already by US contractor standards money. There is a saying from a Senator many years ago: “It is only $1 billion but a billion here and a billion there and sooner or later it adds up to real money”.

Monitoring Ukraine’s Security Governance Challenges
What is the catalyst that is needed to bring these sides together and to be able to have real projects? It is time, it is culture, it is intent, it is investment in relationships. Todor Tagarev earlier today mentioned two key items – competitiveness and trust. US and, generally, western defense industry is both very conservative and very competitive. If a company, a Ukrainian company, can bring added value from the point of view of the US contractor for the US customer – something that is less expensive, more effective, or local knowledge if it is a geographically oriented project – that is real value. That gives the ability to leverage that value can give an American company in advantage which will allow them to win contracts.

At the same time they are very conservative, the customers and the governments are conservative. They want a solution that has a proven track record. I have recently been involved in an effort to bid for US government contracts in the environmental remediation area from a foreign prime that was perfectly capable of doing the business, was one of the lowest bidders and was not chosen because it was their first time bidding for the US government. The risk of having an unknown quantity was too high, to prime. I think for Ukraine this is going to be at a critical element, the decision to have to try to be prime contractor is going to need lots of investment of time with relatively little return. Finding those places where your capabilities can smoothly integrate with things that US prime contractors or other countries prime contractors are already doing, is going to be far more effective. But that is going to require being there, sharing information about what you have, developing the relationships, and understanding what they need. The kind of investment that you been talking about for that has been going on.

The relationship that is important is not just about the actual contract and contract delivery but an entire business development process: that information comes in from the contractors, that it comes in on time, it is in the right format of the points of contact understand the way the business works; that ideally the local contractor, the Ukrainian firm, brings to the prime additional information which helps it with its business developments process, the development of a real commercial partnership. It is important that the value that Ukrainian partner brings fits into the business model and the operational solution of the US partner.

There is another issue in the bidding process which often is not looked at, and that is information flow. Many American contracts now are called IDIQ, Indefinite Delivery in Indefinite Quantity. A number of contractors bid and are chosen to be part of a team that then bids on specific task orders. If you are not chosen to be one of the three or four contractors that are on that platform you get no more information. Being on those platforms is vitally important and once you are on them it is possible to compete time and time again. But each partner requires a separate point of contact from the subcontractor and those points of contact are not allowed to talk to each other, they are not allowed to go up and talk to management. There are very strict rules about information flow very strict rules even debating about export control, even control of information. These are the very specific details of how the system works that Ukrainian partner has to understand to be able to function effectively.

In a final issue, which is vital is the Foreign Corrupt Practices Act. This violation of the corruption laws now is effectively a death penalty for US companies. They will not
risk it for a foreign partner and the requirements will be very strict up to and including complete disclosure of beneficial ownership and the creation of integrity programmes inside the foreign partner.

This sounds like a high barrier but it is not because the key is on the way forward: integrate into the system it is possible to do added value works. Secondly, it takes investment: start small and concrete, find projects that can work, make them work, build trust; fill the perception of value in the prime and in the customer; update internal processes as needed, business development processes, management processes, financial control, as the prime needs those to happen. Finally, I would say there is a need to change the mindset, from one of survival to one of growth. Not every company is going to survive. Where is Grumman today? Where is Martin Marietta today? They are gone, they were bought up, they went bankrupt they were bought by other companies. The same time we have a $20 billion company Pollentier that did not exist 15 years ago. This mindset of growth and of dynamism and of that the market can bring is essential for Ukrainian companies and for Ukrainian defence industry policy if it is going to be successful working with companies that live in that environment, live and die in that environment today.