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Meteksan Defence Communication Systems Builds Sustainable Business Partnerships Through Mutual Trust and Transparency

"We Aim to Export UAV Data Links, Missile Data Links and our GNSS Anti-Jamming Products in 2020!"

In our exclusive interview, Dr. Erdal TORUN, Vice President in Charge of Communication Systems - Meteksan Defence discusses collaborative projects between University, Industry and Users that promote the creation of synergy within the sector

Defence Turkey: Mr. TORUN, first off, all thanks so much for your time today. Meteksan Defence was established in 2006 to gather defense industry related projects and activities of high technology companies that operate within the structure of Bilkent Holding Group under a single roof. Communication Systems is one of Meteksan Defence's three main departments; could you please inform us on this department's staff size, services provided, and its technological experience and vision?

Erdal TORUN: Regarding Meteksan Defence's technology domain, I would initially like to touch upon the company's position in defense technologies.

As we all know, the cooperation between university and industry is essential for achieving technology ownership. In my opinion the close cooperation that we have with academic institutions is one of the most critical factors that enables the ownership of technology. Building a triangle between university, industry and the users is among the issues that have been discussed over the years. We believe that we are among the establishments that achieve this well in our sector.

As a technology development center with the vision of developing indigenous solutions, in line with our strategy of building a sustainable structure, we directed our resources towards certain areas and restructured our organization on three main areas in 2019 in a way to render it available for the production of competitive products.

Communication Systems is one of these areas and this department effectively and swiftly executes the design, business development and program activities in an integrated manner with nearly 70 personnel. Without doubt, departments in charge of the execution of production, quality and administrative processes also provide services to our group as well.

Communication systems that enable the interoperation of systems such as network-based operations and the required smart munition, reconnaissance and surveillance systems and electronic warfare, and transfer and sharing of data such as targets, status, position, intelligence, time to strike and damage assessment (C4ISR) between the relevant platforms and the users, have become an essential part of modern operations. To this end, the electronic warfare resistant data links developed by our company particularly for missile systems and unmanned air vehicles add tremendous value to the related platforms. Generally, the following solutions are included in our product range:

- Missile Data Links
- Tactical Data Links
- C-Band Data Link for Manned/Unmanned Platforms
- Flight Control Computer for Air Vehicles
- TMV Telemetry Transmitter
- Anti-Jamming GNSS
- GNSS Antenna and Receiver Solutions
- Broad Band LOS / NLOS Tactical Communication Radios
- Vehicle Electronic Control Systems
- SATCOM RADOM

Our technology know-how and design capability enable us to offer custom solutions with these products for every platform. The main principles within our vision as a Technology Development Center are to create designs with low size, weight and power consumption (SWaP), electronic warfare resistant and secure communication solutions within modular structures optimized specifically for platforms.

Defence Turkey: Before moving onto the details of the projects, could you inform us on Meteksan Defence Communication Systems' 2019 performance (its turnover and share in exports) as well as the expectations and targets for 2020?

Erdal TORUN: In 2019 we achieved our targets to a large extent both as the company and as the Communication Systems Group. Within a new organization, we demonstrated utmost attention in taking careful steps. We strived to maintain a controlled financial structure in order to avoid any negative impacts of the cash insolvency experienced in our sector. We implemented the strategies we envisioned accordingly and established the targeted institutional structure in the new organization to a considerable extent. Naturally, when a new structure is established, the identification of its functioning and business processes takes time. I will not mention the figures, but in 2019 as we realized our existing projects in accordance with the foreseen schedule (for instance the KEMENT project which I will be proudly mentioning later), we also added quite prominent projects that paved the way to brand new areas in our portfolio such as Portable Electronic Warfare Systems.

We revealed our C-Band Data Link product for ISR application of unmanned and manned aircrafts. I. This solution we generated enables real-time high rate data transfer with electronic warfare protection between the air platform and ground systems in minimum 200 km LOS range and its competitive superiority is certainly a source of pride for us.

Another product group we developed contains the Global Navigation Satellite System (GNSS) Antenna, GNSS Receiver and our Anti-Jamming GNSS (CRPA Antenna) solutions. The Anti-Jamming GNSS is distinguished from its peers with the advanced technologies it features, its size and lightweight and because it is a product that could be utilized by all types of platforms, particularly by missile systems and unmanned air vehicles.

Speaking of the year 2020, surely we are observing the unfavorable impacts of the novel type coronavirus (COVID-19) pandemic in the sector, a challenge that we all have been facing this year. Therefore, we have identified realistic and cautious targets. There is a point that I frequently emphasize and which I believe in; times of crisis and periods of economic recession should be regarded as an opportunity to prepare for the future with fewer resources. In this regard, Meteksan Defence has also been investing with our internal R&D resources in areas that will maintain our sustainability.

I can summarize our targets for the year 2020 with certain concrete examples. Firstly, the C-Band Data Link systems will be employed by critical platforms. We launched our GNSS receivers and Anti-Jamming systems for utilization on both missiles and UAV platforms. Moreover, we will be launching the KEMENT outputs to various applications within this year.

As you know, data links are one of our main areas. We have been improving our product range in this area in terms of both quality and quantity. Our starting point within the scope of our development activities has been to achieve high-tech competitive products suitable for the platforms. We will be introducing our new data link products to the sector in 2020.

Regarding your question on exports, we have been active with many of our contacts in 2019 and we accomplished our operations to a certain extent and despite the travel restrictions in 2020 we have been carrying out our marketing activities related to exports through video conferences, correspondence and over social media, while continuing our negotiations on system solutions with our potential customers without experiencing any suspensions. The data link applications require custom solutions usually in platforms such as missiles and air vehicles and the development of tailored solutions for each platform takes a long time. In summary, we aim to export UAV data links, missile data links and our GNSS anti-jamming products in 2020.

Defence Turkey: The Novel Type Coronavirus (COVID-19) pandemic hit all companies hard and conducting physical contact became quite difficult. We do not observe any changes in your activities and strategies on the international level. Have there been any new contracts signed regarding

your domestic and international programs or any changes to deliveries of existing contracts during this period?

Erdal TORUN: As you also mentioned, no changes have been made in our strategies or targets, and we are continuing our activities in this direction. However, it should not be misinterpreted that none of our activities have been affected by the pandemic. Even though our speed has slowed down in general, the targets have remained the same. We have no difficulties in carrying out our domestic activities and somehow, we find a way to gather our efforts and make it happen. The defense industry needs continue in the international arena as well. Despite the severe conditions affecting social life, the demands of foreign companies signal their tendency to maintain cooperation with us. Of course, meeting physically is quite important but we endeavor to continue our activities remotely. Indeed, there are changes in our working shift system but there have been no changes in our targets.

Defence Turkey: Back to the details of the projects, the missile data link is among the areas where Meteksan Defence stands out and the activities to this end have been continuing for many years. Could you briefly mention the latest developments in this area?

Erdal TORUN: Starting with the OMTAS/UMTAS and HİSAR data links, the Missile Data Links we developed for SOM, ATMACA, MAM-L, MAM-C, TEBER and LAÇİN systems, these are among our top areas.

With the solutions we develop that enable secure and high-speed communication, we provide major operational superiority to our Armed Forces. We started our journey in this area with the OMTAS (Medium Range Anti-Tank Weapon System) data link in 2009 and upon completion of production line qualification, we launched serial production in 2019. Meanwhile, we also reached the serial production stage after accomplishing the data link development process as part of HİSAR (surface-to-air defense missile system) and our contract negotiations on the serial production of the KEMENT Tactical Data Link systems developed for SOM (Stand-off Missile) and ATMACA (Anti-Ship Missile) are ongoing.

Within the scope of the design of Missile Data Links, we aimed to develop software-based, interoperable systems with a modular architecture containing an integrated infrastructure and our objective is to also have a share in new markets by extending the product family with this architectural philosophy.

Defence Turkey: Thanks to the network enabled capabilities of the Turkish Air Force and Naval Forces, smart capabilities gained through our national cruise missiles such as SOM and ATMACA and with the critical capability gained with the KEMENT program, our country has achieved crucial level operational superiority. Which key features of KEMENT render the system superior to its competitors? Could you tell us about the flight tests and the qualified products in addition to your plans and activities for the future?

Erdal TORUN: KEMENT is the very first indigenously developed TDL (Tactical Data Link) system. We take justified pride in owning a product that was qualified with performance beyond the contract criteria during the flight tests.

Besides its indigenous waveform and encryption with near real-time image transfer capabilities, KEMENT is the first version of the standardized and adaptable product with physical and performance capacities way above its equivalents in the world. We have accomplished the most critical stage of an improved data link which we will be able to launch into the utilization of the Turkish Armed Forces (TAF) and this brings an advantage to our country, advancing it a minimum of 5-10 years compared to the countries that recently started this project. KEMENT is a TDL developed for cruise missiles and it was developed in a flexible and modular structure to be able to fulfil the demands of all the intended platforms in line with the Network Enabled Operation (NEW) concept. We have achieved a system that was developed in the Software-Defined Radio (SDR) architecture that can be updated according to the operational requirements of platforms and that is compliant with the internal or external DLP (Data Link Processor). The preparations for taking part in network enabled TDL projects that will take our country to the next level are in progress.

KEMENT Terminals

Without doubt, the SWaP designs capable of functioning under challenging conditions and our national and indigenous solutions that can be manufactured without export licenses are among Meteksan Defence's most prominent values. Still, the experience we gained through KEMENT are beyond any achievement. Collaborating in harmony particularly with the Presidency of Defense

Industries and the TAF and with TÜBİTAK BİLGEM, TÜBİTAK-SAGE, Roketsan and 1st Air Supply Factory in Eskişehir within the scope of a heavy and challenging schedule has made us more agile. As a result of the intensive activities conducted with the aforementioned institutions regarding our existing projects on the task systems for aircraft and missile data links, we have reached a vision of providing system solutions that are most compatible with the demands of the end-users and interoperability of the systems in a cost-efficient way.

I would like to add one more point. We had close cooperation with TÜBİTAK-SAGE as part of the KEMENT project and specifically over SOM and this collaboration is still in progress. SOM is a very valuable platform over which we wish our products to be used. We reached prominent achievements in the first trials that we ran with SOM and KEMENT.

Defence Turkey: Specifically, about the KEMENT project, what type of feedback have you received from the end-users?

Erdal TORUN: The feedback from the users regarding KEMENT is quite positive. As a result of such feedback, the requirements for fulfilling the new demands related to its upper version have been defined. We believe the implementation of this system to the platforms will be launched.

Defence Turkey: By nature, missile data links are products specifically designed for missiles. The detailed structure and the parameters of the missile are required for their design and production. What are your comments on the cooperation built during the Missile Data Link development process with Roketsan as the manufacturer of the missiles, and on the experience gained?

Missile Data Links

Erdal TORUN: Our qualified business partnership with Roketsan has been continuing for many years in various areas and as I mentioned before we have reached a certain level of maturity with serial production projects in this period and we are aware that we need to be more agile to be ready to manufacture our products in higher volumes. We are carrying out our investments by taking the required steps to this end.

With Roketsan, we have been conducting projects that start from the R&D and product development stages. In the first stage, we initiate the mutual information exchange process with cooperation protocols and start working over the technical specifications. As you also mentioned, we consider the technical requirements we matured through analyses that contain various engineering disciplines such as the location of the equipment over the missile, the volume, weight and power balances of the missile; its adaptation to environmental conditions such as the temperature, altitude, vibration and shock, etc. as one of the most critical stages prior to the design stage. At this stage, the most critical capabilities that have brought acclaim to Meteksan Defence are the electronic hardware and software design, electromagnetic analyses and antenna designs, RF layer solutions and our mechanical designs that enable physical resistance. Due to these projects, Meteksan Defence has developed systems and solutions at the 0.1 – 35 Ghz band that are capable of operating in all types of environmental conditions, from underwater to space and has gained significant infrastructure.

We complete the prototype production upon the design and development stages and provide absolutely all types of support to Roketsan during the qualification of our first products, their integration to the platforms and throughout the field / flight tests. Following our experienced system engineering and deliveries, then our ILS teams follow up and take action. I would like to underline that mutual trust and transparency are the most critical factors in our sustainable business partnership.

Similar to our previous data link projects, we aim to offer our Missile Data Links and TDL solutions for utilization by friendly and allied nations and we believe the trust and synergy formed in the projects we executed with Roketsan will pave the way for prominent achievements in the international arena as well.

Defence Turkey: You announced in 2018 that you completed the C-Band Data Link product developed for UAVs with the know-how accumulated in the design and production of the Data Links and unveiled this product at IDEF'19. The C-Band Data Links with directional or undirected antennas that enable peer-to-peer communication between UAVs performing at high, medium and low altitudes and ground systems, at a range of 200 km (minimum 10 Mbps user data). What feedbacks have you received so far from the related UAV users - the TAF and Security Forces? Could you mention which platforms will be using the C-Band Data Link System and the technical and economic superiorities it has compared to its rivals? Are there any orders from domestic or foreign buyers for the system?

Erdal TORUN: The actual area we targeted with the C-Band Data Link is manned reconnaissance aircraft and unmanned air vehicles

C-Band UAV Data Link Ground Directional Antenna

(UAVs), then again we are aware that the solutions we offer could also be used for other unmanned systems and we have been receiving demands in this direction as well.

The modular structure, flexible interfaces convenient for integration to various systems and cost-efficiency are the critical advantages of the solution we developed. Above all, we have manufactured the very first indigenously and nationally designed system solution that has surpassed foreign systems in terms of performance and economy and that has reached great achievements in the field. Presently, to extend this system we are negotiating with companies that own indigenous platforms and we may give you the good news soon.

Our products are compliant with MIL-STD-810, MIL-STD-461/464 and MIL-STD-704 standards, which are extensively used by our Armed Forces. Capable of transmission at the data speed up to 13 Mbps over a range of 200 km and in addition to providing secure communication with its frequency hopping and direct - sequence spread spectrum(DSSS) features, we have an architecture that enables the simultaneous and joint utilization of the spectrum for multiple UAVs in the same region. When assessed from a tactical perspective in terms of system utilization, this indeed is among the features that are in high demanded by users.

As a result of our internal R&D activities, you will soon witness our solutions that enable the simultaneous and air-to-air interoperability of multiple UAVs with the Remote Video Terminal (RVT) and STANAG 4586 compatibility. I have mentioned this previously as well. We are conducting many of our R&D activities without getting any orders from any companies and the RVT is one of the good examples in this respect.

We have been receiving positive feedback from the users and platform contractors about the RVT during our first trials and integration activities. The negotiations on extending the system are in progress.

Defence Turkey: Within the scope of export activities, which Meteksan Defence products will we be seeing more frequently in foreign markets? Could you share your assessments related to your future expectations?

Erdal TORUN: We have been exerting utmost efforts to offer secure and high-speed communication solutions on an international scale.

As of January 2019, we took on a brand-new structure as Meteksan Defence. With our product-oriented approach and by identifying our strategic targets in accordance with the markets, we aim to conduct sales and marketing to reach every customer possible. We strive to determine our product strategies and to shape the future by placing as much importance on foreign markets as the domestic market.

In addition to providing finished products that could be integrated to platforms, we approach every customer and platform owner as a business partner based on open communication and trust. I can say that we are about to reap the fruits of this approach in the international arena soon.

Defence Turkey: By putting forth a new military doctrine in the operational field, the TAF has been utilizing UAVs simultaneously in an integrated fashion. The C-Band Data Link stands out at this point in particular. Have you received any orders from domestic or foreign customers recently?

Erdal TORUN: Yes, there are certain negotiations in progress to this end, and we believe they will be launched into utilization within this year and we will share details about this in the future. We will start to use this system in our country and regarding the international arena, we have a product and our negotiations regarding this product are in progress, yet each user has been demanding a custom integration and compatibility specific to their platform. As I previously mentioned, the design capability and engineering capacity of Meteksan Defence has been giving our company an advantage abroad in the integration of these systems to missile platforms as well as to UAV platforms. Our negotiations specific to the C-Band are positive and in progress within the international market.

Defence Turkey: What would you like to say about the delivery activities regarding the ANKA SATCOM Radome designed, manufactured and tested for the protection of the Broad Band Antenna and the L-Band Antenna used for SATCOM communication as part of the ANKA-S Project? Can you share some details about the structure and technical data (weight, length and height) of the Radome? Could you also touch on the ongoing negotiations and activities, if there are any, on the utilization of this capability in another UAV Projects?

Erdal TORUN: The design and production of the ANKA SATCOM Radome is a unique engineering project. The production was accomplished after the execution of the design and it is now being utilized by ANKA. Our negotiations with Turkish Aerospace (TUSAŞ) on the new orders are in progress. In reference to the Radome, in addition to the ANKA project, our negotiations on various projects including other UAV platforms, Land Platforms and Radar systems are continuing and this is one of the areas where we acquired quite impressive capability. We have been collaborating with our stakeholders in material and production areas; ownership of both design and measurement capabilities are a critical issue. Since the Radome is used under quite challenging conditions, a failure in signal transmission must not occur.

In respect to the technical specifications of the Radome, well these are defined based on the characteristics of the antenna they are used on. The most critical parameter at this point is smooth transmission; any weakening of the signal should be avoided.

Our negotiations on the utilization of this infrastructure in other platforms are also in progress.

Defence Turkey: In recent months, Meteksan Defence launched the Anti-Jamming and Anti-Spoofing Global Positioning Antenna and Receiver System - the Anti-Jamming GNSS. Frequently utilized in military operations and exercises conducted in the north of Syria and Libya by units of the Turkish Armed Forces, to what extent will this system be useful against GPS Jamming and Spoofing threats? What is your assessment on the value that it will add to the Turkish Armed Forces and to our security forces upon its entry into the inventory?

Erdal TORUN: First of all, I would like to say that these types of navigation systems are always subject to jamming as neutralizing GNSS based systems in an area by establishing an electronic jamming environment in that area is among the most popular measures.

Anti-Jamming GNSS

Our active and passive GPS antennas are our first serial production products that we designed in the GPS field and manufacture for ammunition. In this way, we entered the GPS field way ahead, the academic studies launched on the working principles of GPS satellite systems and receivers were followed by the engineering activities that continued with conceptual analyses; by improving our engineering capabilities we established our own test and verification environment and our GPS receivers and Anti-Jamming GNSS (CRPA Antenna) solutions that we revealed recently have found their place in the tactical field.

Developing a countermeasure against GPS jammers and the functioning of GPS receivers despite the jammers are of vital essence in the field. Another dimension of this issue is Electronic Warfare and Meteksan Defence's infrastructure and design capability in this area played a major role in our success. We design and manufacture optimum custom solutions for platforms by using spatial filtering methods to suppress the signals of GNSS jammers. In this way, the error margin of the missile in target acquisition is reduced while the survivability of Unmanned Air Vehicles and Manned Reconnaissance Aircraft is increased.

Based on the feedback we received as a result of the interoperation of the ammunition and UAVs in

GNSS Receiver

the field, we also diversified our products for UAVs, ammunition, land and naval vehicles and built modular solutions with various antenna units. I can say that we developed the best systems also in terms of weight and size; we observed critical advantages of the discipline formed as a result of the fact that we are an ammunition data link company. We are able to introduce the most optimum and cost-efficient solution to the user without requiring another external GPS receiver and this is certainly another benefit. We can offer this feature on account of the software-based design, the internal receiver of our Anti-Jamming GNSS Antenna and our signal processing unit.

Our GPS products and system solutions have been tested in the field and have been qualified to a large extent; we are conducting our first deliveries and preparing for extensive utilization through our contract negotiations regarding serial production. As I mentioned previously, these systems have contracts both for missile systems and for UAVs.

Defence Turkey: With its expertise, Meteksan Defence has been introducing products that could not be easily procured from other countries to the service of the Turkish Armed Forces and providing a new and extremely critical power factor. Looking at 2020 and 2021, which products and which markets are targeted for communication systems?

Erdal TORUN: I would like to start with the Anti-Jamming GNSS systems. Certain countries have taken part in certain markets in this area. While we design our systems, we develop them based on their qualities, features and performance. As a result, we have reached a level at which we are capable of competing with our products on a global scale. As a matter of fact, we are negotiating over certain proposals and I am sure that we will be exporting the Anti-Jamming GNSS within 2020.

Another crucial and exciting point in the communication field are C-Band Data Link solutions. Some countries are willing to use C-Band not only for UAVs but also for manned platforms and missile communications, and our negotiations with them are in progress. The critical point here is not installing a product over a platform; instead it is to adapt it to the platform at the same time. As we experienced during our previous activities with missile manufacturers, one must identify the features of a missile to a certain extent in to adapt it to a platform.

TMV Telemetry Transmitter

Our contacts and negotiations with UAV and Missile manufacturers are in progress, and the activity in the Asian region is prevalent for the time being. We have prominent cooperation with countries that manufacture their own platforms. I believe it will be useful to underline this fact through your magazine; when Meteksan's products are compared with products of Western Countries, it is noticed that they are quite cost-efficient products that contain high technology and that are capable of competing on the international market.

Regarding our other products, our telemetry transmitters and flight computers are being utilized in the armies of other countries in manned and unmanned air vehicles. Our goal for the next stage is to be able to introduce Tactical Data Links to the market. Every product in the Data Link field that we supply to Roketsan or other local customers is also being utilized by foreign countries as a result of their exports. We strive to extend our export potential in the data link field with the inclusion of tactical data links in the forthcoming period.

The KEMENT Tactical Data Link is a highly important subject. As you know, NATO countries have their own systems. However, when we take a glance at other geographies of the world, we recognize

GNSS Antenna

that the transfer of images and data between various forces during network enabled operations in countries without these systems emerges as a critical requirement. In fact, the infrastructure of our data link is fully capable of fulfilling such needs. To this end, we have been negotiating with countries in the international market for these types of TDL requirements. We consider that these negotiations will gain momentum in the upcoming period and will lead to prominent cooperation.

Defence Turkey: In terms of platforms, missiles and unmanned air vehicles, we are speaking of quite critical products that are also used in the field. One of the most critical subsystems within this scope is one of your products. Do you believe that this success in the field will further accelerate exports in the international arena?

Erdal TORUN: The Turkish Armed Forces is a quite good reference for the armies of other countries. We are utilizing almost all of our products in the real environment, in the field and other countries are aware of this, and every country has a military attaché which closely observe the products on site. Moreover, on account of Turkey's geographical conditions we are able to generate solutions that are convenient for any type of climate. We manufacture products that are capable of functioning both in considerably low temperatures and in high humidity as well as in extremely hot environments. Therefore, as our products have managed to enter the inventory of the TAF then


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other countries often tend to procure them without even testing them very extensively.

From time to time we confront problems. For instance, in the case of an implementation regarding C-Band; if a country procured the product of another and extended it in its own platforms then your company has to offer them a package when it offers that country its own product; we will have to replace all the air and ground terminals with the new ones as they all have to be compatible with each other. We also run our marketing activities to this end.

Defence Turkey: Returning to the COVID-19 process, the Novel Type Coronavirus (COVID-19) pandemic deeply affected the defense and aviation sectors as well as our daily lives. Could you inform us on Meteksan Defence's efforts against the COVID-19 pandemic, the measures it adopted and any ongoing operational changes?

Erdal TORUN: Human health is our priority. Following the breakout of the pandemic, we adopted all the recommended measures to protect our staff while planning all details needed to keep the wheels turning. Then we announced our approach through a press statement on March 23rd to our staff, their families, to our suppliers and our business partners.

In line with the circulars and advice placed by our government, we were on duty and we continued to work on developing new technologies to fulfill the demands of Turkish Armed Forces. We maintained our devoted manner and our maximum level of efficiency with the slogan "together we will achieve" by implementing methods such as annual leaves, working from home and working in shifts that would increase social distancing, in solidarity with our employees.

During this process, we aimed to enable our stakeholders by providing equipment, services and solutions to our company to reassure their own employees without going through any economic bottlenecks. We strived to continue making our payments even though we faced difficulties in debt collection, and we still strive to do so despite the challenges.

In an effort to proceed without any setbacks in our projects, we have been running tests and hold meetings in line with social distance rules and through video conferences. In accordance with the main principles of the Bilkent Holding Group, our company has been fully implementing all the measures against the COVID-19 pandemic determined by the Committee established within the body of our company.

Defence Turkey: Have any changes been made to Meteksan Defence's 2020 action plan regarding turnover / export targets in this unprecedented environment that we've been experiencing due to COVID-19?

Erdal TORUN: We witnessed certain irregularities in cash flow and recession in the sector in 2019 which we were not accustomed to. We stood by our government and dealt with the difficulties. We started to experience certain irregularities in 2020 as well and then the COVID-19 pandemic caused a halt particularly in international affairs, naturally. We sense that we need to run a quite methodical fiscal policy under these circumstances. We strive to maintain our turnover and export targets at 2019 levels and act more disciplined and controlled. Still, we will not be withdrawing our strategic moves. As I mentioned previously, we have adopted an approach on seizing the opportunities created by the crisis. We aim to prepare for the future through R&D, innovation and product development by achieving a robust financial structure.

We identified 2020 to be the year to focus on exports and we have worked diligently on developing strategies to this

end. We strive to develop the mechanisms and structure that will enable us to focus on exports. We have recently identified our target to be that of achieving 50% of our revenues through exports and the remaining 50% from the domestic market. Even if we are not able to fully achieve these defined targets due to further impacts of COVID-19, we will undoubtedly continue to keep our pace moving forward as we stretch to reach for our targets.

Defence Turkey: How have activities proceeded at Meteksan Defence during this period, have there been any changes in operations such as the working style / shifts and how have processes been managed for new contracts and acceptance / tests?

Erdal TORUN: In order to prevent any postponements in the order of activities, at Meteksan Defence we implemented methods such as working from home or working in rotations. There have been certain partial disruptions in the execution of scheduled meetings with our stakeholders and the tests in line with project processes, but we exerted efforts to prevent any major setbacks. For example, we realized certain test processes through video sharing or reporting methods.

We conducted many contract negotiations through video conferences, and new approaches will inevitably emerge in these areas in the upcoming period. As a majority of the projects carried out in the defense industry area are classified and confidential, data cannot be shared via the internet environment; therefore, a certain slowdown is experienced naturally in the speed of the execution of activities in this regard. I expect that activities on maintaining secure information exchange will be realized in the future.

Defence Turkey: As you know, to maintain a well-functioning supply chain, all stakeholders should be involved in the project. Some of the projects may contain imported products or some may contain subsystems procured from domestic sources. Have there been any setbacks in your supply chain caused by other companies during this process? How have you managed this process?

Erdal TORUN: For the company in general, I can say that we have not experienced any setbacks causing severe delays in our orders and deliveries. We have strived to prevent potential delays by increasing contact frequency to ensure clear communication when we worked on importing any equipment. We work to execute deliveries with products that already exist in our own stock. Additionally, we don't have any restrictions by third countries regarding any of our products and this is a plus as well. We identify designs that are in line with this approach and maintain our product supplies accordingly. Generally speaking, there have not been any difficulties that have delayed our deliveries.

Defence Turkey: Lastly, would you like to convey any messages to our readers as well as domestic and foreign stakeholders?

Erdal TORUN: Thank you for this opportunity. I would like to once again underline certain points with a few sentences. Meteksan Defence is a Technology Development Center. We consider our company to be one of the most prominent examples of the cooperation between Universities and Industry. Here, we carry out our activities not only backed by the academic power of Bilkent University but also with the support of many of the universities in our country and we believe that we will enhance our technological ownership in this way. Surely our main mission is to provide funds to Bilkent University and to maintain the flow of funds in order to ensure the continuity of the education at this university. To that end and with this divine mindset, every professional employed at Meteksan Defence has been working in furtherance of the company, directing our collective steps towards a secure future.

Ayşe AKALIN met with Erdal TORUN in Meteksan Defence's premises.

Our overall principle is to operate without compromising our ethical values. We wish to maintain our relations with our stakeholders within the defense industry in this sense. We believe in the essentiality of competition. Competition brings advantages both to the state and to the sector in terms of technological acquisitions; then again it is also essential to operate control well through the use of rule-making mechanisms. In cases where small-scaled companies are positioned as centers of excellence, sustainability should also be secured as these companies have many investments and these investments can only be maintained through new projects. Meteksan Defence is not a company that operates by getting engineering projects from other companies. Therefore, such competition must be weighed well in order to engage our engineers and to create sustainable opportunities, not only for us but also for all companies.

The domestic share of the defense industry is at a certain level, so our focus should be on foreign markets. In my opinion, there is a constant need for building synergy by gathering as a sector with the slogan 'together we will achieve'. I would like to thank you again for giving me this opportunity.

Defence Turkey: Dear Mr. TORUN, thank you for sparing your time for our readers