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EDITORIAL

Dear readers,

2020 will remain a year that the whole world will certainly never forget. This pandemic period has caused many losses, both on human and economic side, which unfortunately do not end.

I am convinced that the Czech defence and security industry is able to offer certain solutions in this regard, how to help in this situation not only in the Czech Republic but also abroad. Whether it is the production of detection and defence devices, the production of masks using 3D printing, the prevention of risks associated with the digital threats, such as hacker attacks or even the project of distribution of medical gases to covid patients with respiratory problems.

I have no doubt that this issue will convince you, the reader, that the Czech defence and security companies, despite this very difficult situation, are giving a good try to constant development and demonstration of absolutely professional production and thus convince not only our legislators, but also the whole world about its outright originality and competitiveness. You can also find this issue online at www.msline.cz.

I wish you a better, and most importantly a healthy year 2021!

Šárka Cook, Editor in Chief



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Exclusively with the 1st Deputy Chief of the ACR General Staff

At the turn of the year, in the current situation of a global pandemic, as well as growing nervousness from the deteriorating international relations, we traditionally addressed one of the leading generals of our army, Lt. Gen. Mgr. Dipl. Eng. Jaromír Zůna, MSc., Ph.D., 1st Deputy Chief of the General Staff of the Army of the Czech Republic.



One of the events that attracted the attention of the general public in connection with the coronavirus situation was the construction of the ACR field hospital in Letňany, Prague. The speed of the military health services response to this task, moving the equipment and materials, the professionalism of the field hospital staff, were closely monitored by the public, the media and the professional community. It was taken for granted that the army would set aside a field hospital if necessary, and this activity required almost no substantial cooperation and planning. For the uninitiated, the only question left was whether the task would be completed in the given time scale and quality. However, the culture of the army is based on the exact opposite of such thinking and does not allow any compromising on the performance of assigned

tasks. On the other hand, given the broader context, the allocation of a military field hospital did not have to be such a matter of course. Suffice it to recall that in 2013, with the large-scale reduction of the army due to the effects of the economic crisis, everyone who thought to be qualified to speak up, recommended cutting on the military support. In line with the idea that the focus of the predominant use of the army in the peacetime will continue to be involvement in international crisis management operations, the reduction of support forces was considered to be the smallest of the existing evils. Military healthcare suffered substantially at that time. However, the idea of reducing military healthcare has never been booming, but, unfortunately, continuous. As recently as 2016, there was a demand to abolish one of the two field

hospitals the army has available. This did not happen, because we perceived the security definition of the country in the spirit in which it was formulated and confirmed for the Czech Republic in the 1990's by a series of types of crisis situations. The field hospitals were modernized and are being supplemented with materials, equipment and staff. The rapid and organized relocation of the field hospital to Prague was also an example of what is meant in the concept of the army under the terms such as mobility and containerization. If we continued to reduce the military healthcare after 2016, we would certainly not deploy the field hospital as smoothly. If in the past the army had succumbed to the view that specialization is the solution and the all-inclusive army with a full-fledged system of command and control at the national level is an obsolete model, it could not be deployed to such an extent today to solve the pandemic crisis. However, this does not apply only to the current situation, but to all potential crisis situations that the Czech Republic may face in the future.

Field hospitals, support in organization of elections, mobile sample collection teams, logistical support and other tasks, fifteen thousand deployed soldiers, including equipment and materials, confirmed the professionalism and readiness of the army to perform tasks arising from crisis management. The Czech Army was able to activate immediately the command and control system and at the same time to allocate the required forces and resources, despite the fact that on 1 January 2020 it carried out a reorganization and transition to the three-level command and control system in

accordance with the ACR development concept. This was given by the culture of readiness. Something that is characteristic for the army. Therefore, for example, the ACR had prepared contingency plans for the second wave of the COVID pandemic as early as in May 2020. This fact also deserves to be captured in the evaluation of the activities of the Army of the Czech Republic in resolving the coronavirus pandemic.

The evaluation of the activities of the particular elements of the state security system during pandemic will be the subject of comprehensive analysis only after it has subsided. Nevertheless, probably everyone who is working in this area is already sorting out his/her own findings. One of my findings seems to be appropriate to mention in our conversation, at least in the concise form. It addresses the difference in thinking between military and civilian elements in the international crisis management operations. The coronavirus crisis has led me to look at my previously published texts over the years, where I came across them. Where civilian organizations in crisis management operations rely on practical activi-

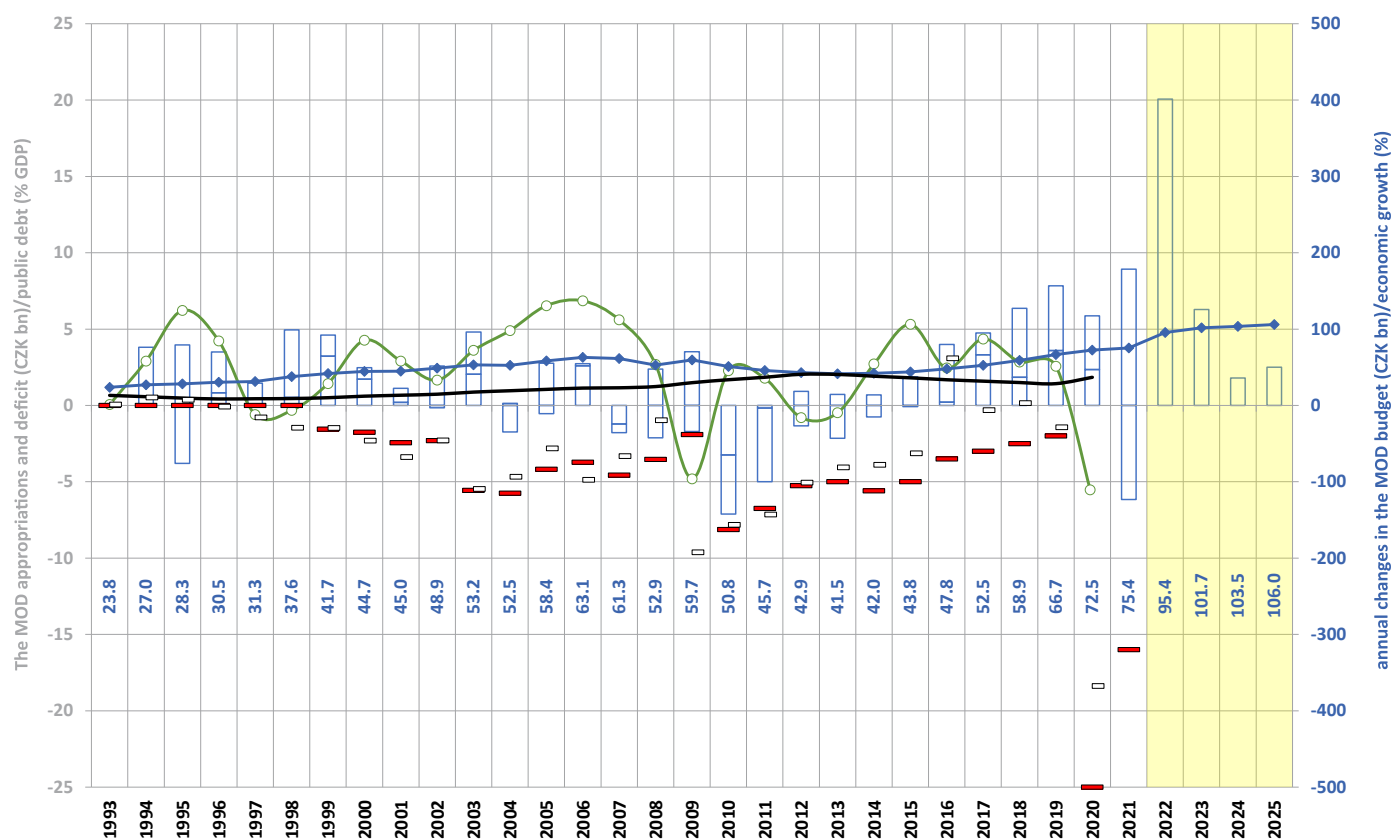
ties, consensual approach, coexistence, and management of operational needs, the military applies doctrine, training in the given area, command and control systems, cooperation, fixed operational procedures, and plans. Where civilian organizations consider long-term engagement to address the substance of the crisis, the military is working with the target state, the date of deployment, and the subsequent deployment to perform other tasks. While, in general, civilian organizations are willing to accept the risk of failure, but they do not take economic risks, the military is just the opposite. Anyone who has followed the course of pandemic crisis management in the Czech Republic closely can try to find parallels between these findings at his/her own level. Although they come from the environment of the international crisis management operations, they can be found in general patterns valid regardless of the format of the operation.

Mr. General, at the beginning of 2020 you gave us an interview concerning fulfilment of the 2020 milestone in the Development of the Army of the Czech

Republic. Could you mention the projects implemented this year and whether the coronavirus situation in the world has not disrupted the fulfilment of the objectives of the Concept of the Development of the Army of the Czech Republic 2030 approved by the Government on 30 October 2019?

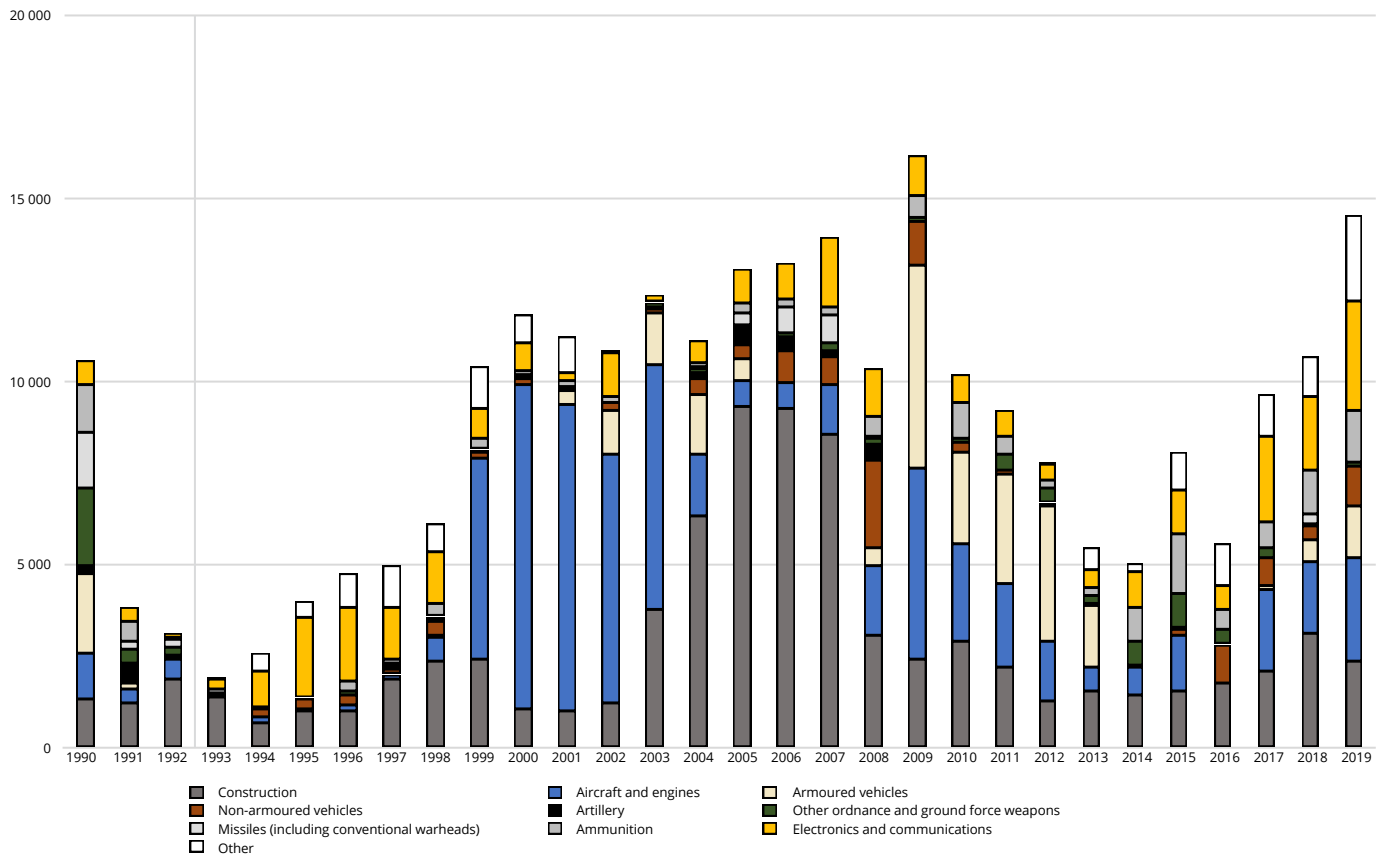
The military assessment of 2020 naturally attracts the attention, because it brings together three specific areas. Annual evaluation of the ACR results for the training year, evaluation of the 2020 milestone in the ACR development and the army's involvement in resolving the coronavirus pandemic. We are currently working on evaluation of the year and the milestone 2020. We still have to wait for the publication of the final indicators and the final balance. Nevertheless, it can already be stated that in 2020, despite all the objectively existing complications, the army achieved several interesting successes. Deliveries of PANDUR II vehicles in the KOVŠ/KOVVS configurations, PVO RBS-70 NG, LZTOP light medical evacuation equipment, TATRA vehicles, individual ballistic protection

The Czech defence spending at Jan 1 (appropriations and annual changes in outlays) in the framework of the public finance development, 1993–2025



Bohuslav Pernica, source: MFČR a ČSÚ

Spending on the force modernization in Czechoslovakia/Czechia according to the UNODA MilEx reports (CSK/CZK m), 1990–2019



source: *The Statistical Yearbook of the Czech Republic, 1993–2020 Prague CZSO*

equipment, small arms and other military equipment continued. In 2020, a number of new contracts has been signed, for example for the acquisition of small arms from Česká zbrojovka, a Toyota HILUX personal off-road vehicle, a passive DPET tracking system, and a fire control system from VTÚ Prague. Important contracts for the service, modernization and upgrading of ground and air systems and the supply of the military equipment have been concluded as well. The absolute majority of all contracts has been concluded with the suppliers from the Czech industry. For large orders from abroad, a 30–40% share of the Czech companies' involvement in the final product is required.

Despite the current pandemic, I cannot think of any single significant reason that could weaken our will to continue the process of modernizing the ACR. Considerable effort has been put into project preparation in recent years. We are currently in the implementation phase for the third year in a row, and this is particularly visible in the statistics on the number and value of contracts concluded. Nowadays, there are not many peo-

ple who would remember the long-term goal adopted almost twenty years ago and the associated internal discussion, i.e. to build one of the best and most modern professional armies of a small state. Nothing has changed because the original intention has not been reassessed. Dealing with the consequences of the pandemic and at the same time ensuring the continuation of the modernization of the army will be primarily a question of staff erudition in the management of related processes and the will to continue in this direction.

In the long-term context of building the professional army, complications such as a coronavirus pandemic are not any exceptionality. Moreover, the economic slowdown was evident even before the onset of the pandemic, which only accelerates the course of economic cycle. Over the past twenty years, the Government had repeatedly to address the dilemma between defence spendings and dealing with the consequences of crisis situations. Let's just recall the project of professionalization launched in the years 2001–2003, when the concurrence of terrorist attacks in the USA, floods in

the Czech Republic and economic weakening occurred. As a result of it, it was necessary to reassess a number of originally planned measures, including the extent of modernization of the army. Another example was the global economic crisis in 2008–2010, the consequences of which wrote off a series of conceptual documents of the Ministry of Defence, in particular the Transformation of the Ministry of Defence (2007), the Long-Term Vision of the Ministry of Defence (2008) and the forthcoming ACR Development Concept (2008–2009). The current pandemic of 2020–2021 is just another crisis situation in this series, coming in virtually the same ten-year cycle. However, I am of the opinion that dealing with its consequences in the army will not be as difficult as overcoming the consequences of previous crises. For a brief comparison, the professionalization project was characterized by a complexity, a wide range of changes, with social and sometimes even economic impacts. It was a system change made through intensification. We are not doing anything like that today. First of all, the current concept is of the technical nature. It is about the



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most extensive modernization to date and increasing the numbers in the ACR by an extensive method that does not work with uncertainty. Secondly, the defence budget is increasing, albeit not at the expected pace. Thirdly, from the point of view of system concepts of the theory of military force development, in case of professionalization it was about adaptation-performance relationship, while in the current concept it is modernization-prestige relationship. In general, the reduction in defence spending in immediate response to a crisis situation has never been the predominant reason for underfunding military development. In the years 2003–2004, the total drawing of the MoD budget changed from 53.2 to 52.5 billion, 2008–2010 from 52.8 to 59.7 to 50.8 billion, 2020–2021 from 72.5 to 75.4 billion. The reason was always the subsequent widening of the gap between ambitions and the reality of the budget in the medium term, in particular after 2010. The Concept of the Development of the professional ACR and the Mobilization of the Armed Forces (2002), for example, expected the 2010 defence budget amounting 95.1 billion. The Concept of ACR Development 2030 (2019) was built on the assumption that

the optimum defence budget in 2030 will be amounting 149.6 billion. The positive trajectory with signs of stability of defence spendings is evident only from 2015 and it would be detrimental to slow down the growth trend and thus devalue the potential that has been created in recent years in the personnel, technical and property areas. At the same time, it will be necessary to consider in the strategic planning the factors that in the past twenty years cyclically cause that we fail to break approximately the same level of combat value of the army, even with growing spendings. This would happen especially if the goal of building the heavy mechanized brigade by 2026 is not met.

The current debate on the level of the defence budget is based on various positions and motives. But we should not confuse cause and effect during it. Since joining the Alliance, we have witnessed two conceptual approaches to building an army. Deterministic, represented by the military concepts, and holistic in the form of the White Paper on Defence (2011) working with cyclical development, a pyramid of capabilities, and scenarios. Concept and White Paper on Defence are typologically the documents

of different purposes. Nevertheless, lessons are learned from their implementation. The deterministic concept almost always had to be reassessed; the holistic approach was confirmed by real practice even in the long term. If there is now a threat that economists figuratively describe as hanging on the investment loop, then it is not the result of cyclical developments, but of a faulty strategy. In this case, political strategy, because the building of the army is based on political assignment.

What are the main priorities of the Army of the Czech Republic for 2021, but in particular from the point of view and interest of the Czech defence and security industry, the main tasks for the next decade?

From the point of view of the interest of the defence and security industry, the priority in 2021 is the one - the modernization of the Army of the Czech Republic. If the priority projects, such as the acquisition of a new IFV, artillery system and SHORAD, are successfully completed, only these are worth about 70 billion. The budget of the Ministry of Defence for 2021 allocates funds for expenditure

res in the area of program financing in the amount of 25.1 billion. There is 14.5 billion planned to finance deliveries from contracts already concluded and a significant amount of funding is planned for the public procurement project already announced. In 2021, purchases from previously concluded contracts, such as mobile 3D MADR radar, CASA C-295 aircraft, multi-purpose helicopters, wheeled TITUS armoured vehicles, CBRN vehicles and the passive DPET tracking system will also begin. Even this brief list is sufficient to understand the consequences that would result from a substantial reduction of the defence budget in the final phase of the implementation of acquisition projects.

The plans of the Army of the Czech Republic for the next ten years are set out in the ACR Development Concept for Milestones 2025/2030 and are available to general public. However, I understand that the question posed is directed to more distant future, because I also noticed the questions concerning the future of the army development. Not for a decade, but for decades. In any case, the right question. Representatives of the Ministry of Defence presented new challenges in the area of advanced technologies, that are not mentioned too much in the ACR Development Concept 2030. Defence and security industries, as well as research and development facilities naturally respond and want to have as much information as possible to focus their future activities. Their interest does not end with the army, because they strive for involvement in the international projects, the outputs of which could potentially be used in the ACR as well.

The concept of the ACR development is based on the conceptual and planning practice of the Ministry of Defence and is a vision, strategy and concept in one single body. The priority is to achieve the required force mix that will meet accepted standards in line with the NATO's capability development objectives. From the point of view of the hierarchy of conceptual and strategic documents, one could say that it is a proverbial moving the carriage in front of a horse. The aim of building capabilities within the NATO defence planning process is jointly accepted and assigned by the Member States, but it is still only a planning process. By its logic, it does not work with the influences of the system environment.

Only the state, which is obliged to build the entire and cover-all security system to ensure national interests, is eligible for this. The national concept of the army development must therefore be, by its very nature, one dimension further than external inputs. Although such must be seen in the allied context, but not as centrality, but in balance, as other goals. Otherwise, there is a presumption of cyclical imbalances, which I mentioned before.

The Development Concept of the ACR does not mention long-term development plans, referred abroad as futures, but sets out the list of capabilities that the army will have available at a given time. The time scale of the conceptual outlook is too short for a development solution in the future. The question where and how the army will proceed with the application of advanced technologies and which functional areas will form the focus of modernization efforts in the long-term view, is answered, in general features, by the Concept of the Defence Applied Research, Development and Innovation 2016–2022. Just a little bit is also included in the Strategy of Armament and Support for the Development of Defence Industry of the Czech Republic 2025. But not as a description of the future ACR. The holistic solution requires long-term cooperation with civilian institutions, where the army contributes with the doctrine, method of use, development of the art of operation, and so on, and it is up to qualified institutions to offer technological solutions that will enable their application in the future.

Without having all the answers we need today, the main areas of application of advanced technologies in the process of military modernization will include autonomous systems, unmanned aerial vehicles, robotics, artificial intelligence, satellite technology, 3D printing, new materials, information technology and communication systems, passive surveillance systems, weapon systems based on the controlled-energy, simulation and trainer technologies, and possibly others in line with technological and military developments. The general goal is not only to build a technologically advanced army, but also to replace the human labour by the capital.

The opinion of the Minister of Defence of the Czech Republic in defending the

approved funds spent on the modernization of the ACR and the fulfilment of coalition commitments was clearly explained in the media. Can you support the Minister's political defence on this subject with more specific cases? By this I mean specific examples in already implemented contracts, etc. What would the prospective financial freezing mean for the Czech Republic, the Army of the Czech Republic and thus for the Czech defence and security companies?

The citizens of the Czech Republic were able to see how, in the event of a crisis, just-in-time ideas or the principle of deferred consumption work in the security system of the country. If the contingent is deployed at a foreign operation, there is usually always enough time for its preparation and a comprehensive provision. If a serious country threatening crisis arises at the short warning notice, the army is deployed as it is. European security architecture is so interconnected that if one of the European countries is forced to mobilize its capabilities due to a threat to security interests, the others will automatically take similar measures. In such a case, the defence industry of the country gives the priority to the needs of the country. Everything else is secondary. The security system of the country must therefore have the basic material prerequisites to be able to ensure an adequate response to the situation in accordance with the security scenarios. I mention the security system as a whole, because ensuring the security of the country today is not only about the army. The need is to achieve the new balance in building the army and the security system of the country. This requires a national theory, a national model and a continuous update of the security definition of the country.

The proliferation of the concept of military capability in strategic documents and in the public debate leads to the idea that by achieving it and thus fulfilling the commitment in the form of a contribution to collective defence, our security needs are secured. However, the concept of military capability has no subjectivity. It is a professional design, a standardization aspect, and does not answer the question of what is the relationship, what is its share, or what is the milita-

ry capability's priority in relation to the national interests in the area of defence and security. It is based on the external environment and is not linked neither to the national security model, in part nor to its capacity. The level of government investment in defence is always proportional to expectations of future benefits in relation to the probability spectrum of possible forms of threats and crises. The government is therefore obliged to build its military strength as a matter of priority according to national perspectives and only subsequently according to external methodologies. In other words, the real need to ensure the defence and security of the Czech Republic has a larger dimension than just the Alliance's commitments. If the allocated defence funds of the government are hardly sufficient for fulfilment of the accepted alliance commitments, then there is a system error in setting the parameters of military force development. This error must be removed, otherwise we will not avoid the continuation of a state of permanent non-replenishment of the army by personnel, or incompleting modernizations.

In the previous question, I have already indicated the degree of tension between the budget, investments, ambitions and the commitments towards the Alliance. I also mentioned that it is not just the budget for 2021, but also the stability of the budget in the medium term is crucial, in particular after 2023. If ten billion is figuratively omitted in the defence budget in 2021, this shortfall is carried over to each subsequent budget period. The previous experience also shows that reductions in the defence budget, or the slowdown in its growth rate, always followed after the crises with two- to three-year delay. Therefore, concerns about developments after 2023 are justified. In such a case, it would not only be necessary to move a number of projects further over time, reduce and revise commitments, but also reassess structural indicators. Such developments have always taken place in the past. It is not only about investments and modernization, but also about the ability to operate the army and ensure the required degree of readiness. The public debate concerning the effects of the budget cuts oscillates around the major armaments projects. There is an underestimation of current expenditures funding a large volume of

purchases of materials, servicing, commodities and services. In this case, we are talking about hundreds of projects that are provided by the Czech companies, for which there is no financial coverage in our plans today. The impact for the Czech defence and security companies are in such a case as substantial as in the case of delays or cancellations of strategic and major projects, the majority share of which is carried out by the foreign companies.

Mr. General, in conclusion, I would like to know your opinion concerning the current "explosive" global situation, by which I mean the minimum communication between the current powers of the world, i.e. the USA, Russia, China and the Islamic world, led by Iran.

Small states need idealism in international relations to assert themselves. The Powers will either have the will to find a positive project together as a solution for the majority, or the trend of closing states, regions, or alliances, into their spheres of influence and their own systems will continue. The second prevails, and the realistic school is gaining the relevance again. The conclusions of prestigious world analytical centers is becoming more and more open and unambiguous in forecasts of developments in the security environment and international relations. In terms of security strategies, we are at the end of the wars of the last two decades, in particular the wars in Iraq and Afghanistan. It has always been the case that when one military campaign ends, the discussion about possible future ones is opened. From the possible nature of future crises to ways how to withstand them, including the relevance of alliances. NATO was founded on the values that are not changing. They are the defence of freedom, common heritage and civilizational values, which are based on the principles of democracy, individual freedom and the rule of law, from which the mission of the Alliance is also derived. Although the world seems to be safer today than at the time of bipolar world, the costs of security are constantly rising.

The period of geopolitical transition from a bipolar to a unipolar world order with the only superpower, the United States, is coming to the end. Unipolarity itself is

an unnatural power arrangement in the structure of international relations and is gradually giving way to another, multipolar model. Despite the relative decline of the influence, the United States will continue to retain its position as the world's most militarily strong country, but only as one of the Powers and without an overall dominant position. Thus there must be much more caution in the future, including the major US-based alliances. This caution returns the strategic culture of the West to its foundations, consisting of the geopolitically desirable order of the world, its regions, and the new geopolitical system that will emerge after the period of unipolarity.

Although the mission of the main international and non-governmental organizations is attractive to the large part of the human population and their significance is beyond any doubt, it is necessary to consider non-state entities within the limits of their defined position in the system. In the equations of geopolitical calculations, they have the role of variables burdening an already complicated system, or even the role of risk factors. In seeking answers to these questions, the state is more readable than the often difficult-to-grasp environment of non-governmental entities. This brings us to the worst-case scenario issues that liberal democracies will have to address in the context of the development of the global system and its institutionalization:

- the set of principles on which our cultures are based does not have to be accepted as a basis for the solidarity and joint action in the global context;
- there may be no agreement achieved on any set of principles as a basis for the solidarity and joint action in the multicultural context;
- the future challenges may be stronger for some than the values on which the world has been unified after the end of World War II and formed during the Cold War.

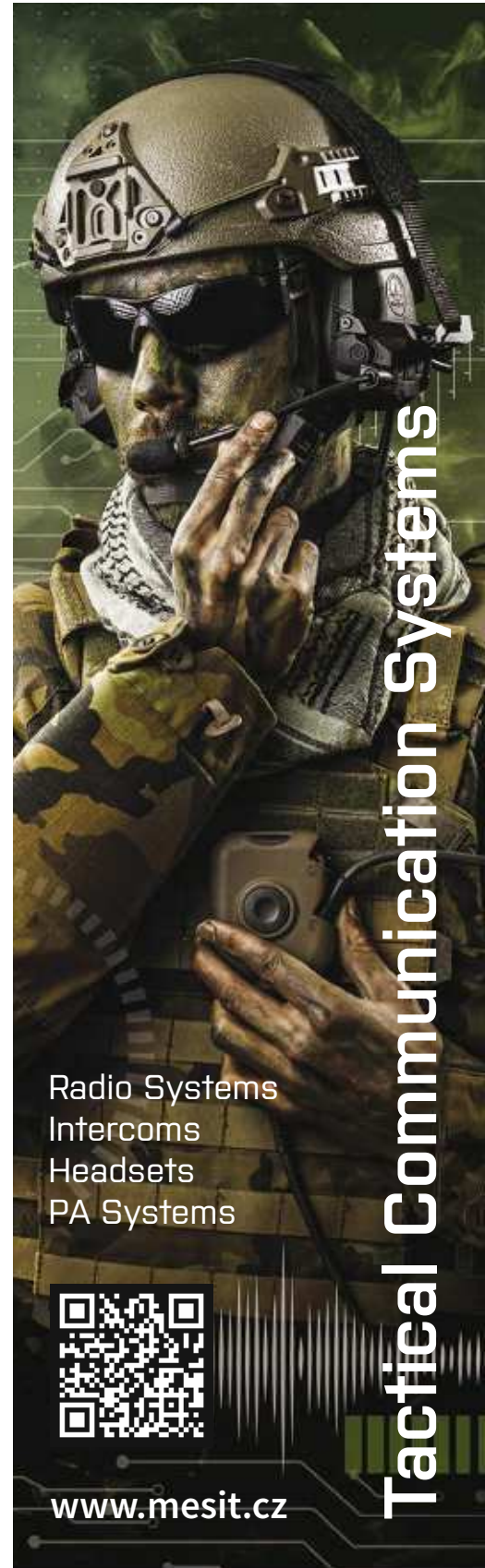
However, these questions are external in their nature. The main internal question is to address the relationship between non-marketability of the principles on which democratic societies are based – democracy, individual freedom and the rule of law – and the extent to which their modification is acceptable. There is room for compromise in the area of eco-

conomic interests. For example, as far as the guarantees of the collective security are concerned, the threat of their disintegration if these principles are compromised is real.

The increased emphasis on the national interest in the content of security strategies of NATO and EU member countries will be a logical response to the current security developments. It is not in anyone's interest to weaken the existing architecture of security institutions in the Euro-Atlantic area, but the security needs of the states will require an alternative view on the potential world without these institutions. At the level of national states, the prevailing argument in discussing the amount of defence spendings as the commitment towards the Alliance, will take a back seat and will be gradually replaced by the justification that it is primarily the matter of ensuring the security needs of the state. The United States do not have this internal dichotomy of security policy priorities, and therefore will cope with geopolitical developments in the world better than European countries. For the Czech Republic, there is probably no more suitable security alternative than strengthening the geopolitical axis Berlin – Prague – Vienna with the USA, that will replace Great Britain in the historical role of the balancer in the Central European region. Therefore, in 2016, I published a thesis in one of my works: "For support of national interests, the potential of the Czech Republic's defence cooperation with

Germany may be higher in its benefits than that one offered by the defence cooperation within the V4 countries, both politically and materially. The countries of Central Europe with Poland as a pivotal area will have no other alternative but to seek closer security ties with the United States on a bilateral basis, that will need to be backed up by mutually beneficial defence investments." Everyone can compare this prediction with the reality of today. Henry Kissinger states in his book World Order (2016), that we are entering the time in which the future will be determined by forces beyond any limitations and order. The state that is unable to define its security interests and adequately secure them, will be losing its sovereignty and security.

*Mr. General, thank you for your answers.
Miloš Soukup*



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Interview with the Chief of ORITEST GROUP Mr. Josef Orel about Detection of TIC's and CWA



Dear Mr. Orel, how did you get into the production of detection and defence equipment?

By coincidence. You probably want to know what the coincidence was. I worked at a food research institute and at that time one of the outputs or results of the research activity was a simple detector for detecting toxic substances. So I decided with several colleagues of mine to start a private company called Oritest with an aim to produce and develop detectors and launch them on the market.

How fast is the detection of dangerous substances by your devices?

We have different pieces of paper or strips and the usual detection time is few minutes, from 1-3 minutes. There is one exception with a detection papers for liquid poisons where the detection is immediate within few seconds.

How is the field currently developing?

It develops so fast! For one simple reason,

because the danger to humans in the environment is not only in chemical weapons, but in chemicals and chemicals substances as such.

As industrialization and the chemical industry develop around the world, so does the need to control production, protect the environment, protect individuals, and that is part of our business.

How to help the mass spread of these technologies?

What is mass expansion? I think these technologies are widespread where it is currently useful. Therefore it doesn't make any sense for every family to have a few of these products in their drawer at home and to think that this will increase their safety.

What are the detection requirements by your customers according to their type: army, police?

In general speaking everyone has sort of the same requirements. It has to be as sensitive as possible, it has to be as small as possible, it has to be as simple as possible, it

has to be as reliable as possible, so it works in any climate conditions and also it has to be as cheap as possible. Our competitive advantage is that we currently manufacture and market the classic detection products in the form of various strips and tubes, and I must admit and reveal that we are at the stage of quite advanced development of our own electronic machines.

How much must the object be contaminated in order to be able to obtain successful detection?

Either the air may be contaminated, the water may be contaminated, the food may be contaminated, or the surface may be contaminated. Toxic substances are either in the form of vapours, gases, aerosols and/or liquids. So each contamination and each surface requires a different method of detection.

*Thank you for the interview
Šárka Cook*



Fig. 1



Fig. 2



Fig. 3

The pictures show the most common representatives of our range of products. It is a detection paper for immediate detection of liquid CWA (Fig. 1), a set of detection tubes for a wide range of CWA and TIC (Fig. 2) and a detection strip for the detection of nerve paralytic substances (Fig. 3). The individual means and especially their combination into sets bring quite a great success. They are applied as part of the armaments and equipment of many armies and rescue corps around the world.

IDET, PYROS and ISET 2021

Will Show Innovations in the Defence and Security Industry

The 16th season of the IDET International Defence and Security Technologies Fair will take place on postponed dates from 20 to 22 October 2021 in Brno; the event is one of the most important fairs held in NATO countries. It is also unique for its concurrent holding with the PYROS and ISET fairs, thanks to which all components of the Integrated Rescue System are presented together. We have talked about the preparations and the envisaged form of the security fairs with their director Michalis Busios, who has been working in the field of trade fairs for eighteen years now.



IDET is a major platform for the defence and security industry in Central Europe. What is it mainly important for?

IDET offers a unique space for establishing industrial cooperation. It facilitates the connection of the Czech and foreign defence industries and that is why it is an ideal place for the development of trade relations. No other sectoral event of this nature in this country enjoys such great political interest, led by the Prime Minister of the Czech Republic, who not only opens the fair, but also visits companies at their stands. In cooperation with the Ministry

of Defence of the Czech Republic and the Defence and Security Industry Association of the Czech Republic, we also endeavour to bring as many foreign delegations and guests to the fair as possible, supporting thus the export focus of Czech companies in this sector. The participants include representatives of NATO and the European Defence Agency. IDET also brings a significant overview of innovations. Exhibitors present the most modern equipment at their stands and regularly introduce new innovative technologies.

Could you already give a clearer picture of what the upcoming fair, to take place in October this year, will look like?

I am confident that in the second half of this year, thanks to the planned implementation of the vaccination strategy in the Czech Republic and in the world, it will be possible to hold the fair on its traditional scale and without significant restrictive measures. I am pleased to see that the exhibitors, despite the current difficult situation, have a high interest in the fair. Major companies from the Czech Republic and abroad will traditionally present themselves. The individual branches of the defence industry will once again be represented. Just like in previous years, the Ministry of Defence of the Czech Republic and the Armed Forces of the Czech Republic will be presented on the largest area. This time, their stand will focus on the modernisation of the Armed Forces of the Czech Republic. For this year,

we have decided to focus more on the topic of cybersecurity, which is becoming increasingly important. In cooperation with the Ministry of Defence of the Czech Republic, we are currently working on a partnership with one of the European countries.

A new feature will be the Security Innovation Zone, which is being created in cooperation with the Defence and Security Industry Association. What exactly is it supposed to be?

The purpose of this project is to support and mainly introduce start-ups active in the defence and security industry. Start-up companies frequently offer exceptional technological solutions and have significant growth potential. At IDET, these companies will present themselves under the heading of the Defence and Security Industry Association and it will definitely be an interesting part of the fair.

IDET is held concurrently with the PYROS and ISET fairs. Does this combination work?

It definitely does. These three fairs complement each other and their combination within one period is appreciated by visitors and exhibitors alike. Companies can offer their products not only to representatives of armed forces, but also to all the components of the Integrated Rescue System. Military, firefighters, police officers and representatives of other units often use



similar equipment, whether it is uniforms, weapons, ammunition or various types of protective means. At the same time, the situation associated with the COVID-19 pandemic has shown how important it is to have well-equipped IRS units; that is why I expect an increased interest in modernisation in this sector.

Who is involved in the preparations for the fair?

Given the strategic importance of the defence industry for each country, it is important to discuss the focus of the fair with the main partners. At the beginning of the preparations, discussions take place with representatives of the Ministry of Defence of the Czech Republic, the General Staff of the Czech Armed Forces and the Defence and Security Industry Association. The aim is to set up the fair that will be as beneficial as possible for all its participants. We respond to the current needs of the Czech Armed Forces and other armed forces, as well as upcoming government contracts. Due to the combination with PYROS and ISET, the Fire Rescue Service of the Czech Republic, the Police of the Czech Republic, the Customs Administration of the Czech Republic, the Prison Service of the Czech Republic and

the Administration of State Material Reserves also participate in the preparations for the fair and its programme. The preparation process is therefore very extensive and begins almost immediately after the end of the previous season.

The fair also features a supporting programme. What will the participants be offered?

Traditionally, a number of highly specialised conferences and seminars will take place, focusing on sectoral topics. Demonstrations of equipment of all components of the Integrated Rescue System will be on view at the IDET ARENA, which is an outdoor off-road polygon. The Armed Forces of the Czech Republic, which traditionally presents an attractive supporting programme at the fair, will also be presented here. Once again, the Golden IDET competition will be held, where an independent expert jury will appraise the best and most innovative exhibits.

How should a company get ready for the fair in order to make its participation a success?

It is crucial to start the preparations in

a timely manner. It is necessary to clarify the main goals and expectations you have from the fair. In most cases, sales targets are set, which every company must adapt to in its preparations for the fair. You cannot rely only on walk-up visitors who come to the fair by themselves – a company should actively invite customers whom it wants to meet up with at the fair. Of course, we make effort to assist exhibitors as much as possible on effective promotion through our marketing department. It is essential to know the content of the stands as soon as possible and be able to work with them during the fair communication campaign. However, I can say that most exhibitors do not underestimate their preparations for the fair and dedicate plenty of time to it.

*Mr. Busios, thank you for the interview.
Šárka Cook*

Agados Presents a New Type of Mobile Field Kitchen

Agados, the largest domestic trailer manufacturer, responds to the customers' ever-increasing demands and expands the range of special products for the components of the integrated rescue system, armed forces, and also civil society. The current offer of PK4 Kaga and larger PK6 mobile kitchens is expanding with a new type - an ultralight and compact AGA ULT kitchen. It was first exhibited and presented to the professional public at this year's NATO Days in Ostrava with the participation of the Minister of Defence Lubomír Metnar. Mobile kitchens are designed for fast and efficient production of large amounts of hot food in field conditions. They are used by armed forces or in rescue operations.



The launch of the first PK4 Kaga mobile kitchen took place in 2017 and it was awarded the Golden IDET 2017 in Brno in the same year. The following year it received the IDEB Prix 2018 in Bratislava. The main motivation for the production of mobile field kitchens was the fact that the last product of this kind was used by the Czech armed forces for more than 60 years. A complete menu for up to 350 people can be prepared in the PK4 Kaga mobile kitchen. Agados offers a larger type of kitchen as PK6. The first line of mobile kitchens by the company based in Velké Meziříčí was a great success. The interest in them came not only from the Czech environment, but especially from abroad.

Now Agados is coming up with a new type of mobile kitchen. The AGA ULT field kitchen complements the existing portfolio in a number of special projects and shows that Agados can satisfy all types of customers and also offers a more affordable variant of field food solutions. In the case of the new ultralight kitchen, it is a double walled cooking unit with a volume of 150 l with heat transfer fluid. It offers two pieces with 20-liter water heaters. Oil, gas or wood can be used as a heat source. The stack system is detachable. In addition, the trailer can be stored on a minimum floor area, it is very compact.

"The AGA ULT kitchen has been designed to be easy to operate, to offer quick and easy commissioning and handling. Due



to the possibility of tilting to a fully standing position, cleaning and emptying the cooking module is very easy and comfortable," says Petr Ostrý, co-owner and CEO of Agados. The kitchen meets all modern hygiene requirements. All the work surfaces and the gastronomic equipment are made of high-quality stainless steel and are easy to maintain.

The AGA ULT field kitchen is equipped with a light transport cover made of aluminium and a tent 3 x 3 m to cover the working area. All accessories can be transported on the trailer in integrated boxes. The total weight of the trailer is up to 750 kg with dimensions (l x w x h) 2,820 x 1,620 x 1,190 mm in transport mode.

All field kitchen modules by Agados are made of high-quality stainless steel and ensure hygiene at the highest level. Rounded corners and seamless design of the kitchen modules make comfortable and thorough cleaning with minimal time and resources possible. Other special projects of the company include a tank, a freezer box for extreme conditions, a water treatment plant or a lighting tower suitable for illuminating accident sites. The company has also developed an amphibious off-road trailer.

www.agados.cz



AURA in 2020

“Aequam memento rebus in arduis servare mentem.”

Yes, AURA has kept a calm mind at all levels in this year's pandemic cycle, confirming its position as the largest Czech exporter of information systems in the field of military logistics by acquiring other major foreign projects.



Domestic company protagonists

In the domestic environment, the core project of the company remains the Information System for Logistics (ISL), which has been built and adapted to the processes and needs of the Ministry of Defence and Armed Forces of the Czech Republic on a long-term basis. After all, its introduction into the routine operation in the Czech defence department was the starting point for AURA in its penetration into the demanding foreign market in the field of information systems for military logistics. This is true even in the situation where the turnover of AURA contracts for the Czech defence department

has lowered almost by half in the last five years and, due to the significant increase in foreign orders, it is no longer the majority turnover for the company. It is this year's AURA success that, despite the acquisition delay on the part of the Ministry of Defence of the Czech Republic, it has managed to prepare the new version of ISL for the updated operating environment and pass the acceptance tests for this delivery in record time. This also created the necessary preconditions for the defence department to carry out a successful recertification of this information system. AURA Codification Agency also performed well at home. Its activities include mainly

the support of domestic manufacturers and suppliers of armaments, equipment and technology to the Czech defence department in the cataloguing of their production or supplies. However, the Agency also cooperates with the department units and institutions in fulfilling the Codification Contract Clause, such as the Asset Codification Department of the Defence Standardization, Codification and Government Quality Assurance Authority, item managers at logistics bases and acquisition offices. Bottom line, AURA Codification Agency has become by far the most requested certified agency in Czechia, in particular due to its excellent

performance. This year, it has increased the volume of its contracts several times compared to previous years and, in order to deal with the amount of work with the first class results, it has strengthened its work team with new employees.

Still a novelty in the company portfolio, first officially introduced at the last year's IDET in Brno and improved this year in cooperation with Code Creator s.r.o., is the Publi Pro platform, or the company eLibrary, used for the controlled distribution of books, magazines, guidelines, manuals, catalogues, webinars and other publications, including the multimedia ones.

Foreign activities and missions

AURA LOGIS, the sister company of AURA, has been actively developing its activities in Slovakia this year as well. It has focused mainly on the certification of the Data Mailboxes project of the National Agency for Network and Electronic Services and subsequent implementation of data mailboxes in the most successful IS for judicial offices in Czechia and Slovakia. In the field of codification, MC CATALOGUE has been successfully moved as MCC WEB to the "Government Cloud" in Slovakia at the end of November, including the interface with the logistics information system of the Armed Forces of the Slovak Republic. Due to the specific work in the ICT field, which runs mainly on the online basis also in AURA, the company has been able to carry out all activities related to the development and implementation of information systems abroad also this year. The most widespread codification software in the world, MC CATALOGUE, has further expanded and implemented customer requirements and necessary innovations related to the changes in the NATO Codification System (NCS). AURA also successfully complemented the traditional semestral meetings of MC CATALOGUE users, so-called MCC User Group, with an exclusive webinar on the NATO Data Exchange Redesign (NDER) modernization project. It is remarkable that more than 60 people (representatives of national codification bureaus and other corporate partners) from 17 countries joined the webinar. The time difference between the participants from the easternmost and westernmost countries was 14 hours. All national codification bureaus that use the MC CATALOGUE codification tool will be ready for the official



NDER launch in January 2022.

NDER represents a breakthrough innovation in the international exchange of codification data and AURA plays an active developing and training role in the development of the NDER project. Its MC CATALOGUE was the first NCS software tool in the world to pass the demanding tests of NDER communication with NATO Support and Procurement Agency (NSPA).

Many thanks go not only to excellent developers for their innovations of MC CATALOGUE, but also to all marketing and sales teams of the company for the continuous renewal of existing business contracts and acquisition of new ones. Among others the on-site services for the United Arab Emirates at the time of the coronavirus restrictions loosening, completion of the modernization project and extension of the business arrangement for the Brazilian Armed Forces, supply of new modules for MC CATALOGUE and services related to the Tier 2 promotion for Japan. AURA has extended the contract to provide MC CATALOGUE in the form of SaaS with Australia, one of the company's most important customers due to its robust NCB. It has further extended the contracts with Afghanistan, Estonia, Croatia, Hungary and Slovakia, and supplied modules for MC CATALOGUE to Jordan. Of course, this list of foreign activities is not complete as AURA intensively cooperates with other partner countries and companies across all continents.

This year, the cooperation has again included the Danish company Bruhn New-Tech A/S, Allan Webb Ltd. from the United Kingdom, Saab AB from Sweden or Data-Craft from Japan.

Not to mention the development of a new secure and modular Logistics Information System (LIS), which is implemented on a modern technological platform using the agile development methods. LIS is primarily intended for foreign markets and it is looking forward to its new customers.

AURA has managed to successfully overcome the extremely difficult pandemic period with unexpected twists and turns also due to the introduction of its own new Customer Relationship Management system (AURA CRM). Detailed information, analysis and specification of the company strategy has brought benefits not only in the relation to customers, but also in the continuous improvement of processes and strengthening of the sense of belonging within the company, as well as in meeting the needs demanded by the pandemic period in the families, especially when working in the form of home office. The very good news is that AURA employees have coped with the difficult period, remained loyal to their business alma mater and are looking forward to a successful future.

Text: Antonín Svěrák
Photo: Archives of AURA

SWORDFISH s.r.o.

A Czech limited liability company and an established member of the DSIA, SWORDFISH s.r.o., is a service company whose main business activity is to support Czech companies primarily in the field of international trade with special goods.

The company has been run for 10 years by its partners Mr Jaroslav Pecháček, a reserve colonel and long-standing vice-president of the DSIA, and Mr Dušan Jamný, a retired naval officer from Czechoslovak Ocean Shipping. Last year, the management team was joined by Mr Jaroslav Pecháček Jr., who was nominated as a representative of the Czech defence industry into the Supply Chain Working Group of the European ASD Association.

SWORDFISH s.r.o. is a member of logistics group CZECHOSLOVAK OCEAN SHIPPING GROUP (hereinafter referred to as "COSG") which operates in the field of maritime, railway container, combined and air transportation, practically all around the world. Apart from its regional branches located in the Czech Republic and Slovakia, COSG has its representative offices in all key European naval ports and in important global trade centres. The company COS Brokers, with its headquarters in Santiago de Chile, is one such example of representation in South America.

The COSG as a group reaches a turnover of almost a billion. To put this into perspective, this means handling, for example, up to 20,000 TEU (twenty-foot equivalent units) per year. Transportation of both standard and oversize cargo for both import and export as well as chartering of vessels and transportation aircraft based on a client's needs is being offered within the group's services. It must be highlighted that the company is especially focused on the transportation of special cargo, i.e. materiel under export licences that are transited through a foreign territory into third countries.

The issue of transit licences within the EU was broadly discussed at that time. The Defence and Security Industry Association of the Czech Republic managed to get the European Commission to acknowledge, to some extent, the discrimination against Czech companies in the issue of transit thanks to the diplomacy of the Czech MFA and

other bodies. But what is the current situation like?

Directive No. 43/2009, which theoretically allows free movement of goods and services, including those commodities otherwise open to discussion, still applies to the transit of materiel.

However, practices differ, and each EU Member State's legislation regulates and restricts the transit of materiel differently. The Czech Republic, which doesn't have free access to naval ports, must apply for transit permits and opt, for example, for the northern route via Poland or southern route via Hungary and Slovenia to transport this special commodity. Unfortunately, transit via Germany, which would provide the easiest access to the sea, remains administratively burdensome, although some progress in the transit of industrial products that are materiel was reached under long-term contracts between the companies headquartered in EU Member States.

If transit by land is not possible, significantly more expensive air transport is the sole option. Over years of our experience, this has proven to be a rapid and reliable means of delivery, which has been used frequently in recent times.

Last but not least, it must be noted that the necessity of transit puts Czech companies at a disadvantage by incurring additional costs and delays, and often also through the loss of competitiveness compared to companies from countries that have direct access to the sea.

There is a continuous effort by the DSIA to ease the burdens of Czech companies in this field, which is done both at the EU-level and in the form of bilateral activities such as economic diplomacy of the MFA or support of the Czech MoD, for example, at German state authorities.

I feel tempted to ask what your main tasks are at present and what your plans for the future are.

In the beginning, our primary aim was to establish a shipping company and build upon

the legendary Czechoslovak Ocean Shipping, aiming to use and develop the tradition of our maritime activities. It is the same for all companies in our group, which were meant to continue education in the fields of yachting and sailing. We gradually added other activities, resulting in a portfolio of services covering all the needs of our clients, beginning by securing the customs procedures, through insurance and securing of financial and logistics services both at home and abroad or, for example, yacht rental all around the world. As part of COSG, we meet the ISO requirements. We are an authorised economic operator (AEO) with customs simplification approval valid at all key terminals, and we implement new digital solutions in order to increase the efficacy of the processes and quality of the client services.

Apart from that, we continuously support scientific research in the Antarctic, which includes regular logistics of the crew and securing of materiel.

Creating the specialist company SWORDFISH s.r.o. meant the accomplishment of our common ambitions in development and logistical support of the Czech defence industry both at home and far afield. This has recently been achieved and proven, for example, in Chile, where we have, among other things, become newly introduced representatives of the public limited company TATRA TRUCKS a.s. for the sale and servicing of Tatra vehicles.

SWORDFISH, along with all members of COSG, puts an emphasis on respectful and flexible customer service, proper fulfilment of our obligations and, last but not least, on the choice of suitable and reliable solutions. We abide by the motto in our company's logo: Security & Fidelity. We believe that we've been playing the role of a stable partner in international trade and development of the Czech defence industry. Today, we enjoy a feeling of satisfaction from our business activities, and we can courageously use further energy to let Czech companies perform acquisitions abroad.

Thank you for the interview
Šárka Cook



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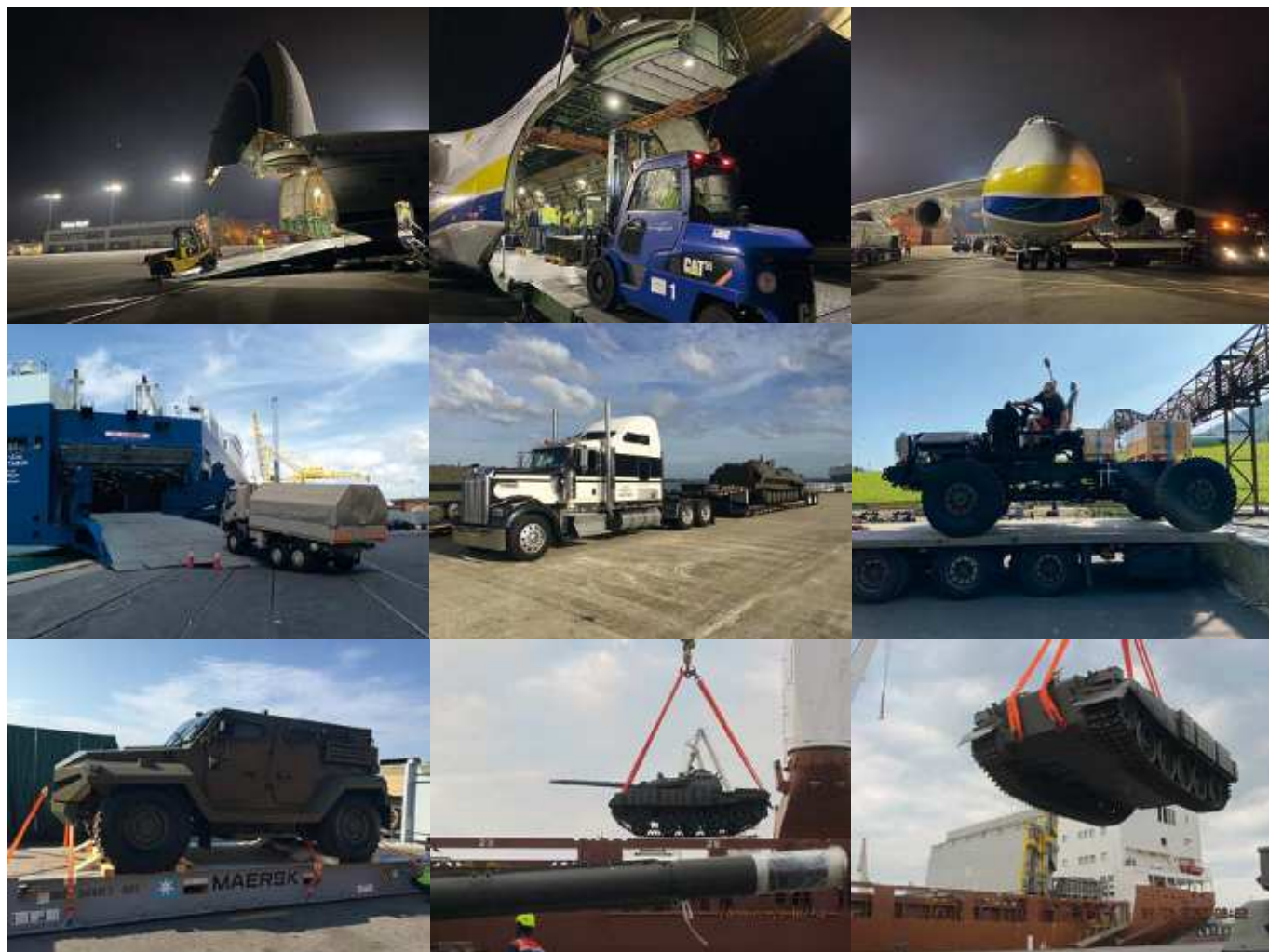
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The Use of Machine Learning in Cyber Warfare

In recent years, there has been a growing interest in technologies known as “artificial intelligence” (AI). Virtually every one of us has encountered technologies for face detection in photographs, speech-to-text transcription or translation of text into a foreign language.

The most widely used algorithms are already several decades old. Their practical utilization has been enabled by substantially more powerful commonly available devices and also by the availability of a wide spectrum of tools and libraries implementing essential algorithms.

This progress has also stepped into the cyber security industry. Tools helping with the initial phase of a cyberattack are the most common – selecting a suitable target, choosing the optimal attack strategy, or creating trustworthy-looking e-mails nudging recipients to fill-in their



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login data into the attacker’s system or to download and install malware into their computers.

More sophisticated hackers can use the machine learning technology to create autonomously operating tools designed to attack systems and perform given tasks without the risk of being revealed because of using C2 (command and control) channels. However, the development of such a system requires highly skilled experts because it needs the deep

understanding of machine learning as well as the knowledge of cyber warfare.

To a certain extent, advanced autonomous systems (AS) are able to replace human operators, and therefore help to solve the problem of lack of qualified cyber security experts. This problem is pronounced in the state administration that is unable to provide salaries comparable to

the commercial sector because of wage brackets. More complications come from the additional security requirements.

As our society becomes increasingly dependent on technologies there is a growing importance of autonomous systems ensuring the security interests of the state and commercial companies as well as personal safety of individuals. AS help with far better allocation of human resources on tasks for which AI is not yet suitable.

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Československá exportní (CZEX) was founded in 2004 as a subsidiary of TKC joint stock company. TKC has been active in the civil aviation business since 1995 on both Czech and foreign aerospace markets, providing business and technical solutions to a wide scope of clients.

While TKC's business focus has been on the civilian aviation market, CZEX holds full licence for arms trade (Pursuant to Act. 38/1994 Coll., Arms Trade Act) for numerous countries on four continents.

Major advantage we hold over competitors is a profound experience and knowledge of technical issues. Roman Sorejs, founder of both TKC and CZEX, graduated from Kiev Aviation Institute in 1987 and since that time has been involved in aerospace business.

CZEX adheres to strict legislative arms trade regulations and upholds best business practices, believing that high integrity and transparency is the best investment in long term business growth.

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QuBit Conference Project

There is no doubt, QuBit Conference is one of the most interesting cyber security projects nowadays. It represents a wide community of cyber security professionals from a variety of industries and destinations around the world, from business to government and the academy sector.

QuBit Conference was founded in 2014. Headquarters are in Bratislava, but the biggest event is carried out in Prague. The event caught the attention right away from the first annual. While in 2015 the main conference was attended by about 100 cyber security experts, four years after there were already about 250 people at this event.

In general, ICT and cyber security are more the domain of men. The curiosity is that QuBit Conference is led by women only. Which used to be "strange" in this typically men environment. "We are happy that we do balance a bit the majority of men in this field. We feel the positive vibes and support from our participants, who are mostly men. Luckily, I have to say, we noticed more women are joining the cyber security lately, the numbers are slowly rising. Every year we try to motivate and lead by example all the women. We are explaining and showing them the huge potential in the field and the need of women touch. At the end men welcoming this change as well," said Maria Kalicakova, CEO of QuBit.

This year presented a new challenge for QuBit. Due to the pandemic situation, the 7th QuBit Conference Prague was moved completely into a virtual space, where participated more than 125 experts and represen-

tatives of almost 80 companies. The most interesting sessions were introduced by Mike Goedeker (Hakdefnet International, Germany), Lukáš Hlavička & Ladislav Bačo (LIFARS, USA) and Joseph Carson (Thycotic, UK), long term QuBit fan and internationally awarded speaker.



The online edition of QuBit Conference Prague 2020 was a huge challenge. Thanks to the support and understanding of speakers, sponsors and partners, the organizational team managed to handle it very well. "The only thing we couldn't deliver to all participants was networking, which is an essential part of our events. Although we were luckily to make couple smaller in-person receptions." added Maria.

QuBit Conference doesn't hold events in Prague only. After the success in CEE region they spread the wings and organize annual cyber security events for communities in Belgrade and Sofia as well. The newest edition is the event for locals in Slovakia – QuBit Conference Tatry. The other educational activities, such as webinars, subject matter discussions and workshops with experts on cyber security issues, are conducted under the brand QuBit Academy.

QuBit has also created several professional platforms such as CySec Club, which is an independent professional community of key personalities in the field of information and cyber security in Slovakia for critical infrastructure. Another platform is CySec Municipal, within which discussions take place between the Competence and Certification Center for Cyber Security, the NSA and the professional public. An equally im-

portant activity is the creation of a network of Czech and Slovak professionals who are responsible for cyber security in companies and organizations, the so-called CISO Club. Last but not least, it is a DPO club, which represents the community of experts and managers responsible for work within the GDPR.

Besides the trainings and events for "master class", QuBit will focus next year on education and awareness for wider audience, regular IT users in order to increase the level of knowledge of the general public in the field. "I am convinced that ignorance is a tool of fear and manipulation, and conversely, information and knowledge are the light we wish to continue to spread," says the CEO of the QuBit Conference Maria Kaličáková.

You can follow the QuBit Conference on the official website www.qubitconference.com and also on social media:

- LinkedIn <https://www.linkedin.com/company/5151151/>
- Facebook <https://www.facebook.com/QuBitCon/>
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By Tomáš Kolomazník
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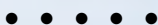
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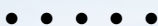
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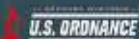


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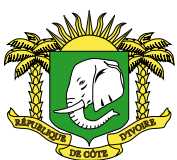
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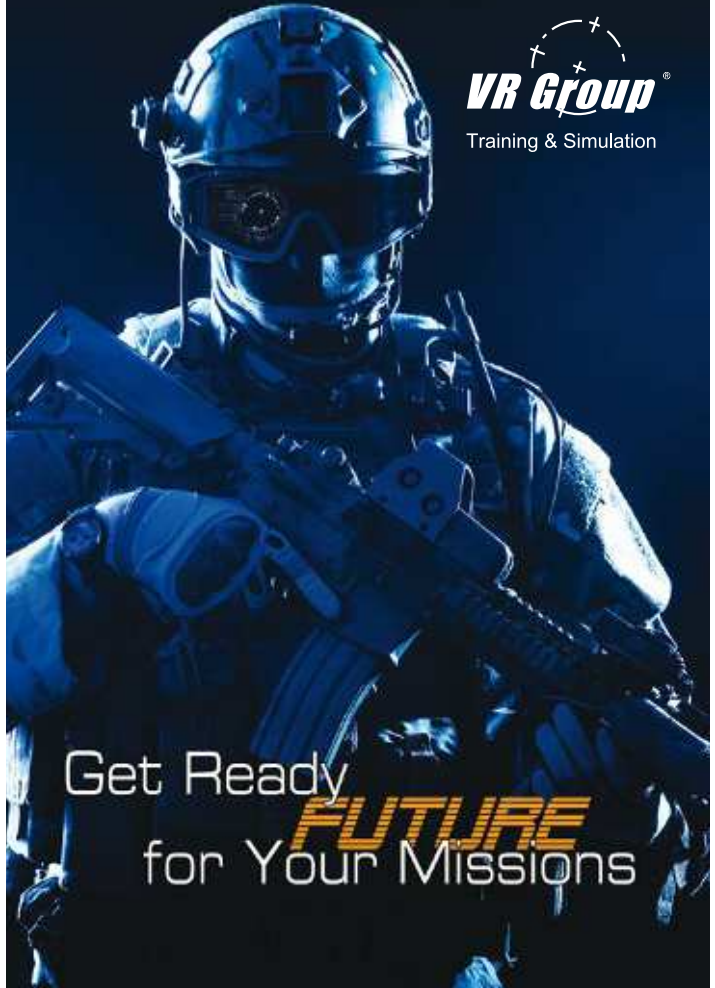
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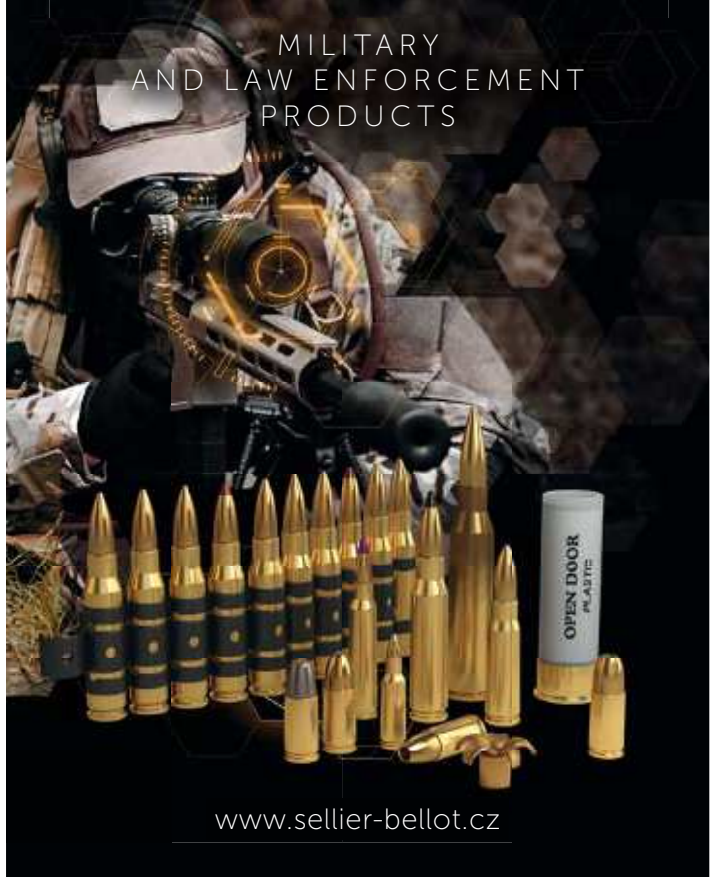


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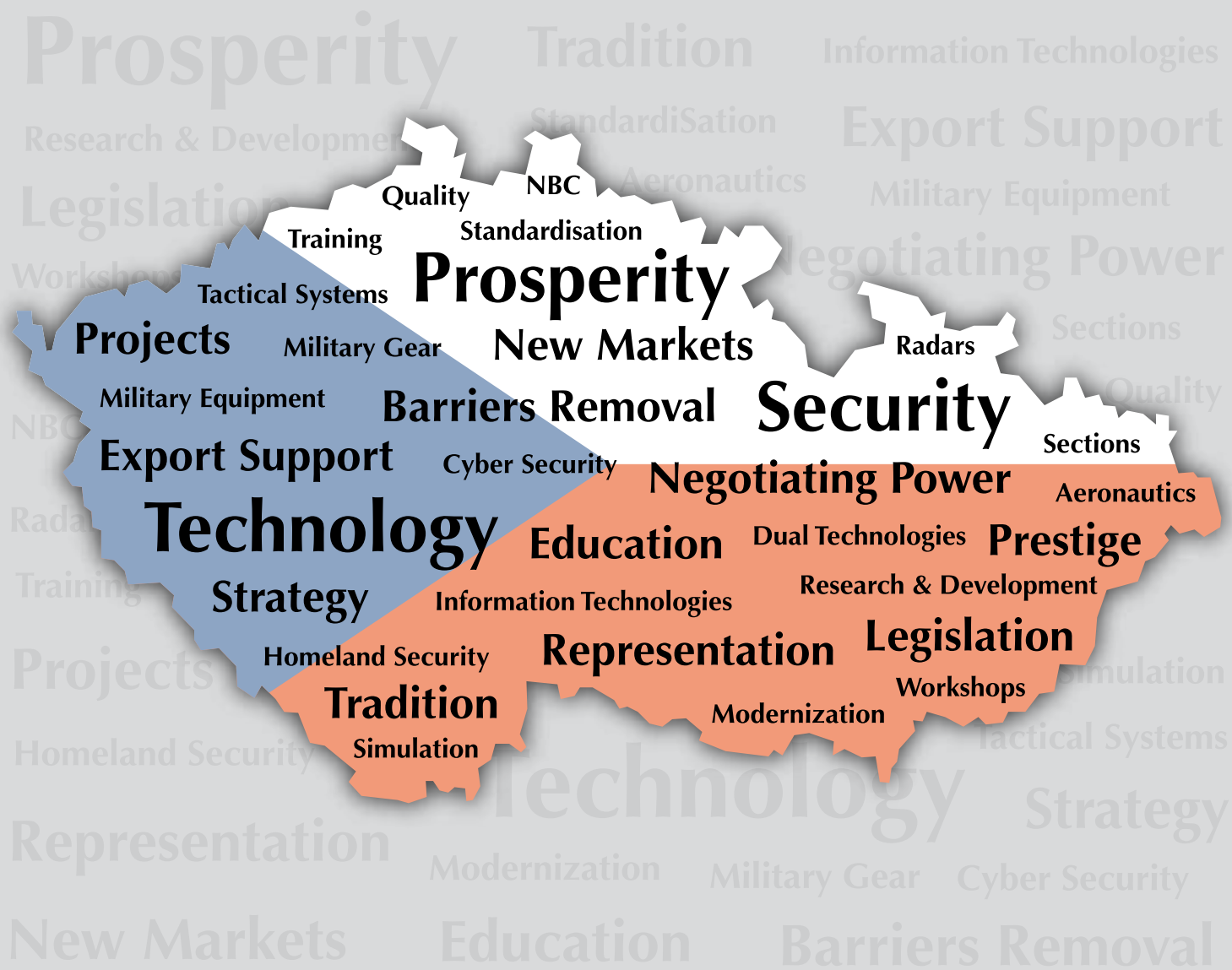


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