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## Smart, Green and Sustainable Solutions

The road that Turkey's automotive supply industry has covered for the last 60 years has enabled the emergence of a strong industry that is globalizing and able to adapt to every transformation. With its high capacity, wide product range and EU standards, the Turkish automotive supply industry provides parts to the automotive industry and existing vehicle parks in Turkey.

The supply industry, which alone has approximately 10 billion dollars of exports, produces for the world's giant brands. The automotive supply industry can produce almost all the parts that make up a vehicle and export these parts abroad, and it has reached a very ambitious stage in product development while producing the most strategic parts of the world's top quality brands. As a global platform, the supply industry has succeeded to have such a structure that it has design and product development competence and can be a part of production projects in more than one country.

Automotive Suppliers  
Association of Turkey, TAYSAD

was founded in 1978. It is Turkey's pioneer organization in the field of production and export, making a great contribution to the automotive industry, and the sole representative of the Turkish automotive supply industry with its nearly 500 members.

As TAYSAD, we set a 5-year strategy in 2021. This strategy consists of new technologies, export growth, competitive supply industry and strong association. To increase the competence and competitiveness of the supply industry, we guide our work with the slogan "Smart, Environmental, Sustainable Solutions".

In our work, we put the technological transformation in the sector at the center and we do not just explain the new trends, but also enable our members to experience and examine new technologies. So we want all our members to internalize the process of adapting to new technologies. For the Turkish automotive supply industry to be permanent in the automotive, mobility sector as it is called lately, it is not sufficient to ensure the transformation, but we also need to transform faster than our competitors abroad.

Our goal is to ensure that our companies, our industry and our contribution to the country's economy always remain sustainable.

We aim to ensure the sustainability of the contribution that our companies and the sector make to the country's economy.

Yours Respectfully,



**SEVGİ ÖZÇELİK**

Acting Secretary General



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**Albert SAYDAM**

Automotive Suppliers  
Association of Turkey (TAYSAD)  
Chairman of Board

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Karsan CEO



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# SİSMAK

GIVE DIRECTION TO LIFE

## Give Direction to Green Energy

We are using our energy and technology for electric vehicle.



Automotive production always runs in Turkey, Turkish Automotive suppliers do not stop the production lines globally.

# Turkey is an Automotive Country

Our aim is for Turkey to be among the top 10 countries globally by 2030 in terms of design, supply and technology. In order to achieve that, we are planning to present smart, environmentalist and sustainable solutions.

## Albert SAYDAM

Chairman of TAYSAD Board of Directors

**T**urkey's share of the world's gross national product is around 6-7 per thousand. In terms of automotive vehicle production, its share in total production in the world is 1.9 percent. These figures show that Turkey is an automotive country. The supply industry, which produces the latest technology in the Turkish automotive industry, is an important building block of the sector. As TAYSAD, our aim is to take the necessary steps together with our stakeholders to make Turkey stand out in the global automotive sector. As the sector is being redefined, we undertook the mission of moving Turkey further in the automotive industry.

### Turkish automotive industry has more than 60 years of experience

Our automotive industry has continued its development in a fully competitive environment created by the Customs Union process between the European Union and Turkey. Today, it has proven its international competitiveness with its achievements. Our industry, which internalizes sustainability and change, has transformed its structure into one that is suitable for serving developed markets. It has expanded its competitiveness in production with the steps taken in R&D and innovation; it has achieved the capabilities of designing vehicles from scratch, designing, and supplying parts to these vehicles in a timely manner and in the desired qualities.

The increasing share of telematics and electronics in vehicles, the development of new vehicle technologies with alternative fuel usage and autonomous vehicles necessitate changes in many areas from product development to after-sales services and the supply industry. In a world where the description of automotive is rewritten again, we aim to increase our share of global trade by taking the right steps based on our past strengths and experiences.

### Instead of short-term opportunities, we have focused on our responsibilities

Various negativities and tensions existing in our geography also create some opportunities for our country. However, as TAYSAD, we prefer to focus on our duties rather than the opportunities arising from the tensions in the region. We believe that in an environment of war, it is not possible to make plans for investment and the future. Instead of the short-term opportunities arising from a war environment, we aim to get a share of the welfare that the peaceful environment will provide.

We would not want to use the term "opportunity" in the same sentence as "war", however it is obvious that there is currently a corridor that exists for us. In this aspect, the aim is not opportunism. We are ready as a country, as a sector and as an association to work towards world peace and for the advancement of the global economy. The war in Ukraine has taught us things we didn't know. We were initially reminded of how important the chips used in automobiles were during the pandemic. As the



pandemic continued and the war in Ukraine started, we also realized the importance of the raw materials that we use.

### Turkish Automotive Suppliers are becoming more competent

Until now, we had been producing parts parallel to the technological advancements that were occurring with traditional vehicles. As we see the birth, advancement and spread of a new generation of cars, we have added new talents to support our 60 years of experience. New parts and services stand out as an important and essential service of our procurement industry.

According to our recent studies and research, companies that produce traditional parts are expected to transform the way in which they produce. Most of the residual revenues will evolve from digitalized products or services provided in the digital environment. TAYSAD members possess the infrastructure and courage necessary to adapt to these new technological changes. We aim to become the best version of ourselves, taking our years of experience together with new talent to ensure our most productive self; and together with our stakeholders, we will take the right steps to ensure our goal is met in a short period of time.

The Turkish supply industry internalizes the requirements of the automotive industry and prioritizes its interests over the interests of the company. The Turkish supply industry is the strong link of the automotive sector and therefore a value for both for the domestic manufacturers and the new global investments.

### Electrification is the focus of Turkish Automotive Industry

We anticipate that the current investments on electrification in Turkey will soon be followed by new ones. Many global companies already ahead in electrification are looking for potential partners in Turkey. Therefore, we believe that we will be hearing new investment announcements in the coming 6 months. We also see that there are further battery or electrification investments coming soon.

With the publication of rules and regulations on charging stations and the announcement of investment incentives, we have started to see new investment in this area. We, as TAYSAD and our members, are very pleased to see these developments. Our goal is to maintain our ability to produce 80% of a vehicle internally in Turkey as we reach 2030's.

### As TAYSAD, we offer all kinds of support to our members.

As TAYSAD, we are keeping electrification studies on the agenda and trying to raise awareness in the developing mobility sector for a sustainable world. As TAYSAD, we offer all kinds of support to our members. We continue to develop our training processes on what the right process is and how to manage complex situations. We support the emergence of new ideas on new technologies, vehicle manufacturers' expectations and sustainability by bringing together our members.



# DEĞER YARATMAK BİZİM İŞİMİZ!



## Tedarik Zinciri Yönetimi

Esnek üretim ve tam zamanında teslimat sunarız.



## Proje Yönetimi

Müşterilerimizin işlerini büyümesine destek oluruz.



## Problem Çözme

Müşterilerimize mükemmel çözüme ulaşma deneyimi sunarız.



## Etkili Süreç Yönetimi

Müşterilerimizin çıkarlarını koruruz.



Müşterimizin parça tedarikçisiyiz!



Yüksek kalitede üretiriz!



## PASSANGER CAR PRODUCTION

**382.**  
947 UNITS

June January-June 2022, car production decreased by 8 percent compared to the same period a year ago.

## PASS. CAR EXPORT

**274.**  
54 UNITS

In the January-June period of 2022, automobile exports decreased by 9 percent compared to the same period of the previous year.

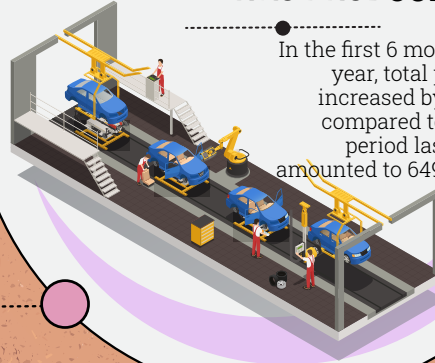
## COMMERCIAL VEHICLE

**19%**

January-June 2022 in the period commercial vehicle production 19 percent level It increased.

JANUARY-JUNE 2022

**649.311**  
VEHICLE WAS PRODUCED



In the first 6 months of the year, total production increased by 2 percent compared to the same period last year and amounted to 649 thousand 311 units.

## AUTOMOTIVE MARKET

**375.**  
683 UNITS

There were 375 thousand 683 units in the total market, with a decrease of 9 percent per day.

## TOTAL PRODUCTION

**673.**  
991 UNITS

In the January-June period of 2022, together with the tractor production, the total production reached 673 thousand 991 units.

## CAPACITY USAGE

**83,4%**

January-June 2022 period total capacity usage it was 83.4 percent

Heavy commercial vehicle group increased by 26 percent.

## JANUARY-JUNE 2022 AUTOMOTIVE PRODUCTION

	PASS. CAR	%	L. TRUCK	%	H. TRUCK	%	PICK-UP	%	BUS	%	MINIBUS	%	MIDIBUS	%	TRACTOR	%	TOTAL
A.I.O.S.	-	-	1.573	64,5	-	-	156	0,1	174	5,3	-	-	405	27,4	-	-	2.308
FORD OTOSAN	2.834	07	-	-	7.835	39,4	155.426	72,6	-	-	25.109	99,3	-	-	-	-	191.204
HATTAT TRAKTÖR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.525	10,2	2.525
HYUNDAI ASSAN	108.300	28,3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108.300
KARSAN	-	-	-	-	-	-	-	-	12	0,4	178	0,7	148	10	-	-	338
MERCEDES-BENZ TÜRK	-	-	-	-	12.049	60,6	-	-	1.564	47,4	-	-	-	-	-	-	13.613
MAN TÜRKİYE	-	-	-	-	-	-	-	-	878	26,6	-	-	-	-	-	-	878
OTOKAR	-	-	395	16,2	-	-	61	-	357	10,8	-	-	674	45,6	-	-	1.487
OYAK RENAULT	92.498	24,2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92.498
TEMSA	-	-	469	19,2	-	-	-	-	317	9,6	-	-	250	16,9	-	-	1.036
TOFAŞ	59.938	15,7	-	-	-	-	58.334	27,3	-	-	-	-	-	-	-	-	118.272
TOYOTA	119.377	31,2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	119.377
TÜRK TRAKTÖR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.155	89,8	18.141
<b>TOTAL</b>	<b>382.947</b>	<b>100</b>	<b>2.437</b>	<b>100</b>	<b>19.884</b>	<b>100</b>	<b>213.977</b>	<b>100</b>	<b>3.302</b>	<b>100</b>	<b>25.287</b>	<b>100</b>	<b>1.477</b>	<b>100</b>	<b>24.680</b>	<b>100</b>	<b>673.991</b>



# Rethink Agility in Manufacturing

The journey towards autonomous and collaborative manufacturing



Henry Ford, in 1909, said that *"you can have any color so long as it is black"*.

On the contrary, today all manufacturing sectors are pulled into the *"make for me"* trend which is pushed by consumers.

Conventional manufacturing has become extremely inefficient for *"high-mix low-volume"* demand.

Consumer behavior is changing fast... so manufacturing must change too.

A fresh, new manufacturing model is needed.

As expressed by the Omron i-Automation! concept, we believe that any technological progress should strive to make the manufacturing place a better, cleaner and happier place to work in. Manufacturers can optimise personalised products through flexible manufacturing, while also achieving higher operational excellence and ensuring maximum safety and quality.

Let's rethink manufacturing together in this journey towards 'the factory of the future'. Today!

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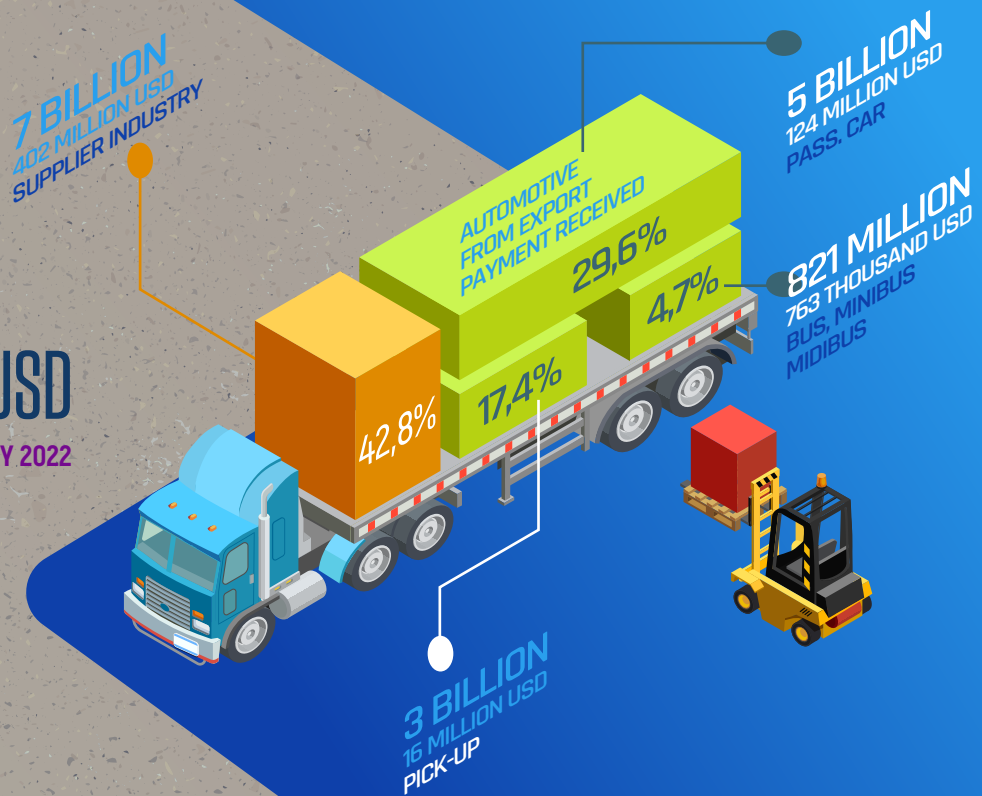
industrial.omron.com.tr/uretimi-yeniden-dusun

The automotive exports increased by 3.5 percent in July from a year ago to stand at \$2 billion, the Uludağ Automotive Industry Exporters' Association (OİB) has said.

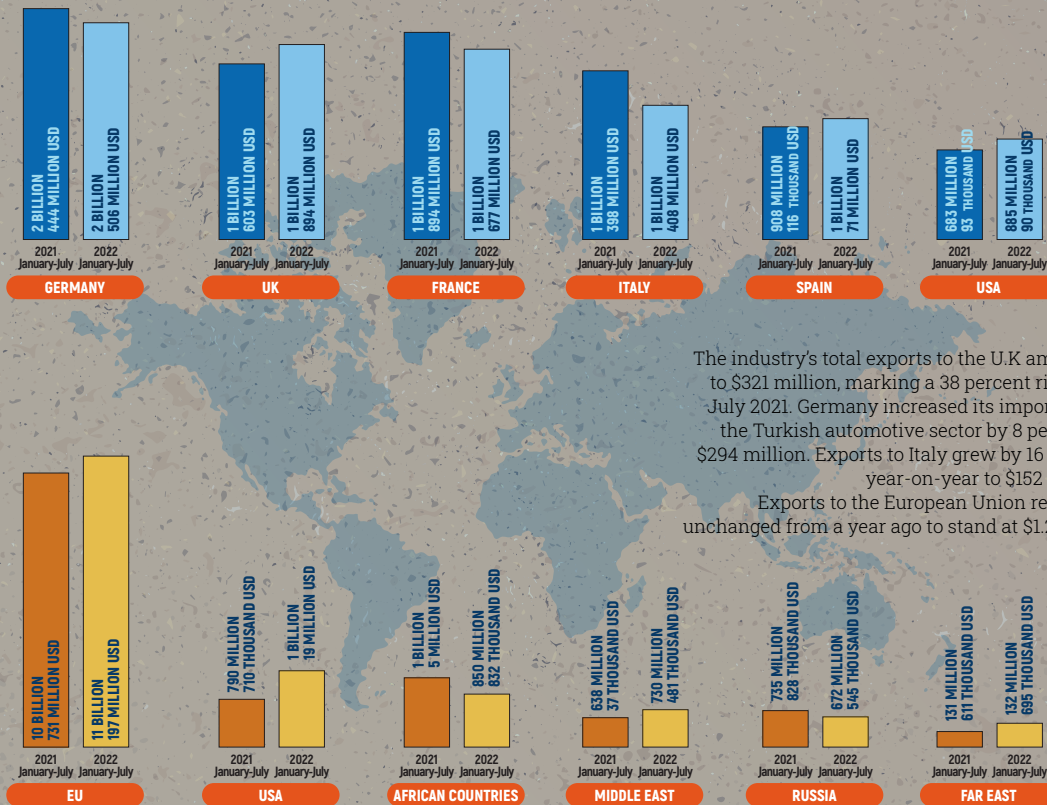
# 17 BILLION 310 MILLION USD

THE YEAR OF THE INDUSTRY 2022  
7 MONTHS PERFORMANCE

In the first seven months of the year, the automotive industry's export revenues rose by 5.8 percent to \$17.3 billion. The monthly exports averaged \$2.5 billion between January and July.



## Turkish Automotive Industry January-July 2022 Cumulative Country Exports



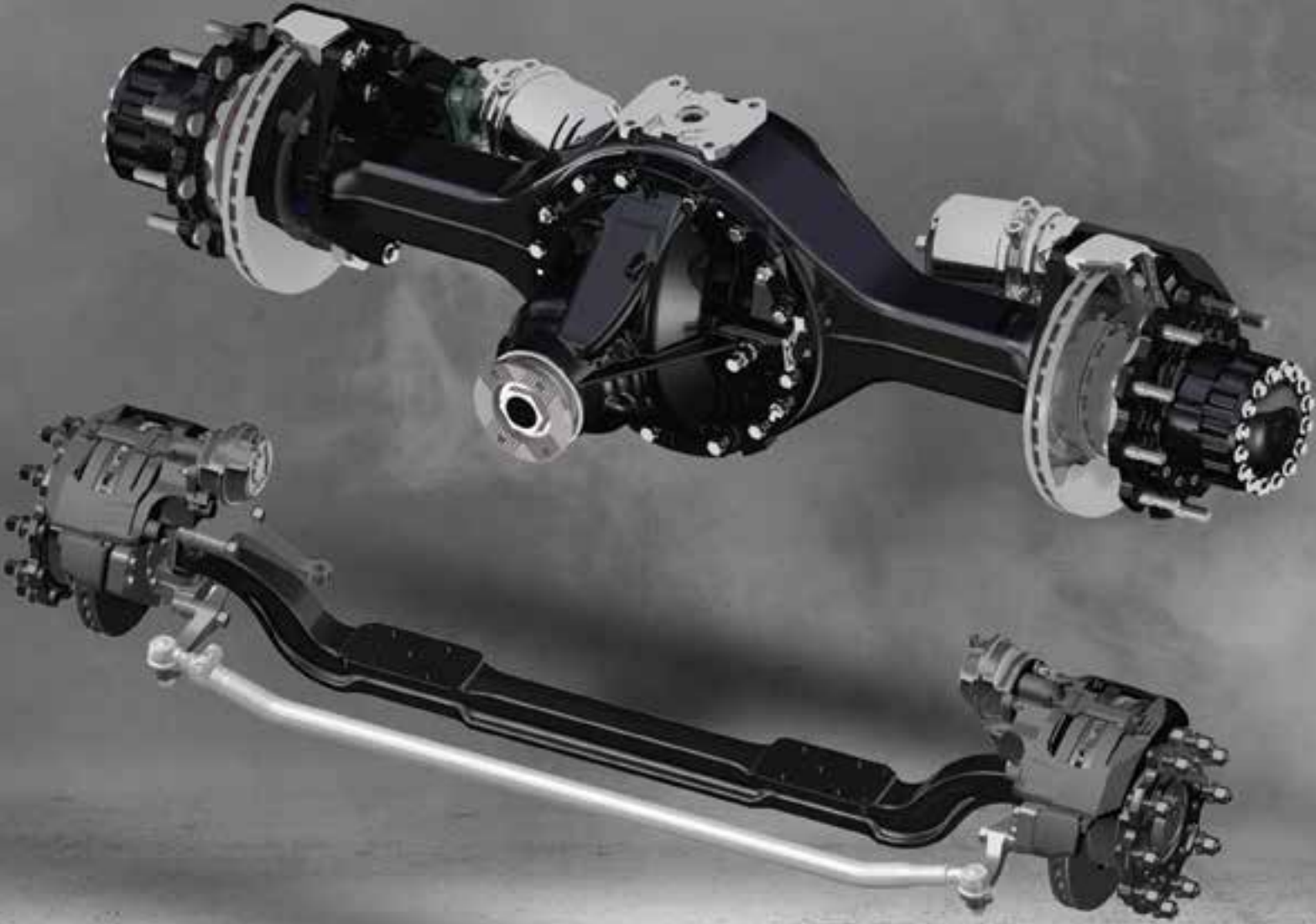
The industry's total exports to the U.K amounted to \$321 million, marking a 38 percent rise from July 2021. Germany increased its imports from the Turkish automotive sector by 8 percent to \$294 million. Exports to Italy grew by 16 percent year-on-year to \$152 million.

Exports to the European Union remained unchanged from a year ago to stand at \$1.2 billion





#rulesthepower

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**Togg aims to reach production of one million units across five connected electric vehicle models by 2030, with all five developments being created from a common architecture.**

## Turkey's Car Brand Togg Backs Tech Ventures' Global Journey

*Looking to guide startups on their global journeys, Turkey's first domestically produced car brand is taking its mobility acceleration program to the international arena.*

**A**utomobile Joint Venture Group (Togg), the consortium developing Turkey's indigenous car, has announced a cooperation with the world's largest innovation platform to launch its Mobility Acceleration Program.

The cooperation looks to support international startups in many areas, from mentoring to financial consultancy.

Plug and Play has 400 corporate partners in the heart of the Silicon Valley as well as in four continents, 20 countries and 39 offices.

Togg will also be a member of STARTUP AUTOBAHN, an open innovation platform supported by Plug and Play,



and will take an active role in the field of mobility together with global players.

Addressing the STARTUP AUTOBAHN Expo 2022 in Stuttgart, Germany, Togg CEO Gürcan Karakaş said startups are an important part of new technology solutions in the mobility ecosystem.

"Companies relied heavily on their own R&D (research and development) units 5-10 years ago, but with startups, technological innovation has reached an unprecedented speed," Karakaş said.

"Startups that take bold steps with their agile business models take fast action and transform sectors. Startups also play a critical role in shaping the mobility ecosystem. The sector creates a window of opportunity for new players to emerge, while collaborations with new players allow us to create sustainable value," he noted.

"The Mobility Acceleration Program we are launching with Plug and Play is an important step we have taken to

support startups, a very important element of the ecosystem."

**"We are the rare mobility ecosystem application platform in Europe in a real sense."**

Karakaş said in June the company participated in Vivatech, Europe's largest technology and startup event, and conveyed their startup approach.

"We also had the opportunity to engage with startups with Mobility Park by Togg, which was located in the center of the event. As a company that is preparing for global competition, we will continue to be involved in all kinds of efforts that will improve the mobility ecosystem not only in our country but also internationally."

Plug and Play Turkey Director Lale Gozübüyük said the innovation platform "will be happy and proud" to share with Togg an experience that encompasses not only global automotive companies but many other sectors, mainly mobility, as well as the opportunities it has developed. ●



Togg CEO  
Gürcan Karakaş





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65 Years



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Strong



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• TİRSAN AFTERMARKET



• TİRSAN PART PRODUCTION



• TİRSAN HOT FORGING &  
PART PRODUCTION



• TİRSAN KARDAN SRL ITALY



• TİRSAN KARDAN RUSSIA

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**Ford Otosan plans to invest €490 million in the plant over the next three years to expand production growth and play a key role in Ford's electrification journey in Europe.**

## Ford Otosan Takes Ford Plant in Craiova into Electric Future



*Ford continues its accelerated transformation, Craiova Manufacturing Plant ownership transferred to Ford Otosan.*

Continuing Ford's accelerated transformation of its business in Europe to achieve an all-electric future, today Ford of Europe officially transfers ownership of its Romanian plant to Ford Otosan. Following a previous announcement and regulatory approval, the agreement between Ford of Europe and Ford Otosan has now been finalised.

By combining the Craiova plant's production power with Ford Otosan's extensive experience in commercial vehicle design, engineering, and manufacturing, the facility will play a key role in Ford's electrification and commercial vehicle growth plans for Europe. The next generation Transit Courier, including the van and combi models, designed and engineered by Ford Otosan, will be produced in Craiova and launched in 2023, and all electric versions will start production in 2024.

### **NEXT-GEN TRANSIT COURIER TO BE PRODUCED IN CRAIOVA IN 2023 FOLLOWED BY ALL-ELECTRIC VERSIONS IN 2024**

"With the Craiova plant acquisition, Ford Otosan is expanding its manufacturing experience and capabilities into international operations," said Güven Ozyurt, general manager, Ford Otosan. "Highly skilled employees of Craiova and their outstanding work in producing some of the most appreciated Ford products will build on Ford Otosan's success story. Craiova will benefit from the skill base and knowledge transfer through Ford Otosan's experience in designing, engineering, and building commercial vehicles as well as electrification."

*The next generation Transit Courier, including the van and combi models, designed and engineered by Ford Otosan, will be produced in Craiova and launched in 2023, and all electric versions will start production in 2024.*



Ford officially took over the facility in Craiova 14 years ago, investing \$2 billion and transforming it into a state-of-the-art manufacturing site.

This agreement will strengthen Ford Otosan's position as the largest commercial vehicle producer in Europe and will expand its operations internationally to create sustainable value to its shareholders. With the addition of the Craiova plant, Ford Otosan's total annual production capacity will exceed 900,000 vehicles. Ford Otosan, the Ford joint venture in which Ford and Koç Holding are majority shareholders, is one of the longest running and most successful joint ventures in the global auto industry.

At the official handover event held in Craiova today and attended by the Prime Minister of Romania and representatives from Ford Otosan, Rowley said, "The Craiova operations have a strong record of delivering world-class competitiveness and flexibility as evidenced by the success of the Ford EcoSport, the Puma and the 1.0-litre EcoBoost engine in the European market. ●



# SEGER

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# Turkish Automotive Industry

**Production, export, and engineering hub of global brands for international markets**



**USD 16 billion**

Total investment volume of global brands in the Turkish automotive industry since 2000.



**1.3 million**

Number of vehicles produced in Türkiye in 2021.



**1<sup>st</sup>**

Türkiye's rank in commercial vehicle production in Europe.



**4<sup>th</sup>**

Türkiye's rank in Europe's automotive production.



**13<sup>th</sup>**

Türkiye's rank in global automotive production.



**73%**

Average export rate of OEMs in Türkiye.



**8%**

CAGR of the vehicle market in Türkiye for 2002-2020.



**30 Global Supplier**

30 of the top 50 global suppliers have production facilities in Türkiye.

## Turkish Automotive Industry

High level of integration into global automotive industry

13th major automotive producer in the World with 75% average export rate

Production, export, and engineering hub of global brands for international markets

## Suppliers and Engineering in the Industry

Quality products with high export rates

Hundreds of Tier 1 companies working directly with OEMs

Center of excellence in automotive engineering and R&D in which the new technologies are developed

## Growth Drivers in Turkey

Strong macroeconomic growth with increasing income per capita and a burgeoning middle-class

Favorable demographics with a dynamic, young, and skilled labor force supporting the industry

## Strong International Presence

Giants of global automotive value chain benefit from Turkey's location, cost, and competence advantages

Because of their profitable business in the country, companies in Turkey continue to invest in the country's future

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# Türkiye Is a Major Automotive Manufacturer In The Region

**A resilient, fast-growing economy, Türkiye offers business-friendly policies, a deep talent pool and global market access at the nexus of Europe, Asia and Africa to attract sustainable FDI.**



## A. Burak DAĞLIOĞLU

*Investment Office of the  
Presidency of Turkey, President*

**T**ürkiye's main assets include a strong manufacturing capabilities and logistics infrastructure, which has been constantly improved under the leadership of President Erdoğan since 2003. As a result of strong fundamentals and decisive reform agenda, cumulative FDI inflows to Türkiye reached to USD 240 billion since 2003. Türkiye has become a regional R&D, design, manufacturing, logistics, and management hub of multinationals to run their operations in the wider region.

Türkiye has proven itself as a resilient player of global value chains with multinational companies shoring up their presence in the country in line with their strategies of nearshoring, regionalization and diversification. Given its strategic location that unites three continents, Türkiye is coming to the world stage in the search for alternatives to the Asian-based production network. Türkiye's export volume stood at USD 36 billion in 2002, climbing to USD 225 billion in 2021. Its share in global exports has surpassed 1% for the first time in its his-

tory in 2021. The FDI inflow in 2021 was USD 14 billion which is a clear proof of V-shape recovery to pre-pandemic level. With 11 percent annual GDP growth, Türkiye has been the fastest growing economy in the G-20 countries in 2021.

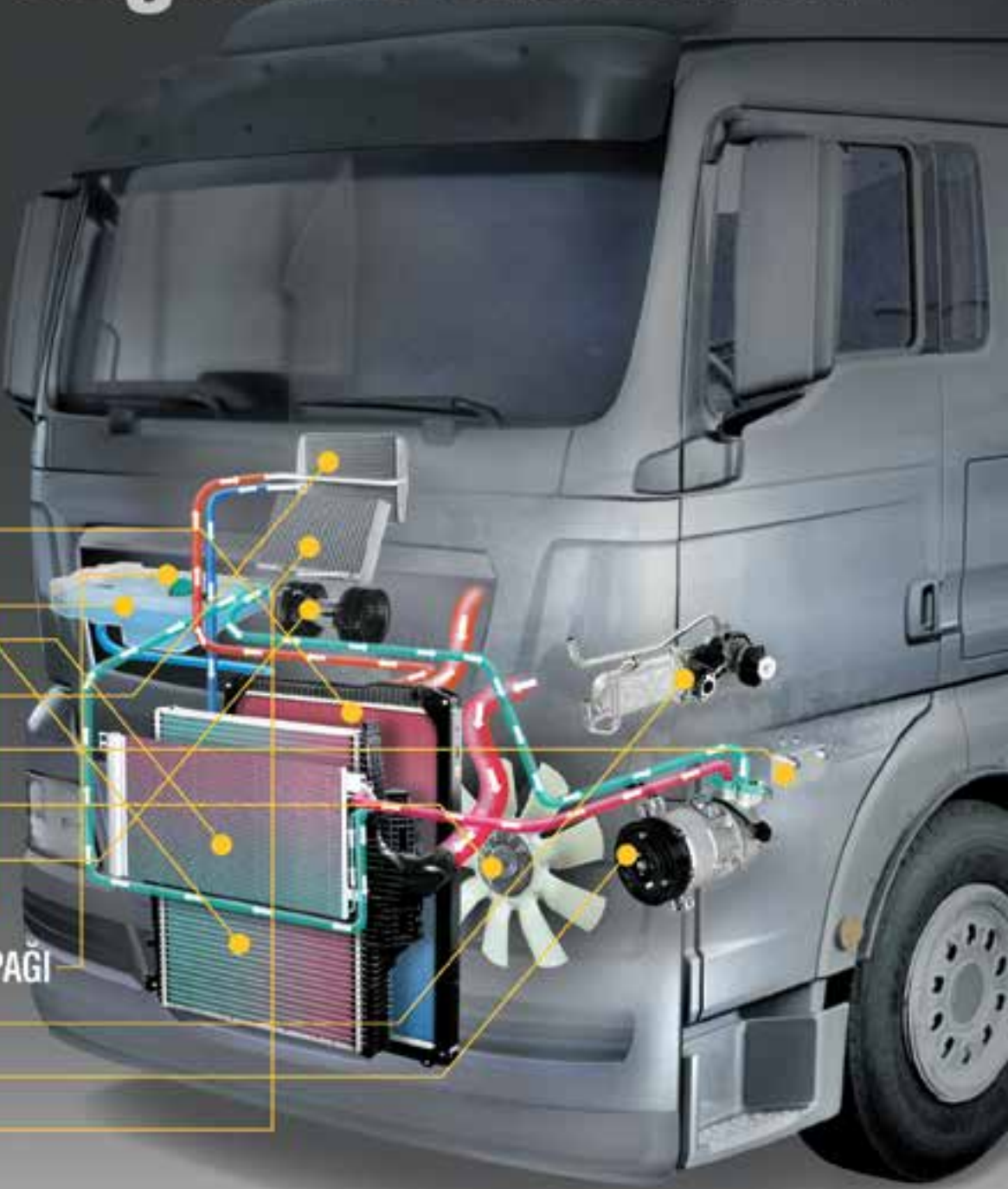
The globally-integrated nature of the Turkish automotive industry with a yearly export volume of around 25 billion USD provides plenty of opportunities for multinational companies such as Mercedes, MAN, Hyundai, Ford, Toyota, Renault, and Fiat, Türkiye has become a regional center. Global OEMs, together with numerous global suppliers, have built up a very competitive mobility ecosystem in Türkiye in the last 60 years. According to the total vehicle production date in 2021, Türkiye is ranked 4th in Europe and 13th in the world. In addition, Türkiye is ranked first in commercial vehicle production in Europe. It is important for countries to transform their business climate in line with sustainability, digitalization, electrification and decarbonisation agenda. Turkish automotive industry has already started transforming through successful policies, incentive programs and commitment to European green deal. In automotive and mobility industry total incentives can reach up to the 70% or more of the total investment amount.

In Türkiye already 12 OEMs and more than 450 tier 1 suppliers are actively operating, and keep investing. Between 2016 and 2021, OEMs in Türkiye have invested over USD 5.3 billion in order to increase their production capacities and to modernize their facilities. Türkiye is a major automotive manufacturer in the region. OEMs have started manufacturing hybrid and EV models in our country. A local consortium also took an initiative to manufacture Europe's first non-traditional born electric SUV branded as TOGG. Supplier network is also transforming their selves. Besides Türkiye has taken an important step in the production of EV batteries. Yet, 3 battery producers having decided to produce lithium ion battery plants in Türkiye, and we see there is an increasing interest that will push more projects to the country. We are able to manufacture hybrid engines, critical components of EVs, charging stations and etc.

In June 2022, Mobility Vehicles and Technologies Roadmap has been published by the Ministry of Industry and Technology, and here are set 8 targets regarding EVs, such as supporting and encouraging the EV production, or being a regional battery production centre. In compatible with these targets, Investment Office of Türkiye aims to act proactively to attract innovative, sustainable, and value-added FDI to Türkiye, and increase the international investment stock. ●

# Ağır Vasıta Klima ve Motor Soğutma Sistemleri

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- ◆ INTERCOOLER
- ◆ KONDENSER
- ◆ KALORİFER
- ◆ YAĞ RADIYATÖRÜ
- ◆ FAN & DAVLUMBAZ
- ◆ BLOWER
- ◆ GENLEŞME TANKI
- ◆ GENLEŞME TANKI KAPAĞI
- ◆ EGR
- ◆ KOMPRESÖR
- ◆ EVAPORATÖR



**KL KALE**  
OTO RADIYATÖR  
*Akılcı soğutma*

# Turkish Automotive Industry as a Significant Global Actor

**Turkish automotive industry is a significant global actor that develops and produces its own engine and exports engineering services to the world as well as its own products from design to production. Our industry stands out with its flexible, efficient, and high-technology facilities, as well as its competent, qualified human resources and strong supply industry.**

## Cengiz EROLDU

*The Automotive Manufacturers Association, Chairman*

**T**he automotive eco-system is like a driving force that enables the steady growth of the country's economies, accelerates technological developments, and helps the growth of many industries. While it is the buyer of the products of several industries such as iron and steel, plastics, glass, petro-chemistry, textile, and electronics, it is the supplier of the motor land vehicles needed by industries such as agriculture, tourism, construction, infrastructure, transportation, and defense. Moreover, it has close contacts with several industries such as finance, insurance, and fuel as well as the authorized dealers and maintenance & repair services network that ensures the delivery of its final products to the consumer... In short, the automotive industry has its own ecosystem due to its connections with many industries and has a strategic structure that contributes directly and indirectly to the national economy in several areas.

### **Electric vehicles will have a significant role in the transformation**

Recently, we have seen that the transformation to the electric vehicle has gained momentum in the world due to the effect of global environmental policies. It is quite clear that electric vehicles will be the future of the industry. The European Green Deal, which was announced by the EU, our most important export market, as the new growth strategy for Europe to become a carbon-neutral continent by 2050, marks an important transformation in all



areas such as transportation, buildings, agriculture, industry, finance, and foreign trade. Considering the EU's emissions by industries, transport accounts for a quarter of the EU's greenhouse gas emissions, while road transport accounts for 95% of greenhouse gas emissions in transportation. From this point of view, the significance of the steps to be taken in the area

### **AUTOMOTIVE INDUSTRY**

**2** MILLION PIECES  
INSTALLED  
CAPACITY

### **SOLD IN EUROPE**

**5** FROM EVERY FIVE  
CARS AND TURKISH  
AUTOMOTIVE INDUSTRY  
PRODUCES ONE  
OUT OF EVERY TWO  
COMMERCIAL VEHICLES

### **WE ARE THE LARGEST COMMERCIAL VEHICLE MANUFACTURER IN THE EU**

→ Besides vehicle manufacturing, our main industry performed engineering export of about USD 125 million in 2021, thanks to its 16 R&D centers and more than 4,500 employees. With its quality and flexible production approach, and value-added products, our supply industry exports significant quantities of products to global OEMs, as well as supplying our main industry.



**The qualified and advanced labor force, domestic market potential, strong supply industry, geographical location, and customs union with the EU are the strongest features of the Turkish automotive industry. In the transformation process that the global automotive industry has been going through, our top priority should be to further develop our strengths beyond maintaining them.**



# S

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## WE RANK 13TH IN THE WORLD AUTOMOTIVE MANUFACTURING RANKING

→ Our industry, which has made a significant contribution to the national economy with its exports of 1.3 million vehicles and export income of USD 30 billion in 2021, has been the export leader of Turkey for 16 years. Today, one of every five cars and one of two commercial vehicles sold in Europe are manufactured by our industry, and we rank 13th in the world automotive manufacturing ranking and 4th in the EU ranking.



→ About 75% of the total automotive production of Turkey is exported while about 80% of the export is performed to the European market. Therefore, we must perform the production in a way that meets these requirements in the EU to maintain our competitiveness and to continue our contribution to the national economy.



of transportation to achieve the carbon neutral goal is very clear.

Considering the European Green Deal and the "Fit for 55" law package, which is a roadmap to achieve these goals, from the perspective of the automotive industry, several topics such as product standards and transformation in the market, new rules in foreign trade and access to finance, transition to the circular economy, climate adaptation, and decarbonization of the manufacturing and supply chain come to the fore. We encounter the issues of stricter emission standards for the products, schedule for the transition to zero-emission, alternative-fuel vehicles, and infrastructure transformation. There are two critical dates for our industry. These dates are 2035 and 2050. As of 2035, all new light vehicles to be sold shall have zero emissions. As of 2050, the machine park shall be modernized in line with the climate-neutral goal.

About 75% of the total automotive production of Turkey is exported while about 80% of the export is performed to the European market. Therefore, we must perform the production in a way that meets these requirements in the EU to maintain our competitiveness and to continue our contribution to the national economy. Our industry closely follows up with these developments and carries on its works to manage them simultaneously. Electric vehicles will have a significant role in this transformation. Currently, some members of the Automotive Manufacturers Association (OSD) have started to produce and export their electric vehicles. Many of them carry on their projects and investments in alternative-fuel vehicles. Moreover, the investments in battery systems continue.

### We continue our collaboration with our supply industry for the localization of critical technology at top speed.

We see that climate-oriented goals have been increasing worldwide and the EU has been leading this issue with its ambitious goals. As the main industry, we closely follow up with this serious transformation process that the EU has been going through due to the effect of environmental policies, and we have been preparing our roadmap to adapt to these goals.

One of the most significant factors for

maintaining our competitiveness in this transformation process is to maintain and improve the high domestic contribution rate in our products and to contribute to the national economy at the highest level with high added value production. With the contributions of our strong and competitive supply industry, the percentage of the domestic contribution in some products is about 80%, although this figure varies depending on the vehicle group. However, considering that vehicle structures undergo a serious change due to the effect of transformative technologies such as electrification and alternative fuel technologies, we face the risk that the current domestic contribution rates might decrease in the future. With this transformation, it is very important for us to localize the critical technology that comes or will come into our lives. We continue our collaboration with our supply industry for the localization of critical technology at top speed. In this transformation, we are pleased to observe very positive developments in the supply industry; however, we should not ignore that the speed of transformation of our supply industry seems as a significant opportunity and risk.

### Strengths of the automotive industry

The qualified and advanced labor force, domestic market potential, strong supply industry, geographical location, and customs union with the EU are the strongest features of the Turkish automotive industry. In the transformation process that the global automotive industry has been going through, our top priority should be to further develop our strengths beyond maintaining them. It is important to develop policies that support the transformation of our supply industry, to create approaches that enable the domestic market to demonstrate its potential, to put forward effective foreign trade policies for the development of new export markets, and to increase the efficiency of logistics networks. In summary, it is of great importance to increase our exports, to create a predictable and growing domestic market, and to create the necessary environment for attracting more investment to our country with an approach considering long-term plans aiming to maintain and develop the current competitiveness of our country in the changing automotive ecosystem. ●



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# We Aim to Consolidate Our Position In The Mobility Transformation

**In the Turkish automotive industry, we need to read the transformation well, make preparations and be a part of this transformation. As Automotive Industry Exporters' Association (OİB), the only coordinator association of the Turkish automotive industry for exports, we have focused on this issue for a while. We closely follow up with the developments in the world automotive industry and take action for the development of our industry.**

## Baran ÇELİK

Uludağ Automotive Industry  
Exporters' Association (OİB)  
Chairman of Board

**A**s the automotive industry, which has been the export champion of the Turkish economy for 16 years consecutively, we have been taking firm steps forward for our export target of USD 33 billion in 2022. Considering our performance in the first half of this year, we have achieved an export figure of USD 15 billion 261 million with an increase of 6% compared to the same period of last year. The average monthly export figure is around USD 2.5 billion.

In this period, exports of all product groups except passenger cars increased. Our supply industry achieved an export figure of USD 6.5 billion with an increase of 9%. In this period, Germany became the country to which we exported the most with USD 2.2 billion, and it was followed by the United Kingdom with USD 1.6 billion, and France with USD 1.5 billion. Considering the export figures in terms of country groups, Members of the European Union remain our top market with a share of 65%.

Although our exports increased in the first half of the year, we could not achieve the expected increase. In this period of the year, we also have a loss due to EUR/USD parity. Considering the product groups, the increase in the export figures of the supply industry has been going on, and the situation in commercial vehicles is also better; however, we have experienced the biggest loss in passenger car exports.



**We should keep in mind that the automotive industry has faced multiple problems such as the global chip crisis and energy costs, and we have been naturally affected by this situation.**

In the January-June period, the European passenger car market experienced a shrinkage of 14%. This is one of the major reasons why we could not achieve our desired export increase in passenger cars. However, we are hopeful that the recovery will be swift once production problems are resolved since there is no decrease in the demand.

Therefore, although our automotive export figure is behind our targets, for the time being, we have not revised our export target. We anticipate that the second half of the year will be better than the first

### SECTOR AVERAGE MONTHLY EXPORTS

**2,5** BILLION  
USD

### JANUARY-JUNE 2022 SUPPLY INDUSTRY EXPORT

**6,5** BILLION  
USD



→ The transformation, new trends, and technologies in the automotive industry have been transforming the industry into a completely different structure, i.e. the mobility ecosystem. This transformation of our industry will also change the inputs used in manufacturing and the manufacturing methods.



→ We can expect our automotive export figure, which is around USD 30 billion today, to increase to USD 50 billion or even higher if we achieve the transformation in the automotive industry.



**THERE IS ALWAYS A WAY TO STOP**  
**CHOOSE THE SAFER WAY**



## "THE FUTURE OF AUTOMOTIVE" DESIGN COMPETITION

→ We have been carrying out many activities with the vision of the Turkish automotive industry being referred to as the world's R&D, Innovation, and Design Center. Among these, we have been organizing our most important event, the "Future of Automotive" Design Competition (OGTY), with the support of the Ministry of Trade and the coordination of the Turkish Exporters Assembly since 2012.

## IAEC-INTERNATIONAL AUTOMOTIVE ENGINEERING CONFERENCE

→ We will hold the IAEC-International Automotive Engineering Conference between 10-11 November 2022 as part of cooperation with the Automotive Suppliers Association of Turkey (TAYSAD) and the Automotive Manufacturers Association (OSD). The conference will contribute to the implementation of the digital and green transformation in the automotive industry as part of the improvement in export figures. At the conference, we aim to provide an environment for the international experts to share the steps to be taken in engineering issues in the automotive industry, the current dynamics of engineering in the automotive industry, and industry trends, with the industry professionals.

half. Let us also underline that the performance of passenger car exports will be the main determinant in achieving our export target.

In the Turkish automotive industry, we face several chain problems. The process we have been going through involves risks and opportunities. For instance, we look at the Russo-Ukrainian War from several different perspectives. The total share of Russia and Ukraine in our total automotive exports is 3%. We have experienced sharp declines in our automotive exports to both Russia and Ukraine since the beginning of the war. Therefore, we face a great loss in these markets. A long war and high commodity prices will be the greatest risks for 2023.

On the other hand, we have been experiencing an increase in demand from both Russia and European countries due to problems in the supply chain. The desire of European countries to bring their supply bases closer especially for reducing the supply chain problems that have peaked with the COVID-19 pandemic is very important considering Turkey's proximity to this market. To turn this risky situation into an opportunity, we should strengthen our production and logistics network, focus on the zero-carbon target in production and energy, and be prepared for the risks that may arise due to the current risks.

### **The automotive industry has been undergoing a worldwide transformation.**

We have reached the end of the stage that can be reached with fossil fuel motor vehicles and traditional components and parts. The transformation, new trends, and technologies in the automotive industry have been transforming the industry into a completely different structure, i.e. the mobility ecosystem. This transformation of our industry will also change the inputs used in manufacturing and the manufacturing methods. The achievements of Turkey in traditional automotive manufacturing and exports do not guarantee our future. High domestic production rates, which are of great importance in the competitiveness of our industry, face the risk of falling. If the necessary transformation cannot be carried out, there is a risk that our domestic production rates, which have reached 70% in passenger cars and 80% in commercial

vehicles, will decrease down to 20%.

The Climate Policies of the EU, which is our biggest market, are also the main factor challenging the transformation in the industry. The EU aims to reduce greenhouse gas emissions by 55% by 2030 and to be climate-neutral by 2050. In the automotive industry, on the other hand, the sale of internal combustion engine vehicles will be prohibited in 2035. In our automotive trade with the EU, we will face additional taxes within the scope of the Emission Trading System as of 2026, when the transition period ends. Electric vehicles are very important in this process, which aims at zero carbon. The market share of electric vehicles has reached almost 10% in the EU. We're still behind on this. It is of great importance to attract electric and autonomous vehicle investments that will make a difference in the automotive ecosystem in the future. We need to expand electric vehicles in the domestic market as well.

Also, the development of the automotive supply industry in product groups such as electronics, software, batteries, charging equipment, digital dashboards, cameras and sensors, and lightweight materials, which will also constitute a significant proportion of the vehicle cost, will be critical for sustainable competitiveness. The added value of the new generation vehicles and the new generation components and parts to be produced as a result will be higher. We can expect our automotive export figure, which is around USD 30 billion today, to increase to USD 50 billion or even higher if we achieve this transformation. However, if we fall behind this transformation, we may even fall below today's figures.

Therefore, in the Turkish automotive industry, we need to read the transformation well, make preparations and be a part of this transformation. As Automotive Industry Exporters' Association (OİB), the only coordinator association of the Turkish automotive industry for exports, we have focused on this issue for a while. We closely follow up with the developments in the world automotive industry and take action for the development of our industry. With our entrepreneurs, we aim to keep up with the great transformation and brand new opportunities in the automotive industry and to increase our share in the world market. ●



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# It is Necessary to Look at the Development of the Market in a Long-Term and Strategic Way

**The automotive industry continues to exist successfully in our economy as a sector that requires long-term foresight and significant investments due to the size of its investment and activity areas, as well as the unique characteristics and value of the product.**

## Ali Haydar BOZKURT

*Automotive Distributors'  
Association (ODD)  
Chairman of Board*

### **Our domestic market potential is very high compared to Europe**

**T**he automotive industry is a sector that requires long-term foresight and significant investments in terms of the size of its investment and activity areas as well as the unique characteristics and value of the product. Considering the new technologies, it is critical for our country's economy to establish policies that will bring domestic automotive market back to 1 million levels while maintaining a trusting and stable environment. These developments are very important for the automotive industry, which moves in parallel with the economy. Our domestic market potential is very high compared to European countries. We aim to progress in a way that will catch up with the figures in the EU in the number of cars per 1,000 people by developing the sector. However, the domestic market numbers of the automotive sector continue to remain below the domestic market level of one million units realized in our sector in 2015.

There are a variety of reasons for both the 53% drop in July compared to June and the fact that July was below expectations. Lack of vehicles comes in the first place. When you look at the sales reports on a brand basis, you can see that the brands that typically sell between 3,000 and 5,000 units remain in much smaller numbers and are not vehicles. The second reason why sales were less than expected was that SCT was expected to



fall. There was an artificial expectation of a decrease in SCT, and therefore, those who hesitated postponed buying a vehicle, and some demands were shifted to those who were waiting. Another issue that affected sales last month was the difficulty in accessing the loans. We are getting feedback from many people that their loans have not been approved. Of course, the large price rise compared to last year was one factor that had an impact on sales. When all of them came together, we came across the table in July. But a large part of these factors we have mentioned is the availability of vehicles. Demand continues on both the fleet and retail side, and if there were enough vehicles, the decline in the overall market would not have been so great.

Aside from the inflationary environment, the factors that limit demand in our sector, taxation, updating the SCT bases, loans, and exchange rates continue to be major challenges that directly con-



### **TURKEY AUTOMOTIVE MARKET**

→ The Turkish automobile and light commercial vehicle overall market decreased by 7.3% from January to July 2022 compared to the same period of the previous year, totalling 410,110 units. In the January-July 2022 period, automobile sales decreased by 7.9% compared to the previous year to 319,313 units, while the light commercial vehicle market decreased by 5.3% to 90,797 units.



**Your safety  
and comfort is  
our priority.**



→ Supporting the environment-friendly vehicle market in our country's domestic market as well as spreading and developing new technologies in the market are very valuable in terms of both encouraging the formation of consumer habits and the development of the automotive ecosystem in this direction in parallel with global developments.

→ We expect that penetration in Turkey will increase in parallel with the rise of models in Europe. In terms of infrastructural preparations, our Ministry of Industry and Technology conducts extensive work on charging stations. We expect that new electric vehicles and other environmentally friendly technologies will be introduced to the domestic market in our country in parallel with those introduced in Europe. As ADA (Automotive Distributors Association), we have initiatives before EMRA and Ministries.

cern us. As is well known, the automotive industry is a sector with high added value. A very important resource is also created by the employment in addition to taxes. When we look at it today, since almost all models fall into the 80 percent SCT segment, there has been an expectation in the sector regarding the update of the base amounts, especially at the point where the costs have increased due to exchange rates.

According to the domestic market estimates for 2022, it will be a success to catch up with the domestic market numbers from last year in light of the current supply and demand balance and the indicators for the current period.

#### A long-term roadmap is needed

A long-term roadmap including production incentives and funding resource planning should be developed in addition to taxation. This step will make it easier for individuals to access automobiles and will position Turkey as a candidate for an automotive base. We have a significant place in automobile manufacturing, but our goal is to take the burden of Europe and develop it more. To achieve this, we need to use predictable strategies to expand our domestic market. Domestic market development is critical in order to say, "We can lead this business," and to attract investment. Along with these investments, there will be a large amount of employment to be achieved. Exporting 80–90% of the vehicles produced will also benefit the country considerably. A long-term road map should be drawn for this.

**Countries all across the world, especially in Europe, are making critical decisions about environmentally friendly automobiles. When we look at electric cars, we see that the word "widespread" is used frequently. Infrastructure preparations are very important in terms of ensuring widespread dissemination. There are important preparations based on the predictions made about the charging infrastructures in European countries. With the 2030 aim in mind, there are considerable incentives and preparations in many European cities for innovative and environmentally friendly technologies, including carbon neutrality.**

While determining this roadmap, what we need to do today is a shift to a tax system that explains the technologies of the era in a way that does not reduce current public revenue. Especially, we observed the positive impacts of measures taken in relation to the pandemic on the environment. Consumer habits and expectations have also changed during the pandemic process. The trend towards environmentally friendly vehicles such as hybrids and electric vehicles is increasing day by day. In this regard, the implementation of regulating the taxation system applied to the Turkish automotive sector only based on engine volume needs reconsideration.

As of 2016, a gradual system was introduced in the special consumption tax on motor vehicles. In today's conditions, the lack of a model that can benefit from the low tax bracket makes consumers aggrieved. As of today, most of the models on sale are in the 80% tax bracket.

#### TAXATION OF ENVIRONMENTALLY FRIENDLY VEHICLES

When it comes to environmentally friendly vehicles, it is necessary to emphasize once again the necessity to reconsider the taxation system used in Turkey's automotive industry. Taxation based on engine volume should be left behind, and world-class taxation should now be adopted. From emissions to engine power, there are several examples with scientifically proven criteria. The most important step that must be taken as quickly as possible is to modernize the implementations that are dependent on engine volume and try to be adjusted with tax assessment.

Turkey needs to look at the automotive sector more strategically. The automotive industry is one of the major industries in developed and developing countries. As you know, the automotive industry employs around 500 thousand people, along with other stakeholders. It also constitutes a significant proportion of the total tax revenues of the state. To protect and support this resource, as well as adapting to global changes, we need to take the necessary steps within the sustainable medium-term plan. These steps include the structure of taxation systems as well as the preparation of our cities for new technologies.

The automotive industry continues to exist successfully in our economy as a sector that requires long-term foresight and significant investments due to the size of its investment and activity areas, as well as the unique characteristics and value of the product. Especially in terms of new investments, the importance of our taxation system has been seen once again. For consumers in our country to prefer new technologies in parallel with the developments in the world, the issues should be addressed from all aspects, and after the necessary preparatory work, especially taxation, revision applications should be initiated. ●





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# The Mobility Platform Of The Future



**As of the 25th of June, 2018, Togg has been settled as a globally competing Turkish technology brand. With our mobility solutions and technologies, we create cutting-edge new smart devices. We are developing a mobility ecosystem around these devices within our "USE CASE Mobility®" concept in which all is connected.**

**W**ith the aim of becoming a global USECASE Mobility® provider, Togg aims to transform Turkey's mobility industry with its mobility ecosystem designed around its smart device to produce innate electric, zero-emission, user-centric, autonomous, smart and connected vehicles. Togg continues its activities with the vision of "More than a car just an automobile" in order to achieve two main goals:

To create a global brand that 100% belongs to Turkey for intellectual and industrial property

Creating the core of the Turkish mobility ecosystem

Following the completion of homologation tests, C-SUV, Togg's first smart device, will be launched in Turkey in the first quarter of 2023, and in Europe approximately 18 months after this date.

After the C-SUV, Sedan and Hatchback models in the C segment will enter the production line. In the following years, with the addition of B-SUV and C-MPV to the family, the product range consisting of 5 models carrying

the same DNA will be completed. Togg plans to produce a total of 1 million vehicles with the production of 5 different models in the cleanest facilities of Europe established in Bursa Gemlik until 2030.

Togg, which established the Technology Development Center in Ankara in order to localize strategically important technologies and carry out R&D studies, aims to increase the domestic rate from 51 percent to 68 percent when the smart device is released by 2026. Togg Europe, which was established in Stuttgart with our user-centric approach, also conducts users researches for the European

market. Bringing together innate electric cars and advanced technology services, Togg establishes Turkey's mobility ecosystem with strategic collaborations. In this context, Togg has included 17 out of more than 250 startups in the mobility ecosystem.

Togg, who established a company called Siro with a 50/50 partnership with Farasis, the world's leading lithium-ion battery manufacturer, to produce its own battery, also established Trugo to strengthen Turkey's charging infrastructure and started working to establish 1000 fast charging stations for this purpose. ●



*With the aim of becoming a global USECASE Mobility® provider, Togg aims to transform Turkey's mobility industry with its mobility ecosystem designed around its smart device to produce innate electric, zero-emission, user-centric, autonomous, smart and connected vehicles.*



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# We Develop Policies and Strategies In Line With Our Global Vision

**I think that the Turkish automotive industry, which manufactures world-class cars thanks to its strong supplier infrastructure, trained manpower, sustainable and safe operations has a very significant position for Turkey today.**



## Erdoğan ŞAHİN

**President & CEO  
Toyota Motor Manufacturing  
Türkiye Inc.**

### We observe the acceleration of our industry toward a better future

**T**he Turkish automotive industry, in which we also operate as a main industrial company, continues its position as Turkey's leading industry, which is usually called the locomotive industry. In 2021, the industry manufactured 1 million 276 thousand vehicles while 937 thousand of them, i.e. almost 74%, were exported. At the end of 2022, it is projected that there will be an improvement of over 20% in both manufacturing and export figures compared to 2021. Despite the reflections of the global problem caused by the

supply of parts, we observe an acceleration towards better in our industry.

I would like to believe that this is sustainable development. Although there have been some losses in export competitiveness due to the increase in global inflation and the rising energy costs in parallel with the indirect effects of the COVID-19 pandemic, which unfortunately still exists, I think that the Turkish automotive industry, which manufactures world-class cars thanks to its strong supplier infrastructure, trained manpower, sustainable and safe operations has a very significant position for Turkey today.

### The environment is one of the top priorities for Toyota

Our company has been inspiring other companies across the world in

terms of developing environmentally friendly engine types and developing technologies, products, and working methods that are beneficial in this regard.

Being the first company in the world to manufacture hybrid vehicles and the first to manufacture hydrogen fuel cell cars are concrete examples that demonstrate our vision. Toyota, which started with hybrid technology in 1997 and continued this journey with plug-in hybrid and hydrogen-powered vehicles, has also announced that it will create a product range of 30 electric vehicles in the passenger cars and commercial vehicles segments by 2030. We position ourselves to develop strategies and projects in accordance with this global vision in our factory in Turkey in Toyota's European organization.

### Our supply industry has proven its competence on the global scale

Today, the automotive supply industry in Turkey has achieved the notion of the global-scale exporter, which manufactures quality products that can compete in global markets, renews and strengthens its product and technology through R&D activities. We, as the main industry, appreciate these achievements and We strive to provide all the support and cooperation required for them to achieve sustainability. In the transformation process of electrification in the world, we recommend that our automotive supply industry keep up with the requirements of this transformation and prepare their future plans and product ranges according to this new situation. ●



# WE ALWAYS STRIVE TO **DO BETTER!**

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- 🦾 Strong

# We Are Now Closer to Our Goal of Becoming a Logistics Base

**Our country strengthens its position in the world in logistics day by day with its geographical advantages, growing economy, transportation and infrastructure investments. New investments which were made globally after the availability crisis and changing maps in the supply chain create a significant advantage for Turkey.**



## Serhan TURFAN

**Ford Trucks**  
**Deputy General Manager**

**We create value with the most efficient transportation solutions**

**F**ord Trucks, which is a global operation under the roof of Ford Otosan and continues its international expansion strategy successfully, has been among the world's leading heavy commercial vehicle brands for more than 60 years with its engineering power and sub-industry in heavy commercial vehicle production. With our vision of "creating value with the most efficient transportation solutions", we express our purpose of existence as "being a companion that cares about their customers and improves their business".

We have public and superstructure solutions for use for different purposes with tow trucks, road and construction trucks in our portfolio, including 18 tons and more vehicles in the heavy commercial vehicle industry. We are among the few brands that develop and produce all the powertrains of a vehicle with domestic axles, engines and transmissions thanks to our engineering competencies and R&D power. Especially in the last few years, the heavy commercial vehicle industry has been going through busy periods in parallel with the increasing logistics needs of businesses and the rise in e-commerce. As Ford Trucks, we also continue to grow in this process with our heavy commercial vehicle solutions in terms of production, design, technology and product development. For example, we

### CONNECTED VEHICLES PLAY AN IMPORTANT ROLE IN OUR FUTURE VISION

→ We have been making investments and carrying out studies in this field for a long time. With ConnecTruck, which is the first connected vehicle project of Ford Otosan, our customers can connect to their vehicles from their computers or mobile phones at any time they want. They can follow their vehicles on the map and access instant live vehicle data and retrospective vehicle usage reports thanks to this technology. With ConnecTruck, we have reached more than 10,000 connected vehicles and made over 13,000 remote software updates without bringing our customers into service. This technology I mentioned means an important step for our Ford Trucks vehicles to reach 100 percent uptime (useful working time of the vehicle). For example, thanks to ConnecTruck, error codes that leave the vehicle on the road are classified and it is aimed to increase the operation time of the vehicles thanks to the fact that the services are aware of the situation. In addition, we are starting our predictive diagnosis and maintenance activities. In other words, we aim to detect the breakdown and maintenance needs in advance with the help of data, to inform our customers and to keep their vehicles in continuous operation.



# THE BEAT OF YOUR HYBRID ENGINE IS THE SONG OF OUR PARTS

**Forging** provide safety for automobile transmissions, suspensions and chassis. Working always for better products, Automobile manufacturers precisely choose their suppliers with high attention. At this point, continuously improving new technology and proving its quality, **KANCA** is developing and producing steel forgings being the first choice of automotive manufacturers. "**Kanca Quality**" brings safety into life.



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### THE RISING TREND CONTINUES IN THE TURKISH HEAVY COMMERCIAL VEHICLE MARKET

→ Parallel to the whole world, with the increasing logistics need during the pandemic period and the rise of e-commerce, we continue to spend active days for tow trucks in the heavy vehicle market. This suggests that demand for the tow truck segment of the industry will continue to grow. We have seen growth in this area in parallel with the investments in the construction industry before. Therefore, although the demands on vehicles change within the framework of different dynamics in our industry, the heavy commercial vehicle industry in our country will continue to play an important role both with the technologies it offers and the ecosystem created and with the success it has shown abroad.



have achieved a market share of 26.3 percent by selling nearly 7,000 vehicles in the domestic market despite global availability problems last year. In the first half of this year, we moved this share up a bit. We have doubled our export sales and we make more than 80 percent of our international market sales to European countries.

### We export our heavy commercial vehicles which we produce in Eskişehir to more than 40 countries in the world.

We achieve many successes in global markets with our heavy commercial vehicles under the Ford Trucks brand, especially with our F-MAX vehicle, which we developed and produced entirely with Turkish engineering and which brought us the ITOY award in 2019. In our global journey, after Portugal, Spain, Italy, Belgium, Luxembourg, we also appointed distributors in Germany and France, the largest and most competitive markets in Western Europe last year. We continue to grow internationally with new markets and collaborations and aim to reach 50 countries on three continents in 2024. As Ford Trucks, we signed the ACEA Heavy Vehicle Roadmap Joint Statement in 2020. We promised to carry out our heavy commercial vehicle production by 2040 with the target of "0 emissions". We continue to work on new generation solutions with alternative fuels that will help us achieve our zero carbon emission target. We shared the F-Vision, which presents Ford Trucks' vision for the future in zero carbon, connected, autonomous vehicles, with you at the Hannover Fair in 2018. With the new technologies we have developed, we have been approaching this aim step by step ever since. Most people think of electric vehicles in the first place when it comes to zero emissions. How-



**We always think that the biggest added value we offer our customers is the 'total cost of ownership'. While designing our products, we aim to enable our customers and business partners to manage their operations more efficiently with the aim of "being a companion who cares about their customers and improves their business" in line with our purpose of existence.**

ever, in order to reach the zero emission target in the heavy commercial vehicle industry, we find the solution in electric trucks in ranges below 400 km and in hydrogen fuel vehicles in a range above 400 km, and we plan our investments in this direction.

### Autonomous driving is also one of the technologies that will stand out in the automotive world of the future

In 2019, we implemented the Platooning-autonomous convoy project with AVL for the use of autonomous driving technology in heavy commercial transportation, which is also a first in Turkey. Thus, we achieved our goal of reducing fuel consumption and carbon dioxide emissions in heavy commercial vehicles and increasing driving safety. With Level 4 Highway Pilot, we are now working on technologies that enable trucks to carry out their transportation activities between logistics centers, which we call hub-to-hub, autonomously. Also, thanks to our remote vehicle control technology, we make it possible for operators to remotely connect to the autonomous vehicle and take over the drive in cases where unexpected events or human control are needed during autonomous driving. With our autonomous reverse parking technology, which brings us closer to our fully autonomous driving target and supports us in case of docking at the loading and unloading station, our vehicles are at a level to park as if there is a driver in them. Thanks to another breakthrough supporting this area, trucks of Ford Trucks supported with 5G technologies in the 5G-MOBIX Project recently passed through the Greece-Turkey border corridor with autonomous driving. ●

### "TOGETHER, SHARING THE LOAD!"

*While we act with the motto of "Together, Sharing the Load..." with the technologies, products and services we have developed, we have been moving forward by focusing on customer experience since the past. Especially in recent years, we always update ourselves according to changing customer expectations. For example, we have recently launched the Private Vehicle Center in our Eskişehir factory after noticing the increasing interest and demand for private or personalized vehicles in heavy commercial vehicles. In this way, we first started to work to modify our stock vehicles with 'tailor-style' according to customer demands. In the upcoming period, we will respond to the needs of our customers in a wide range from the production of vehicles suitable for superstructure applications to the new niche products demanded by the market, from personalized luxury packages to vehicle dressing.*



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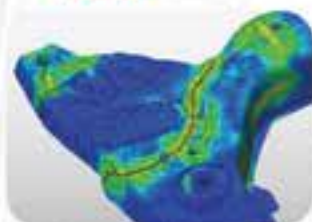
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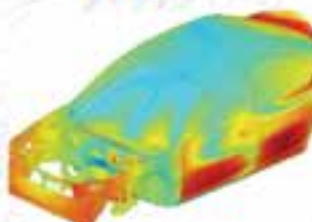
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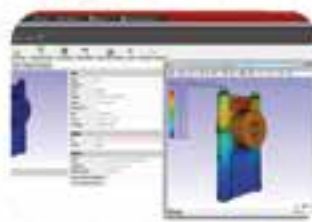
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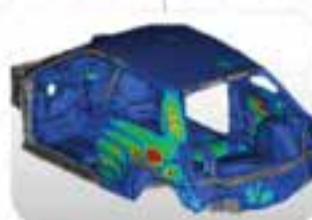
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# Electrification Constitutes Our Priority Investment Area

**In today's understanding of competition, the main game plans of the companies are shaped on the axis of two main trends: Sustainability and digitalization. Investments in these areas, beyond economic activity, directly affect the social development of societies, while also becoming an important driver for the protection of the environment.**

## Tolga Kaan DOĞANCIOĞLU

Temsa CEO

**P**articularly in our industry, electrification, which is at the center of all these developments, has been one of TEMSA's priority investment areas for a long time. As one of the rare brands in the world that have made four different electric bus models ready for mass production, today, TEMSA has also become one of the flag carrier companies for electrification in public transportation.

Today, TEMSA, as a company that has established Turkey's first R&D center in its industry and allocates nearly 4% of its turnover every year for R&D activities, is constantly looking for ways to develop and improve.

Along with the battery packaging facility that we implemented at the beginning of last year, we started to produce our battery packs, which we see as the most important part of electric vehicles today, in-house. Without being satisfied with this, we are constantly chasing the question of 'how can we develop this technology further?'.

We are constantly working to strengthen our own technologies with different academic platforms, especially with Sabancı University. We mobilize our knowledge here not only for the development of TEMSA, but also for the development of the Turkish industry and sector. And while doing this, we also have



the chance to protect ourselves as much as possible from the raw material and supply shortages that we have seen frequently in the world lately. As our digital power, technological know-how, and value-added production capabilities increase, our transformation process into a company that writes the rules of the game, not one that adapts to the rules of the game, also gains strength... As we continuously strengthen our technological infrastructure, we also strengthen TEMSA's global position with new markets.

TEMSA, which made the first electric vehicle export in its history to one of the world's most developed countries in this field, such as Sweden, has today put its electric vehicles on

*Today, TEMSA, as a company that has established Turkey's first R&D center in its industry and allocates nearly 4% of its turnover every year for R&D activities, is constantly looking for ways to develop and improve.*

the roads in many geographies from France to the Czech Republic, from Lithuania to Romania.

In addition, with the TS45E, which was developed specifically for the US market and successfully completed its 2-year test process in Silicon Valley, we both play a pioneering role in the North American market and demonstrate our claim in this geography with a vehicle that is the product of our own technology in the world's most competitive market.

Our biggest dream is to create a TEMSA that also provides services in different areas of electrification in public transportation, with the power given to us by our partners Sabancı Holding and PPF Group, and the high synergy we have realized with our sister company Skoda Transportation.

Sustainability and the digital world require only one thing above all: Thinking without limits... As a world brand that has made this a corporate culture and has exported nearly 15 thousand vehicles to nearly 70 countries around the world, we are happy to strengthen our global power with each passing day.

We continue on this path with determination. ●





# IN ALL CONDITIONS CONFIDENT FIXINGS



# One of Every Two Buses Traveling in Europe is Produced in Turkey

Since its establishment in 1966, Karsan has been manufacturing for the world's leading brands in the commercial vehicle segment, including its own brand.

## Okan BAŞ

Karsan CEO

**Autonomous e-ATAK, the first mass-produced passenger bus capable of carrying Level 4 passengers**

Our autonomous e-ATAK vehicle is the first and only mass-produced passenger bus in Europe and America capable of carrying Level 4 passengers. The autonomous e-ATAK includes much technological equipment such as Lidar, Radar, GNSS, RGB camera, and thermal camera. I can say that each of these sensors and equipment is the eyes and ears of the vehicle. Even beyond the human eye. All sensors complement each other by detecting the external environment in different ways. The software we adapted in cooperation with ADASTEC in the autonomous e-ATAK manages all commands, like the brain of the vehicle. For example, when changing lanes, an autonomous e-ATAK can detect a cyclist staying in a blind spot that the human eye cannot see. Or, it can detect the speed bump or a vehicle at close range or at a distance. It can reduce its speed accordingly. It can recognize pedestrians that even the human eye cannot see in intense light or foggy weather. Our autonomous technology intelligently manages many more complex situations like this. And all systems communicate with each other with precision, allowing the vehicle to move.

Karsan autonomous e-ATAK, which can drive autonomously with a speed of up to 50 km/h in all kinds of weather con-

*Karsan has more than 400 electric vehicles in 20 different countries. We have an all-electric product range from 6 meters to 18 meters. Our vehicles in different countries of the world have gained millions of kilometers of experience.*



ditions, during the daytime or at night, can perform all operations without a driver, such as docking at stops on a defined route, managing the boarding processes, and providing transportation and management at traffic lights, intersections and gateways. Autonomous e-ATAK, powered by the 220 kWh capacity batteries developed by BMW, reaches 230 kW and meets the needs of customers. Karsan Autonomous e-ATAK with 8.3-meter dimensions, 52-person passenger capacity and 300 km range have made the Autonomous e-ATAK a leader in its class. Autonomous e-ATAK can be charged in 5 hours with AC charging unit and in 3 hours with DC unit.

**Karsan has been in a serious transformation for the last 5 years**

As the first step of this transformation, we have a fully electric product range from 6 m to 18 m. The second step of the transformation is to have an autonomous version of our entire electric prod-

*To date, we have developed many partnerships and projects on a project basis with traditionally big brands and the world's big brands, and we have produced in this direction. Renault Megane Sedan was added to the brands including Renault Trucks, Hyundai and Peugeot. We have become the only manufacturer of Megane Sedan in the world. With this project, we will have an annual production of 55 thousand units. Karsan will also produce passenger cars with Renault for the first time.*





# CUBEBOX

## ROBOTIC AUTOMATION SYSTEMS



For detailed  
information



TEZMAKSAN  
ROBOT TECHNOLOGIES

→ One out of every two buses traveling in Europe is produced in Turkey. As Turkish companies, it is our responsibility to achieve this success in electric and environmental buses. While the world is trying to keep up with this technology and change, we quickly completed our part of this transformation and had a fully electric product range, and 90% of the electric vehicles sold from Turkey to Europe are Karsan products. The abovementioned development is a great advantage for our country in terms of having a good reputation and technology.

*The autonomous e-ATAK, the first full-length Level 4 bus with 8 meters in Europe and America, operates on a 5-kilometer route on the Michigan State University campus. And it carries students and lecturers in real traffic there. This project is the first in America. Thanks to the precise mapping in the vehicle, the Autonomous e-ATAK can approach the stops precisely at one time, providing 10% energy savings compared to the driver's use.*



uct range. In addition to our electric product range, we are working to bring our Fuelcell (Hydrogen) vehicle to our product range. We supported the transformation of the transportation infrastructure of many European cities with an electric product range. By further expanding our goals, we and Europe have turned our course to the North American market. We continue our global collaborations with Canada in North America in line with our strategy. Within this framework, we made our first e-JEST delivery within the scope of the distributorship agreement we signed with Damera, and as Karsan, we broke new ground. The 6-meter e-JEST is North America's first electric van in its class. e-JEST is currently circulating in North America with great interest as part of customer promotions. We aim for our

electric product range to take an effective place in the North American market in the coming period and we continue our efforts in this direction at full speed.

Karsan has more than 400 electric vehicles in 20 different countries. We have an all-electric product range from 6 meters to 18 meters. Our vehicles in different countries of the world have gained millions of kilometers of experience. With our autonomous vehicles, we broke new ground both in many European countries and in America. In this context, the autonomous e-ATAK, the first full-length Level 4 bus with 8 meters in Europe and America, operates on a 5-kilometer route on the Michigan State University campus. And it carries students and lecturers in real traffic there. This project is the first in America. Thanks to the precise mapping in the vehicle, the Autonomous e-ATAK can approach the stops precisely at one time, providing 10% energy savings compared to the driver's use. In addition, within the scope of the project in Stavanger, Norway, a full-size bus, Karsan autonomous e-ATAK, started to carry passengers on a real public transportation line for the first time in Europe. This is the first and only example in public transport of Europe.

This year will be a year for us to enter new export markets with our electric models and achieve double growth. We aim to continue this journey by having the autonomous version of our entire electric product range. ●







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# The Mobility of the Future is Shaping



**To keep the added value, it is crucial to invest in battery technologies and vehicle software to be used in new generation vehicles. The mobility of the future is starting to take shape. A model integrating three dimensions of connectivity, digital transformation, and environment-friendliness comes to the fore in the sector.**

## Hakan ÖLEKLİ

KPMG Turkey Audit Partner  
Head of Automotive

**One out of every two vehicles sold will be an electric vehicle by 2030**

**D**espite the negative effects of the pandemic, which began in 2020 and is still ongoing, the Turkish automotive industry maintains its competitiveness, which it has maintained for 16 years as our country's leading sector with 30 billion dollars in exports. Along with the devastation caused by CASE (Connectivity, Autonomous Driving, Car Sharing, and Electrification) developments in the industry, economic and geopolitical factors such as the chip crisis, the crisis caused by the Russia-Ukraine war, the supply chain being affected negatively, and the rise in commodity prices all have an impact on the industry's future. By 2030, it is predicted that one out of every two vehicles sold globally will be electric, and significant initiatives are being taken to transform the industry in this direction.

Considering the average age of the Turkish car park, this transformation in the sector, which is planned to be completed within the next ten years, is expected to have a greater impact on the Turkish automotive market after 2035. In this situation, the domesticity rate and added value of our industry are at risk of rapidly decreasing. In this context, it is essential that we invest in battery technologies and vehicle software to be used in new generation vehicles in order to maintain the added value. Furthermore, digital instrument panels, cameras, sensor technologies, charging equipment, power distribution systems, fuel cells, innovative and light materials, and multimedia systems in cars are among the areas in



which investment is required. The mobility of the future is taking shape, and a model integrating three dimensions of connectivity, digital transformation, and environment-friendliness comes to the fore in the sector.

The latest edition of our Global Automotive Executives Survey, which we organize every year as KPMG, presents industry predictions and reveals current trends. Research results reveal that R&D investments in autonomous vehicle hardware and software and connected vehicle technologies will increase in the upcoming period. According to the research, significant changes in the sector's marketing channels are expected. More than three-quarters (78%) of automotive industry executives surveyed believe that by 2030, the majority of new cars will be purchased online. Also, nearly half of respondents (47%) believe that by 2030, automakers will sell at least 60% of new automobiles directly to consumers. An-

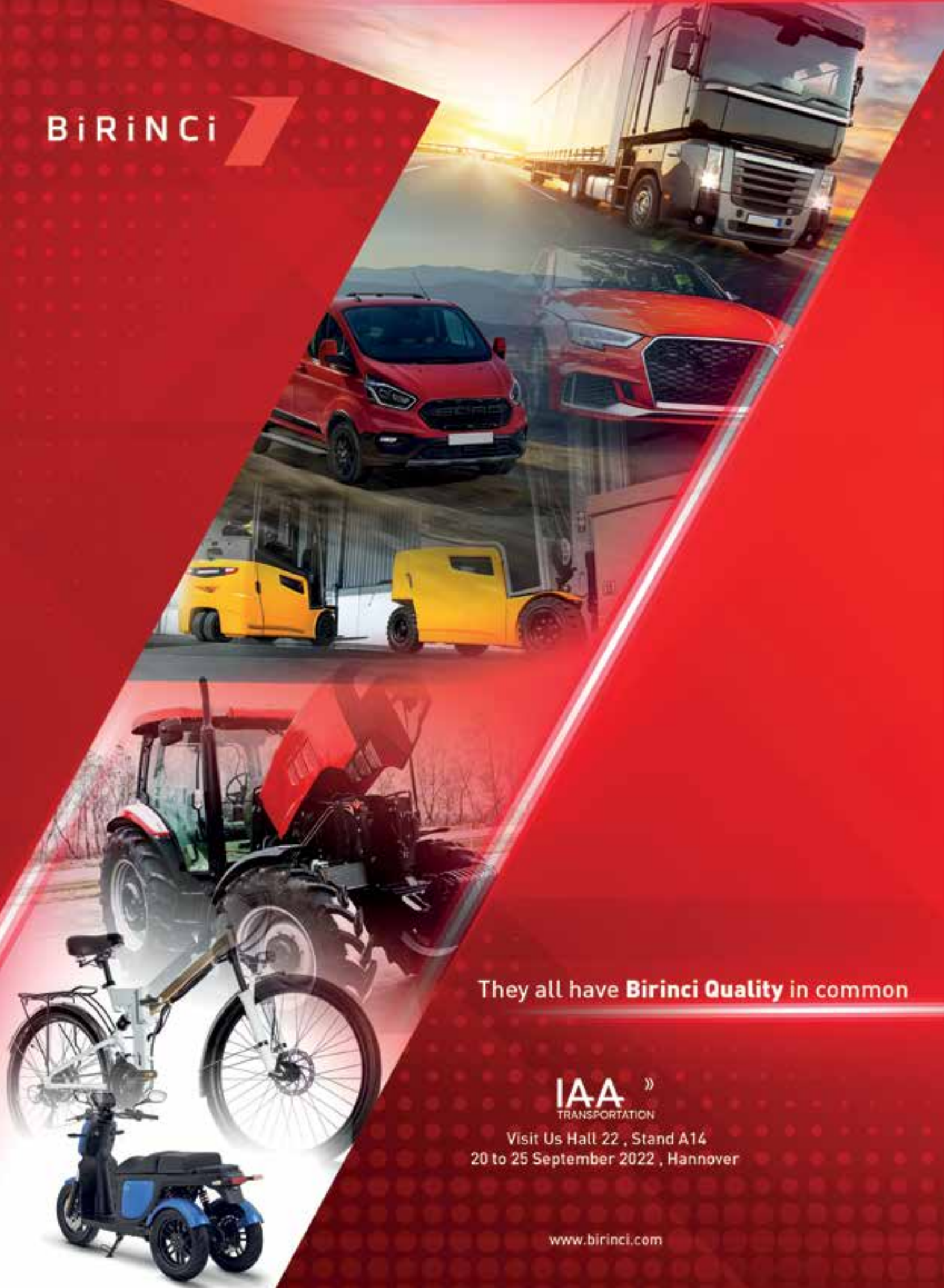


### R&D INVESTMENTS WILL INCREASE

→ The latest edition of our Global Automotive Executives Survey, which we organize every year as KPMG, presents industry predictions and reveals current trends. Research results reveal that R&D investments in autonomous vehicle hardware and software and connected vehicle technologies will increase in the upcoming period.



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other significant finding from the research is that industry executives expect that the market share of electric vehicles will rise dramatically by 2030.

#### **Supplying problems affect production numbers**

Increasing vehicle and fuel prices as a result of inflationary economic conditions in the home market in Turkey, increase in the VAT rate on the purchase of second-hand vehicles, contraction in the European market, which accounts for a large portion of exports, and ongoing global supply chain problems prevent the automotive industry from returning to pre-pandemic levels.

While the number of global passenger and light commercial vehicle production was approximately 76.9 million in 2021, year-end production predictions for the first six months of 2022 are expected to be around 81.3 million. Because of the COVID-19 pandemic, many global automotive manufacturer businesses have had to stop production for certain periods due to restrictions such as curfews and are unable to accurately determine the demand after the restrictions. For this reason, production numbers decreased compared to the pre-COVID-19 years, and manufacturers had difficulty in meeting the necessary demand.

It has been observed that the chip supply problems in the automotive industry continue to have a significant impact on production numbers, especially due to the scarcity of silicon—the primary raw material required for chips—in China and the political unrest between Taiwan, the world's largest chip manufacturer, and China.

#### **More technological developments will be made for the development of environmentally friendly vehicles**

Within the context of global sustainability, governments conduct various research to reduce carbon emission rates. China, the United States, the European Union, and many other countries have declared their aims to achieve net zero carbon emissions by 2050. In addition, the European Parliament announced in June 2022 that it will prohibit the sale of petrol and diesel vehicles in 2035 and beyond. It is observed that the decision's implementation is dependent on the acceptance of the law by all member states, but the German Ministry of Finance has said

that they cannot accept the related development. However, all of these developments are expected to drive the automotive industry to make more technological innovations and renewals in addition to the present research on carbon dioxide emissions.

#### **Ways to stay competitive**

Because of the COVID-19 outbreak, which started in 2019, restrictions on non-vital products in international trade border crossings in global restrictions reduced the industry's movements, including automotive components. These restrictions have led to high levels of supply problems in international trade and disruptions in the supply chain. In fact, the Hubei region of China, where the pandemic occurred, is a supplier to over 100 automotive firms and one of the country's most important automotive manufacturing centers. Under normal conditions, China has around 34-billion-dollar export in automotive spare parts each year, and automotive manufacturers have experienced spare parts supply problems as a result of the negative impact of the pandemic on the existing factories in China. However, problems between Taiwan as the world's largest chip manufacturer and China as the supplier, the earthquake in the city of Fukushima, Japan, where the world's second-largest chip production facilities are located, and the fires in one of Japan's largest production facilities have caused supply problems and disruptions in production. Regarding 2022, the effects of the pandemic are still being felt, and quarantine procedures that occur periodically in China, as well as the ongoing Russia-Ukraine war, gas cuts, and the rise in petrol prices cause these problems to continue today. These processes have also led to breaking points in the supply chain. One of the reasons for the decrease in automotive manufacturing is the scarcity of original spare parts used in automotive production.

In Turkey, some manufacturers stated that there was a supply problem in electronic components, which is very important for the sustainability of the automotive industry, and had to pause production for a certain period in March 2021. It should be noted that only organizations that proactively handle the disruptions in the supply chain and manage to turn the crisis into an opportunity can operate in a competitive environment in such times of crisis. Especially the past 3 years have shown everyone in the industry that it is necessary to be ready for even the most unexpected crises. For this reason, it is necessary to always be aware of the necessity of creating crisis scenarios without disrupting production and that supply problems can affect the sector at any time and to create the necessary alternatives. However, shifting supply chains to regions closer to production centers is one of the necessary changes after the pandemic. ●

#### **PREPARATION FOR UNEXPECTED CRISES**

It should be underlined that only businesses that handle supply chain disruptions proactively and manage to turn the crisis into an opportunity can operate in a competitive environment in times of crisis, such as supply problems. In particular, the last 3 years have shown everyone in the industry that it is necessary to be ready for even the most unexpected crises. For this reason, it is critical to be aware of the need to create crisis scenarios without disrupting production, and that supply problems can hit the sector at any time, as well as to create the necessary alternatives. However, one of the necessary changes after the pandemic is shifting supply chains closer to production centers.



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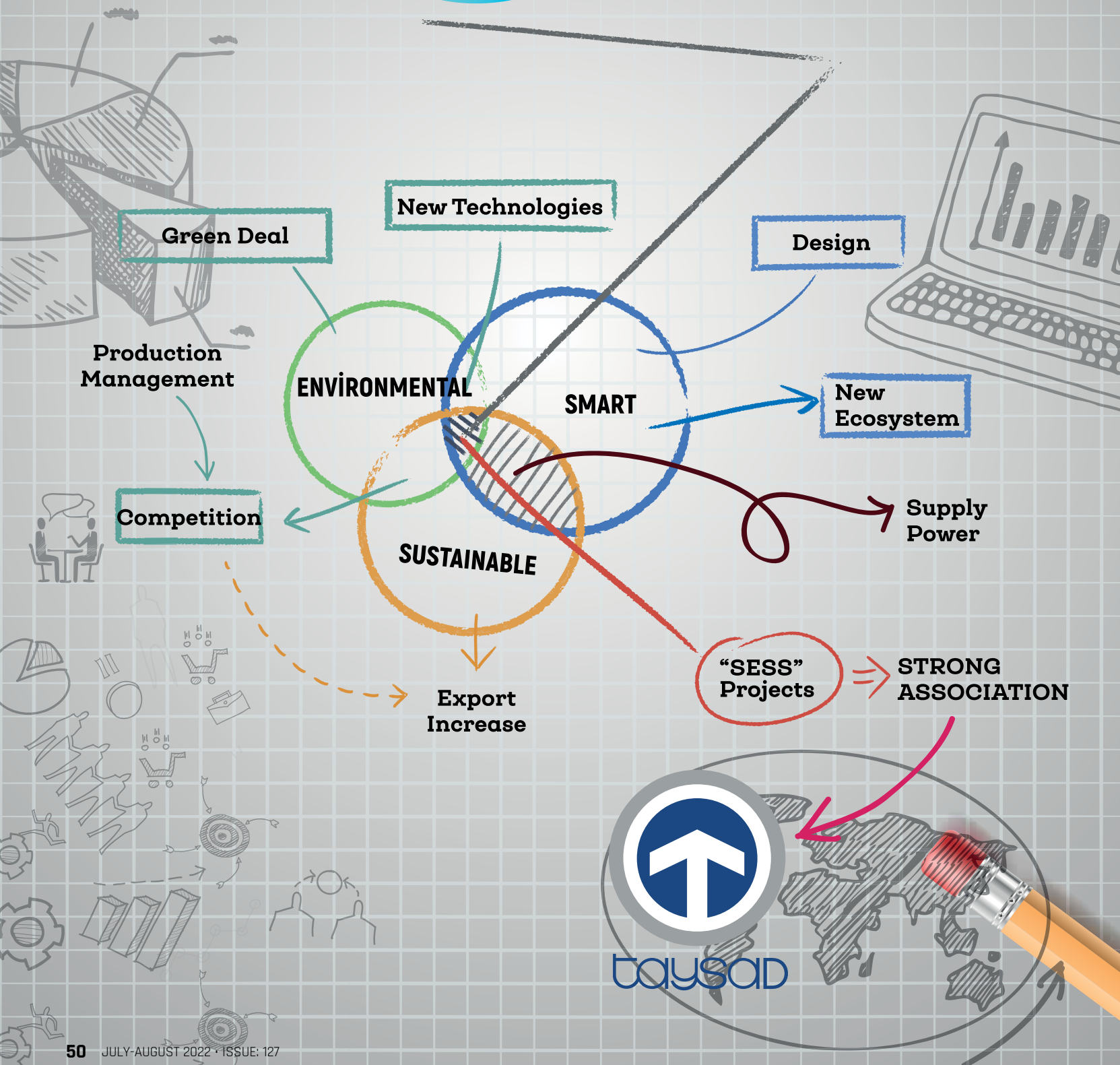
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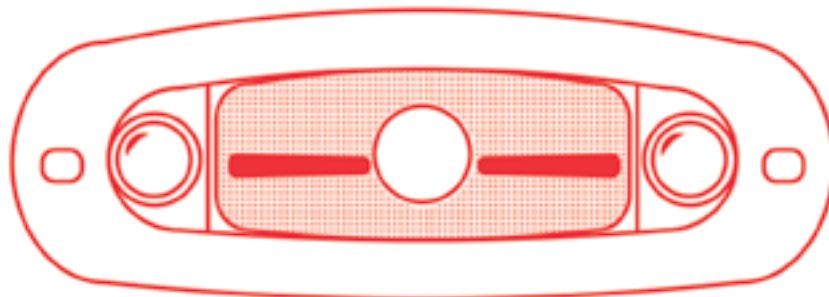


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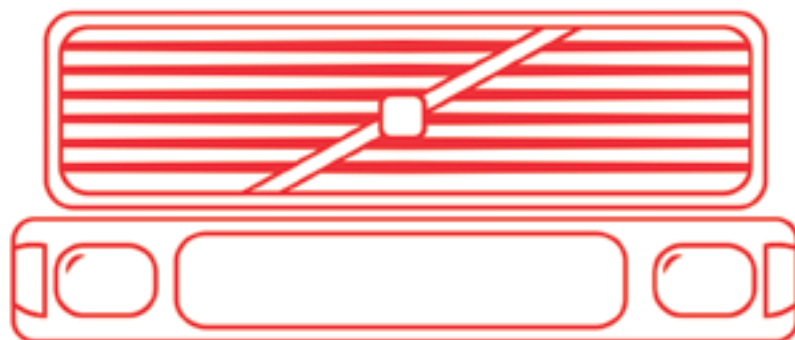


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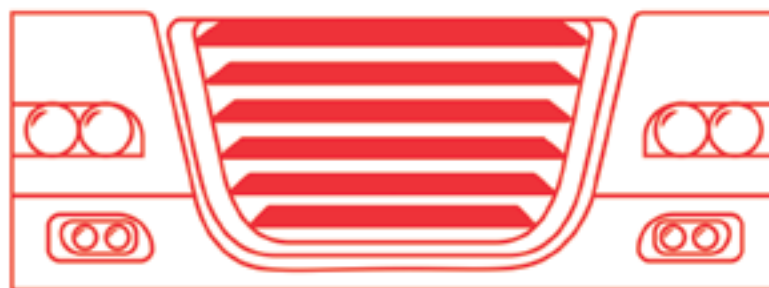




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# The Supply Chain Conference Organized by TAYSAD For the First Time This Year Brought Together All the Stakeholders of the Industry

*TAYSAD (Automotive Suppliers Association of Turkey), the Turkish automotive supply industry's umbrella organization, focused on the impacts of global changes on the supply chain at the Supply Chain Conference, which had the main theme of "Digital Transformation."*

TAYSAD gathered supply chain stakeholders together for the first time this year at the Supply Chain Conference, which is preparing for a major transformation in the "digital" aspect in light of developments in the automotive industry. On the axis of the automotive industry's transformation, developments in the supply chain, both on a global and national scale, were discussed at the event in Istanbul. The event, which had the main theme of "Digital Transformation", hosted many valuable names who are experts in their fields.

## **"We switched from offline to digital, from VUCA to BANI"**

Tülay Hacıoğlu Şengül, a TAYSAD Board Member, said, "2020 showed that uncertainties are possibly the only certain thing in our lives. We switched from offline to digital, from VUCA to BANI. While considering that VUCA, which stands for volatile, uncertain, complex, and ambiguous environment, had found its meaning with the pandemic, an American anthropologist, writer, and futurist offered a new term called 'BANI.' The 'B' in BANI stands for brittle. We are currently experiencing and will continue

to experience breakdowns in the supply chain and many other areas. Our responsibility is to take the necessary precautions to ensure that our operation runs well, even on such brittle ground. The 'A' in BANI stands for anxious. We see an increase in the anxiety levels of the people around us. The 'N' in BANI stands for nonlinear. Our old knowledge and experience may not be sufficient to deal with today's problems. Therefore, making long-term plans may not make much sense. A very clear beginning, a midpoint, but no end. We are at a point in the game where we are ready to go back and forth. The 'I' in BANI stands for



## **COME TO TURKEY, THE LINE DOES NOT STOP IN TURKEY**

TAYSAD Chairman of the Board of Directors, Albert Saydam, addressed all the stakeholders of the supply industry and said, "The line does not stop in Turkey, you are the ones who make this happen". Saydam stated, "With your support, the Supply Chain Conference will be able to continue as a hallmark event like our other organizations in the coming years."

## **FAST FISH SWALLOWS SLOW FISH**

**TÜLAY HACIOĞLU ŞENGÜL**  
TAYSAD BOARD MEMBER

→ TAYSAD Board Member Tülay Hacıoğlu Şengül said, "We are no longer in a world where the big fish eats the small fish. We are in an environment where the fast fish swallows the slow fish," and remarked on the advantages of digital transformation for the supply industry.





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AUTOMOTIVE TEST CENTER



## TOSB BİAS AUTOMOTIVE TEST CENTER

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incomprehensible. Such a brittle, anxious, non-linear environment makes many events and decisions incomprehensible."

**"We must maintain our digital maturity stage with an intelligent and autonomous supply chain."**

"We no longer live in a world where the big fish eats the small fish. We are in an environment where the fast fish swallows the slow fish," Şengül remarked, adding, "The world of BANI requires adapting to change, agility, flexibility, and correct risk and opportunity management to be successful on any fragile ground. In this instance, digital transformation becomes a critical tool that makes our lives easier with its leverage effect." Emphasizing that with the transformation in the automotive sector, companies should get rid of the traditional perspective and

focus on new competencies and skills with a game-changing, innovative mindset, Şengül said, "We must maintain our digital maturity stage with an intelligent and autonomous supply chain. In this respect, to be a part of the game in the globalizing world, and to take Turkey's position to the highest levels, we must focus on innovative thinking, being flexible and agile, and doing simple and high-quality work in all our processes."

**The impact of digital transformation on the supply chain has been discussed.**

At the conference, Prof. Dr. Gülçin Büyüközkan, Head of the Industrial Engineering Department at Galatasaray University, continued with her speech, entitled "Digital Transformation in the Supply Chain". While Norm Holding

**START THE CHANGE WITH YOURSELF**

**FATİH UYSAL**  
BOARD MEMBER

→ TAYSAD Board Member, Fatih Uysal, said, "The motto 'start the change with yourself' is indeed a very correct approach. I think it would be the easiest and fastest. At our conference, we discussed critical subjects such as supply chain risks and opportunities, digital transformation, sustainability, and the chip crisis. I would like to thank all of the presenters, sponsors, and participants for their contributions to the event."



**CRISES AND OPPORTUNITIES IN THE SUPPLY CHAIN**



A panel titled "Crisis and Opportunities in the Supply Chain" was also held at the conference. The moderator of the panel was Murat Palaoğlu, Head of KPMG Customs and Foreign Trade Services Department and Partner of the Tax Department. Ford Otosan Material Planning and Logistics Leader Gökşen Töre Sancak, Bosch Logistics Director Ersin Öztürk, SOGAD Board Member and Borçelik Executive Board Member Güvenç Temizel, and Ekol Global Growth Director Mehmet Şahintürk were among the speakers on the panel.



Supply Chain Director Mehmet Karaca shared the exemplary practices in Norm Holding, the Head of the Supply Chain Department of Istanbul University, Prof. Dr. Murat Erdal talked about the developments in the digital transformation field in logistics. ●



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# Turkish Automotive Industry Met at the 12<sup>th</sup> Aftermarket Conference

*The Turkish automotive industry met at the 12th Aftermarket Conference. During the event, critical issues such as the risks and opportunities that have evolved as a result of the automotive industry's transformation, the reflections of supply chain difficulties, and cyber security were scrutinized.*

The Aftermarket Conference, organized in collaboration with TAYSAD, OSS, and OIB (Automotive Industry Exporters Association), was held for the 12th time this year. At the event, the reflections on the change in the automotive industry on the aftersales market, and the problems and opportunities in the sector were evaluated. In keeping with tradition, The Aftermarket Conference organized a meeting on a worldwide scale this year, hosting surprise guests from abroad as well as Turkey. The surprise guests of the event, which was held as a video conference,

were Thorsten Muschal, President of CLEPA, Europe's umbrella organization of the automotive supply industry, and Cor Baltus, CEO of FIGIEFA, Europe's umbrella federation of automotive aftersales associations. The organization also included representatives from manufacturers, suppliers, distributors, and independent services.

**"We temporarily lost the leadership to the chemical industry. However, it is a fun race"**

TAYSAD Chairman of the Board Albert Saydam said, "Positive terms are used to represent the situation in automotive; we even

## TURKISH SUPPLIERS ARE READY TO TAKE AN ACTIVE ROLE

ALBERT SAYDAM

Chairman of the Board

→ Who will lead in vehicle segments or regions where electrification is not available? Absolutely, we can take it. Or, which more flexible suppliers will be able to meet the need for software in connectivity instead of large companies? I think that both we and the Turkish suppliers are ready to play active roles in this situation.



say 'a point open to progress' at the conference's opening. But today, it is tough to find positive expressions to describe the situation of the economy in the automotive industry. There are other factors besides the



## THE MOBILITY OF TOMORROW WILL BE DIFFERENT

THORSTEN MUSCHAL  
CLEPA Chairman of the Board

→ Connectivity, on the one hand, digital transformation, on the other hand, and environmentally friendliness, on the other... Various improvements, such as more collaboration between vehicle manufacturers and suppliers, will be required.



## CYBER SECURITY AND DATA PRIVACY

COR BALTUS  
FIGIEFA Chairman of the Board

→ I think we should be able to evaluate the data inside the vehicle. We will need this so that our services can be delivered to the right place at the right time while maintaining privacy.





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destructive trends, which are expressed with the abbreviation CASE (Connectivity, Autonomous Driving, Car Sharing, and Electrification), which are in the lives of all of us. For instance, the risk of geopolitical crises or even war, supply chain disruptions, or the high rise in commodity prices.

Maybe, there was one last addition to these. For 16 years, the automotive industry has been the leader in our country with 30-billion-dollar export. In the last two months, I think we temporarily lost this leadership to the chemical industry. However, it is a fun race. We believe that by taking the right steps, we will once again reinforce our leading position in the national economy in this race."

#### **Date for the Turkish automotive aftermarket: 2035!**

OSS Association Chairman of the Board Ziya Özalp said, "Zero diesel and gasoline vehicles still have a very substantial market dominance compared to electric vehicles.

Considering the average age of the Turkish car park, this structural transformation, which is likely to be completed within the next 10 years, is expected to have a greater influence on the Turkish automotive aftermarket after 2035."

OİB Chairman Baran Çelik stated that "It is necessary to emphasize that the aftermarket sector will also be affected by this transformation, and that it should take action in this direction at this time" by highlighting the areas that need to be invested in vehicles such as digital instrument panels, cameras, sensor technologies, charging equipment, power distribution systems, fuel cells, innovative and light materials, and multimedia systems.

Thorsten Muschal, President of CLEPA, said, "There is a serious demand for electric vehicles. This means a great transformation for our industry. The mobility of tomorrow will be different. Connectivity, on the one hand, digital transformation, on the other hand, and environmentally friendliness, on the other... Various improvements, such as more collaboration between vehicle manufacturers and suppliers, will be required."

#### **In order to protect both cyber security and privacy...**

Cor Baltus, President of FIGIEFA, stated that as vehicles are becoming more connected to each other day by day, and as a result, critical information is produced. Baltus stated, "Today we can launch a discussion in Europe

#### **WE CAN EMBRACE ALL THE TROUBLES BY ACTING TOGETHER**

**ZİYA ÖZALP**

OSS Chairman of the Board

→ Supply problems, exchange rates, and increases in costs are also the most important problems experienced by our industry. These are accompanied by cargo cost and delivery issues, as well as customs and cash flow problems. We can overcome these challenges by working together as all stakeholders in the sector, following trends, and generating self-renewing business models.



about who will be in control of this data. As independent companies, we trust the manufacturers of the vehicles." "We are talking about technological innovations that can protect both cyber security and privacy," said Baltus, adding that "It is very important that we can not only access the data but also control the data. I think we should be able to evaluate the data inside the vehicle. We would like to express that we need this so that our services can be delivered to the right place at the right time while maintaining privacy. Access to information within the vehicle must be secured in order to protect the interaction between a human and the vehicle. For this, it is necessary to create a framework based on responsibility and endurance." ●

#### **ACTION MUST BE TAKEN IN ADVANCE**

**BARAN ÇELİK**, OİB Chairman of the Board

■ The added value in vehicles and components exported from Turkey is at great levels, and the rate of localization is very high. However, it is estimated that by 2030, one in every two vehicles sold in the world will be electric, and significant steps are being taken to transform the industry in this direction. If this occurs, the localization rate and added value of our industry are at risk of rapidly decreasing. For this reason, it is essential that we invest in battery technologies and vehicle software to be used in new generation vehicles to maintain the added value.





# FASTENING THE PROCESS TO SUCCESS



Thanks to our continuously improving technological infrastructure, in-house production approach and passion for innovation; as **Norm Fasteners**, we are growing and developing ourselves in line with the needs of the sector.

# The third Event of the "Electric Vehicles Day" Series of TAYSAD Was Held in Bursa

*TAYSAD organized the third "Electric Vehicles Day" event in Bursa. In the event where the axis shift in the sector following the transformation experienced by the automotive industry worldwide was discussed, the steps that the supply industry should take and the trends shaping this transformation were discussed.*

In the event held in Bursa, which was attended by many experts in their fields, the repercussions of the radical transformation in the automotive sector on the supply industry were discussed. In the organization, where the steps that the supply industry should take in the field of electrification are discussed, the details of the road map that should be created for the supply industry in this context are shared.

TAYSAD Vice Chairman Berke Ercan, who made the opening speech of the event organized

under the sponsorship of Tragger, Numesys and Karel Electronics, said the following: "Our priority is electrification. The details of the change in technology are actually not very clear yet. It is known that it will change, and it is known that it will evolve, but there are different opinions about the direction in which it will evolve. Companies also invest in different technologies in line with their own strategies."

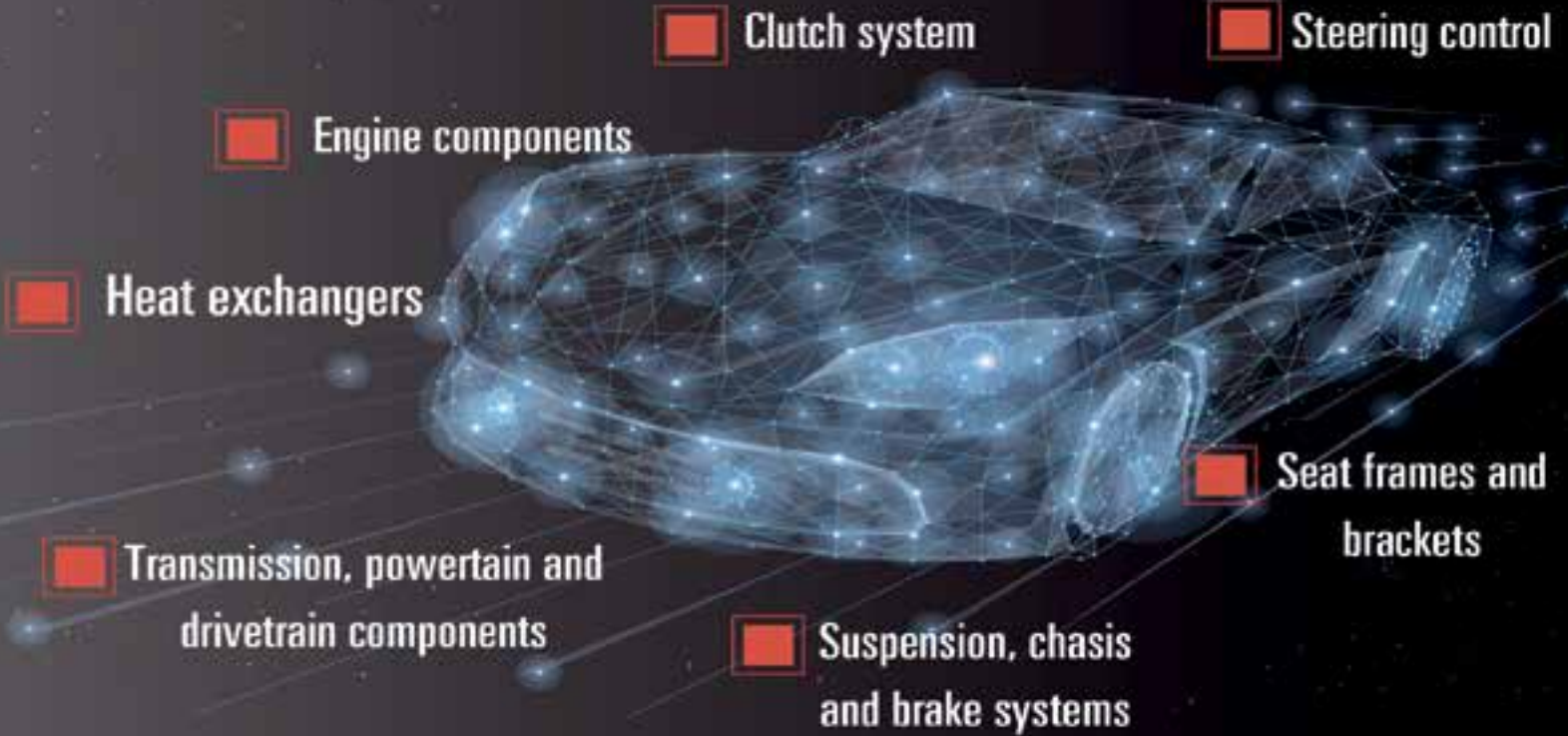
The event continued with Renault Group Local Purchasing Director Önder Plana's speech entitled "Electrification; Axis Shift in Automotive Industry

and Expectations from Supply Industry". Karel Electronics Information and Communication Technologies Engineering Director Alper Sarıkan also mentioned the developments in this context under the title "Increased Share of Software in Electric Vehicles with Computerized Vision under the Control of Power". FEV Turkey Electronic Driving & Power Electronics Department Manager Abdullah Kızıl provided information about the changes in the field of engine and powertrain technology trends in electric vehicles. ●





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# TAYSAD's "Equalize Opportunity, Diversify the Talent" Project

TAYSAD has undertaken an important project to increase the employment of female employees in the automotive supply sector. TAYSAD aims to support gender equality with the project named "Equalize Opportunity Diversify the Talent (FEYÇ)" implemented in cooperation with the European Bank for Reconstruction and Development (EBRD) and Arbor Impact.

While the automotive sector focuses on developing solution processes for problems such as cost increases, chip crises and raw material shortages, it also experiences a decrease in the percentage of female employees. The change in labor force participation figures during the pandemic period has

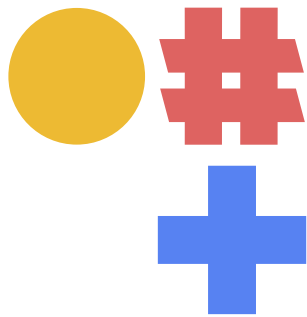
the consultancy company Arbor Impact, has implemented the project named "Equalize Opportunity Diversify Talent (FEYÇ)" in order to increase the number of female employees in the sector.

Female employment will decrease by 13 million compared to 2019! Providing information about the details of the project, TAYSAD

inequalities" and added that "Women, children, the elderly, people living on the poverty line and people with disabilities were most affected by these difficult situations. According to the International Labour Organization, female employment decreased by 4.2 percent worldwide between 2019 and 2020, which means 54 million job losses. Today, the number of female employees is projected to decrease by 13 million compared to 2019."

**The female employment rate in Turkey is 28.9%**

"According to the statistics published by TurkStat for the third quarter of 2021, we see that the rate of women's participation in the workforce is 34.2 percent, while the employment rate remains at 28.9



## Equalize Opportunity, Diversify the Talent

affected even more negatively the employment of female employees, who are already employed at rather low rates in the sector. Based on this problem, TAYSAD, the umbrella organization of Turkey's automotive supply industry, has carried out a study that will be a role model for the entire automotive sector to support gender equality. In this context, TAYSAD, in cooperation with the European Bank for Reconstruction and Development (EBRD) and

Supervisory Board Chairwoman Özge Özen Kural said that the implementation of the project started in September last year. Özge Özen Kural stated that "While experiencing sectoral difficulties such as shrinkage in production, chip crisis, raw material shortage; on the other hand, we faced many difficulties such as climate crisis, sustainability, unequal participation in employment and life, increasing poverty together with the pandemic, deepening

### THE PROJECT AIMS TO SPREAD THROUGHOUT THE COUNTRY

Within the scope of the project, it is planned that 5 pilot organizations selected from among TAYSAD members will develop practices that will increase the number of female employees during 12 months, according to the requirements of the production sites. The project, which aims to support the automotive supply sector in terms of blue-collar female worker employment, targets to spread the wave across the country after the automotive supply industry.



# STRONGER TOGETHER

## DİTAŞ continues its growth with a new partnership in steering and suspension parts.

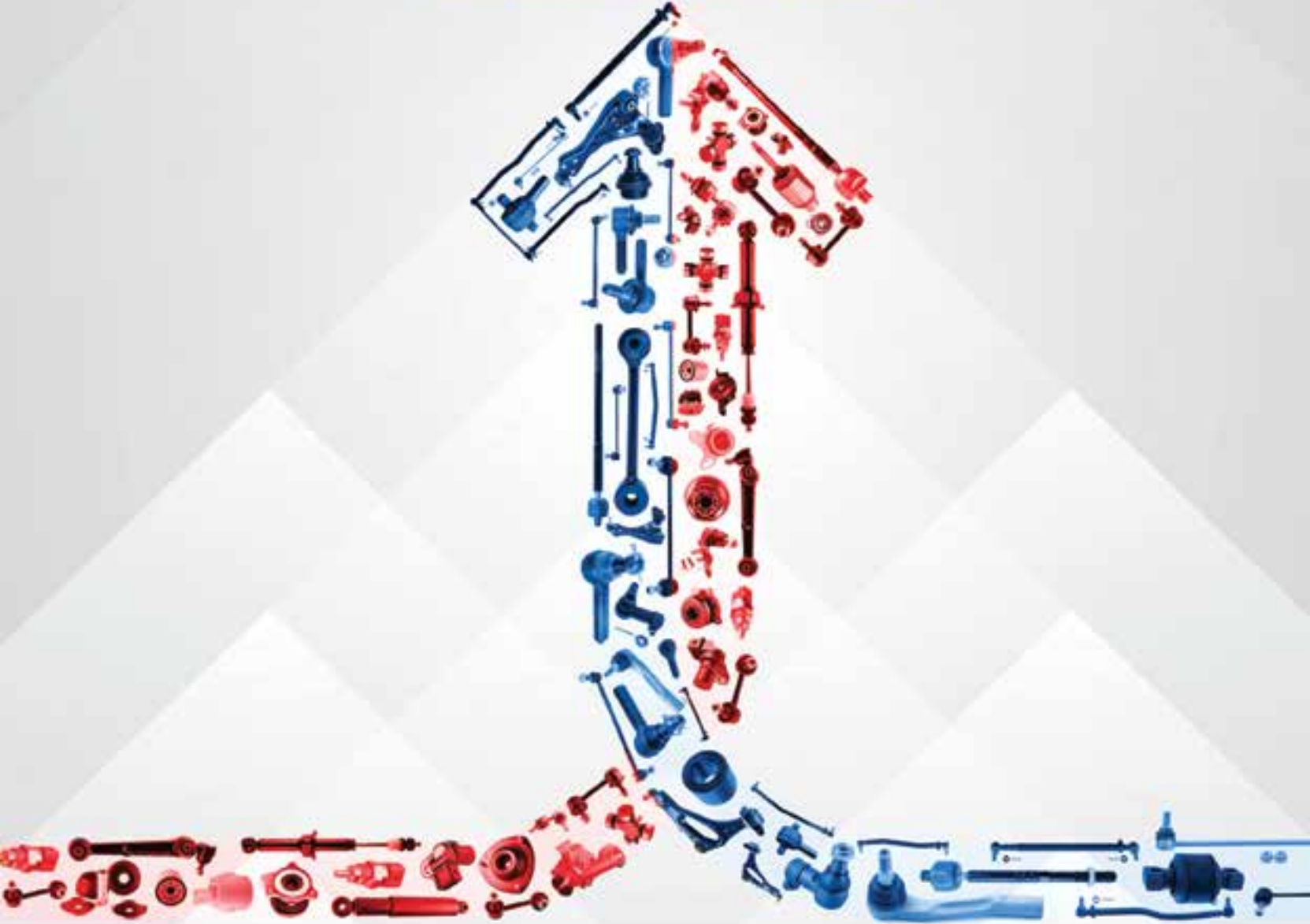
DİTAŞ acquired 70 percent of both **Profil Sanayi ve Ticaret A.Ş.**  
and its subsidiary **3S Kalıp Aparat Makine Sanayi ve Ticaret A.Ş.**

Both companies are located in Bursa, Türkiye. **Profil Sanayi** has a 55 year history  
in automotive supply industry, serving OEMs, OES and aftermarket distributors.

**3S Kalıp** is specialised in sheet metal dies and fixtures.

Through this acquisition **DİTAŞ Group** has expanded its suspension and steering components  
product range to passenger cars, light commercial vehicles, heavy commercial vehicles,  
agricultural tractors, off-road construction and defence industry vehicle segments.

The Group has also become a supplier of stamped parts,  
rollform parts, sheet metal dies and fixtures.



 **PROFIL**  **PRS**  **3S KALIP**

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## RESEARCH REPORT PUBLISHED



The Research Report is carried out within the scope of the "Equalize Opportunity, Diversify Talent Project". It focuses on gender equality in the automotive supply industry. The research report presents the current situation regarding gender equality and equality of opportunity in the automotive industry, equality policies in companies and their future visions with a sample composed of the TAYSAD members. It aims to outline the profile of the sector and identify the possible development areas.

percent", Kural said, "When we look at the Global Gender Inequality Report, we are only 133rd. While 99.5 years were needed to close the gap between gender inequality in 2019, this period increased to 135.6 years after the pandemic."

Automotive supply sector female employment rate is 19 percent. Stating that they organized a survey study with the participation of 112 TAYSAD member organizations, Kural mentioned the results of the study. Özge Özen Kural said, "The rate of female employment in the automotive supply sector is 19 percent and this rate is below 10 percent in approximately 30 percent of our members. 90 percent of our members evaluated positively the attitudes of senior management

and leadership teams towards ensuring gender equality. This is a motivating factor and it sheds light on our future work, which is open to progress. Following these findings; almost half of our members, who are positive about TCE-oriented studies, stated that they do not have a policy on this issue and that they do not have any practical work in this direction. 18 percent of the participants have a preference in terms of gender while recruiting their personnel. In 80 percent of the positions, male candidates are preferred."

### A more egalitarian automotive supply industry...

Kural stated, "With our project, steps have been taken so that the current picture can be replaced with one which is more egalitarian that leaves no one behind. With more than 480 members and more than 220 thousand employees, TAYSAD is located at a critical point that will initiate the transformation for equality, at the intersection of a network extending to civil society on one side and to the private companies on the other side. From today on, we are taking steps for change and taking action to create a work environment that is egalitarian in terms of our policies and practices. We aim to increase the proportion of female employees in the sector with an approach to gender equality that will be a role model in the automotive sector. We aim to spread our project throughout our country starting from the automotive supply industry." ●

## SUMMARY FINDINGS FROM THE REPORT



►► Issues such as women's inability to access high-level positions in business life, wage inequality, and glass ceiling syndrome are associated with social norms. As a result, women are faced with hesitation to take initiative and a lack of self-confidence.

►► In the automotive sector, which is a male-dominated sector, it is important to develop policies for these problem areas. The criteria for success in the projects to be developed are the existence of internal analyzes and data, cooperation, and changes in perception by raising awareness and sustainability.

►► What the research findings show primarily is that companies have strong perceptions and motivation to ensure gender equality. However, this motivation has not yet turned into action. Although 90% of the companies stated that the efforts to ensure gender equality will be welcomed, the rate of those who carry out concrete work is 47%.

►► The main factor affecting the position of women in business life is perceptions of gender equality. The perception that the women are the caregivers of the family is one of the perceptions that are most difficult to change.







# Electric vehicles

are lighter and more environmentally with **aluminum.**

# Bosch is Celebrating its 50th Anniversary of Starting Production in Turkey

*Bosch Turkey increased total net sales by 47 percent to TRY 38.2 billion in 2021, domestic consolidated sales increased by 42 percent to TRY 14.5 billion.*

**B**osch, the leading global supplier of technology and services, ended its 2021 fiscal year with total net sales of TRY 38.2 billion in Turkey, registering a growth of 47 percent over the previous year, including sales of non-consolidated companies and internal deliveries to affiliated companies. The company reached consolidated sales of TRY 14.5 billion in 2021 in Turkey, thus registering strong growth of 42 percent in local currency compared to the previous year. Daniel Korieth, President and Representative of Bosch Turkey and Middle East, stated: "High demand and our successful sales strategy, especially in the industrial technology, consumer goods and mobility solutions sector, were the basis of our strong growth in 2021."

Bosch invested TRY 2 billion in Turkey last year. The number of employees remained stable at nearly 17,900 as of December 31, 2021. Korieth said, "As Bosch Turkey, we aim to reach the same level of sales volume this year as last year, despite current economic challenges. In 2022, we plan to further increase digitalization of our production



*Daniel Korieth, President and Representative of Bosch Turkey and Middle East*

facilities in Turkey. We also want to strengthen our university collaborations with continued investments in development and training cooperations. In this way, we contribute to the society and especially to further enhancing the competencies of young talents."

## **Production facilities with global competencies**

Focusing on value-added production and new technologies, Bursa

Powertrain Solutions Plant started to produce a new generation high-pressure pump for gasoline engines in September of 2021. In this way, a product range other than diesel and gasoline injector has started to be manufactured in Turkey for the first time. In the manufacturing of these products, the highest technology Industry 4.0 solutions equipped with precision adjustment and measurement systems, advanced technology laser welding systems and smart camera systems are used.

Producing a wide range of mobile hydraulics, the Rexroth Plant in Bursa continues to grow. Last year, Bosch has put its second Engineering Center into operation in Bursa, at Bosch Rexroth plant, after Istanbul. The company aims to transform this Engineering Center into an R&D Center at the plant that provides engineering services to Bosch Rexroth plants around the world within five years. ●

## **50<sup>TH</sup> ANNIVERSARY OF STARTING PRODUCTION IN TURKEY**

→ Bosch started business activities in Turkey as early as 1910. Having opened its first manufacturing facility in Bursa in 1972, the company celebrates its 50th production anniversary this year. This first facility established in the automotive sub-industry sector in Bursa was followed by factories producing home appliances, heating-cooling systems and hydraulics over the years. Daniel Korieth said: "While Turkey has become one of the important worldwide bases of the Bosch Group in terms of production, R&D and export in 50 years, we in turn have offered continuous economic and social benefits to the country. With exports of TRY 23.7 billion to more than 40 countries around the world in 2021, we contributed 1.2 percent to Turkey's overall volume and maintain our position among the leading companies."



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## ABB Co-operates to Strengthen Low-Carbon Community Commitment

*ABB announced that it has joined Microsoft's Energy Efficiency Movement. Cooperation emphasizes the common goal of reducing carbon emissions from activities and strengthening industrial decarbonization.*

**L**aunched by ABB in March 2021, #energy efficiency movement is a multi-stakeholder initiative aimed at promoting awareness and action to reduce energy consumption and carbon emissions to combat climate change. Companies are invited to make a public commitment to encourage other companies to join the movement and take action. Microsoft is one of the largest

corporate partners to date. Companies are looking for various opportunities to decarbonize in the face of rising energy costs and pressures from customers, employees and governments to take action on sustainability. Energy efficiency is gaining urgency throughout the industry. A recent study commissioned by ABB found that energy efficiency is one of the top priorities for managers around

the world. This study showed that 89 percent of industry leaders will increase investments in energy efficiency over the next five years, and 54 percent aim to achieve net zero emissions. ●



## ABB E-mobility Opens The Largest DC Fast Charger Manufacturing Plant in Italy

*ABB has signed a contract with Scania, a leading global provider of shipping solutions, to provide a comprehensive range of robotic solutions for Scania's new and advanced automated vehicle battery assembly facility in Sweden.*

**A**BB E-mobility has strengthened its position as the world leader in EV charging solutions with the opening of the E-mobility Excellence Centre in Valdarno, Tuscany, the largest DC fast charger manufacturing facility to date.

ABB DC charging solutions will be produced at this facility, which will support the electrification of all transport sectors and exemplify ABB E-mobility's commitment to building a zero-emissions future with smart, reliable charging solutions for electric vehicles. \$30m investment in the new Valdarno plant by ABB, which sells more than

680,000 devices for Electrical Vehicles in more than 85 markets, means it has more than doubled its production capacity. The new facility will produce more than 10,000 DC chargers per year.

While 14 percent of 2021 revenues are invested in R&D, the Valdarno facility will host an area of 3,200 m2 devoted to development and prototyping. Here, about 70 of the plant's more than 500 employees will be particularly dealing with the implementation of innovative solutions, new software and product lifecycle management tools to fully integrate R&D activities with production. ●



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# With trexDcas SAS (Smart Assembl Station), Ensure the Quality of Your Assembly Operations

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## **What is SAS (Smart Assembly System)? Why was it designed??**

It is a system that provides digital management, error-free and traceability of operations on assembly lines.

Thousands of cordless drills, hand tools and apparatus are used for assembly processes in assembly production lines. In these lines, where a very high production of 1,500 products per day are manufactured, it is very important to guarantee the number of tightening for each vehicle, and the use of apparatus and hand tools that must be used to prevent errors. In a traditional way, Quality problems that occur due to forgetting to use screws, hand tools or apparatus are detected at quality control stations. This kind of detection and type of fixation leads to significant repair work, such as disassembling and reinstalling many backward assembled parts, and inefficiencies with line downtimes.

In WCM businesses, repetition and capture matrices are closely monitored by quality teams. With the traditional solutions, it is

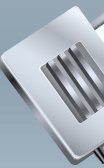
not possible to eliminate the risk in many operations. SAS is much more economical than the existing classic solutions, so you can eliminate risks in almost all your operations.

## **What Does SAS Do?**

In general, the system can manage manual operations, barcode tracking and verification operations, I/O - HMI - PLC related operations, charged tightening tools. It also ensures that the relevant operations are carried out. When necessary, it stops the line to continue performing the operation.

With the Product-Vehicle data collected in a real time, the system provides instant tracking of CIS (Series) and its location in the line.

Cordless drills (charged tightening tools); works as long as the batteries are full. SAS prevents the operator from triggering more than the number of tightening required for the relevant operation, thus enabling the use of battery in a more efficient way.





In this way, it eliminates the downtime resulted by battery being off.

In addition, the number of tightening required for the relevant operation is an important data that must be guaranteed in terms of whether the operation is completed correctly or not.

SAS not only makes the tightening tools smart, it also makes many equipment and apparatus used in the field smart and more advanced. For example; It allows the monitoring of other apparatus such as the button apparatus and gear adjustment apparatus which are used during the installing of the gearbox plug.

**Who can use SAS and what are the benefits?**

All companies that have an assembly line can use SAS.

It is easy to install and can be commissioned quickly. It has user-friendly configuration and reporting interfaces. It reduces the number of risky operations, targets zero errors and increases customer satisfaction. It provides easy adaptation with any production platform. It is an easy solution to deploy everywhere.

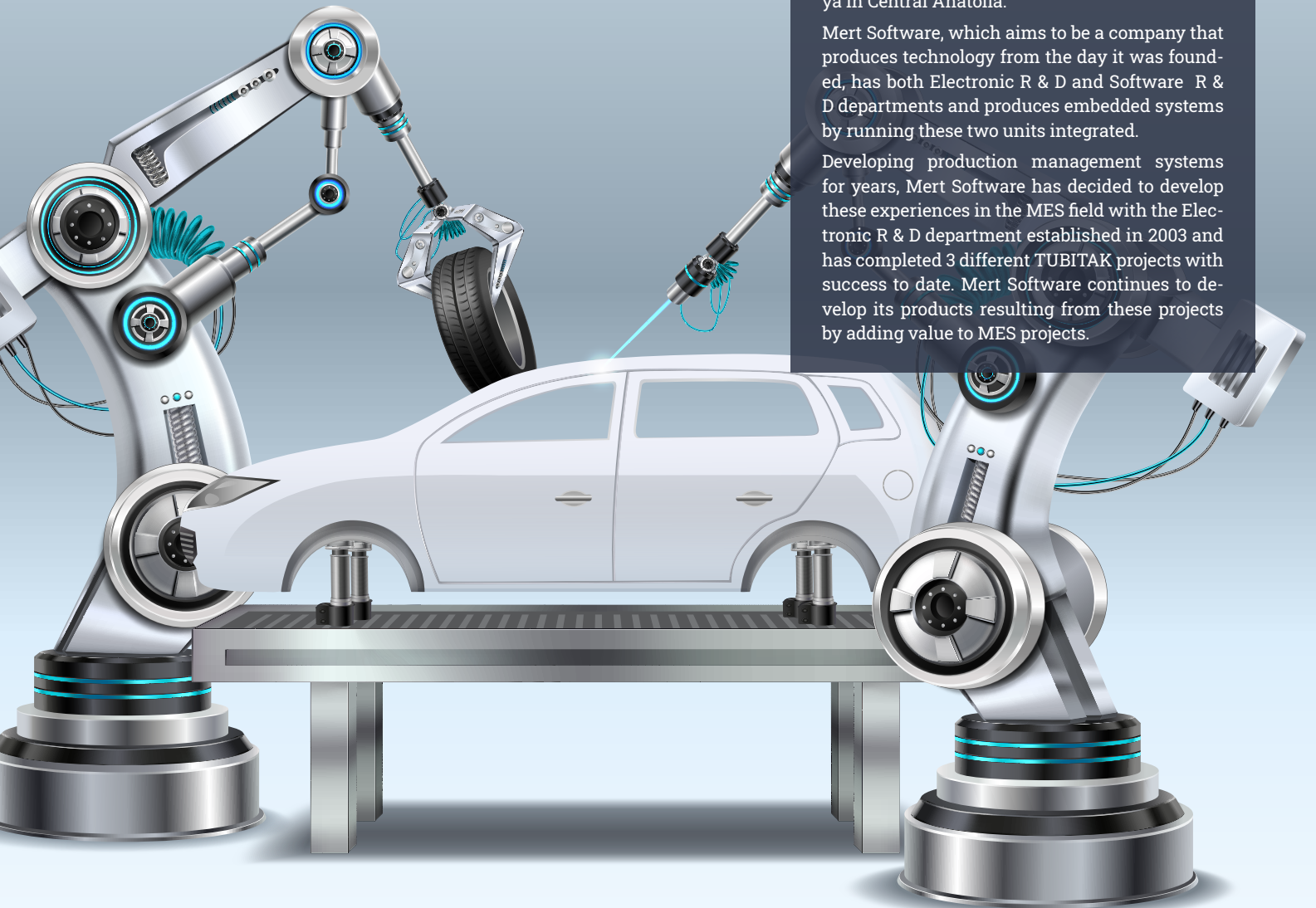
**MERT SOFTWARE**

→ Mert Software, which has been producing MES software and hardware solutions since 2003, offers its products to its customers under the registered trademarks of "trex" and "DCAS".

As an R & D and Technology center continues to serve its customers on an area of 3.000 square meters. Mert Software carries out R & D, product development, sales, and after-sales support activities with approximately 90+ employees in its offices in Bursa in the Marmara region and Konya in Central Anatolia.

Mert Software, which aims to be a company that produces technology from the day it was founded, has both Electronic R & D and Software R & D departments and produces embedded systems by running these two units integrated.

Developing production management systems for years, Mert Software has decided to develop these experiences in the MES field with the Electronic R & D department established in 2003 and has completed 3 different TUBITAK projects with success to date. Mert Software continues to develop its products resulting from these projects by adding value to MES projects.



## CGT50 (Çağatay) and Cengaver UAVs Receives Great Interest at SEDEC

*Turkey's innovative UAV manufacturer UAUVERA exhibited its own CGT50 and Cengaver UAVs at Turkey's Homeland and Border Security Fair SEDEC 2022. The UAUVERA booth attracted great attention from many domestic and foreign participants of the fair.*

**U** AUVERA, one of the innovative UAV manufacturers of Coşkunöz Holding companies in Turkey, attracted great attention from domestic and foreign participants with its stand and products exhibited at SEDEC 2022, the homeland security and border security fair. The representatives from the Ministry of Interior, the Ministry of National Defense, the Presidency of Defense Industries (SSB), the National Intelligence Organization as well as end users, procurement authorities, purchasing agents and SMEs from nearly 50 countries came together at the SEDEC fair held, with the support of the Defense Industry Presidency and the Union of Defense and Aviation Industry Exporters, for the third time in Ankara ATO Congress and Exhibition Palace Congress on June 28-30, 2022. At the fair, UAUVERA exhibited CGT50 and Cengaver UAVs designed with national resources.



CGT50 and Cengaver UAV attracted great attention from visitors from the opening of the SEDEC 2022 fair to the last day. In addition to the representatives from the Gendarmerie General Command, many participants and company officials, especially the representatives of Argentina, Bosnia and Herzegovina, Netherlands, Croatia, Pakistan and Kenya Ministry of Defense, visited the UAUVERA stand and received information about UAVs and other products and activities provided by UAUVERA. ●

## FLY BVLOS Has Participated in the GISS Symposium

*Fly BVLOS Technology, which brought a new breath to the drone industry, became the only drone manufacturer to participate in the Global Implementation Support Symposium 2022 organized by the International Civil Aviation Organization (ICAO) in Istanbul this year.*



**T**he 'Global Implementation Support Symposium', which was organized by the International Civil Aviation Organization brought together the aviation authorities in the world, national and international organizations in the sector, senior managers and professionals of air navigation service providers and representatives of academic institutions. The symposium was held in Istanbul Hilton Şişli Bomonti Hotel between June 28 and July 1. The officials from Fly BVLOS Technology, a subsidiary of Coşkunöz Holding provided information about UAVs, technology and training services at its stand at the congress as the only company participating in the field of civilian UAVs. ●

## Care Your Career Scholarship Provided by Coşkunöz Education Foundation

**T**he new period of applications for the 'Care Your Career' scholarship program has started. The program implemented by the Coşkunöz Education Foundation focuses on studies that will bring new competencies to young people. The most important difference between Care Your Career compared to conventional scholarship programs is that it not only supports students financially but also contribute to their professional development. In addition to monthly financial support, a separate project is created

for each student with Care Your Career, which takes into account the internship, employment and career needs of the students. Selected students are assigned to these projects as leaders. A mentor from the participating companies is assigned to each and every student. While mentors share their professional experience with students, they guide students in the implementation steps of the project and support them to carry out their internships in the most appropriate way. ●



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**TKG**  
OTOMOTİV

# Hitachi Astemo "Effective Education Equal Future" Project For Female Students From Turkey

*Turkey Factory of Hitachi Astemo, which is a global automotive technology company employing 90,000 people in approximately 140 facilities in 27 countries, continues to append a signature to the meaningful works from each other at the point of providing contribution to society.*

**H** Hitachi Astemo Turkey Factory continues its social responsibility projects without slowing down. The company has appended a signature to the 'Effective Education Equal Future' project, which is a continuation of the 'My Profession is My Future' project, for the purpose of directing girls to vocational education and becoming stronger in business and social life.

It is targeted to provide professional development to the female students within the scope of the project that will be realized in cooperation with Ali Osman Sönmez Vocational and Technical Anatolian High School.

Elif Akça, Hitachi Astemo Turkey Human Resources and Communications Manager, who spoke at the signing ceremony of the project, said that they have appended a signature to very serious works at the point of providing



contribution to the society. Akça said that "we implemented our 'Effective Education, Equal Future' project to focus on Social Gender Equality that is one of our 3 major social responsibility projects and realize our target for the girls to reach quality education opportunities in this year. We will be in cooperation with Ali Osman Sönmez Vocational and Technical Anatolian High School in our new project, which we set out with the slogan of 'Today's Youth, Tomorrow's Strong Women Will Grow Up With This Training Program'" by stating that they take care of making works within the framework of the United Nations Sustainable Development Principles, of which they are a signatory.

## 'Machinery Department Girls' class will be created

Akça, who stated that they will create 'Hitachi Astemo Turkey Machinery Division Girls' Class' for

the purpose of providing professional development to the female students at Ali Osman Sönmez Vocational and Technical Anatolian High School within the scope of project, noted that the students will graduate strongly at the end of their high school education, they will graduate with all the technical information about the profession, they will graduate after completing the certificates of all technical devices that they can use in the field of production and they will graduate in all human subjects in some way.

Akça said that "we will coach them in their senior year on this issue as well. Our students will be trained as professionals with all the competencies sought in the sector in the 12th grade, by stating that the students will be able to continue to university at the end of the 4th year if they want". ●

## WE ARE STRONG TOGETHER

→ Elif Akça, who explains that the companies have some difficulties in finding qualified female employees in the automotive industry, especially in the field, and they would like to append a signature to such project for this reason, underlined that they will be involved in all kinds of social projects in order to increase the number of female employees in the companies, as they have done so far. Akça said that "we are very happy that many companies, whether in the same sector as us or not, are involved in such projects, especially for the women to become stronger in business life. Let's be together, let's be together in other beautiful projects.



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*Elektronik Dönüşüm*

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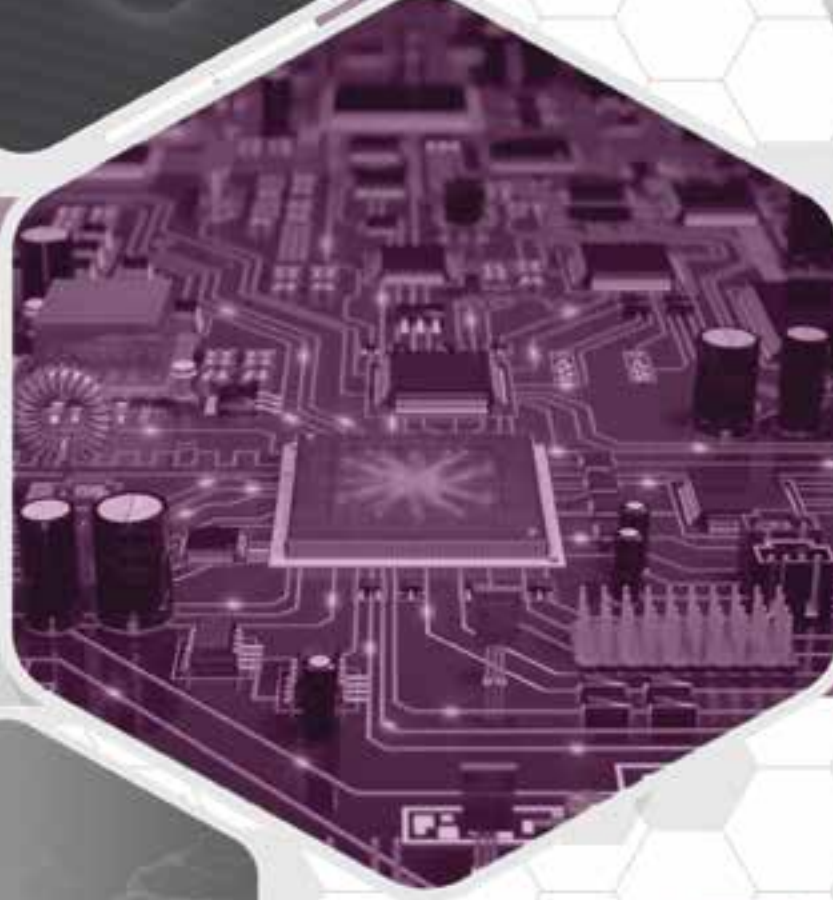


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*Değişim Başlasın...*



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## Maxion İnci Wheel Group Became the Main Sponsor of the 17<sup>th</sup> Aegean Human Management Summit

*The 17<sup>th</sup> Aegean Human Management Summit organized by the Aegean Branch of the Human Management Association of Turkey (PERYÖN) was held with the main theme of 'Courage'.*

**T**he Aegean branch, one of the 5 regional branches of PERYÖN (Turkish Human Management Association), the first non-governmental organization established in the field of Human Management in Turkey, brought together more than 500 industry professionals, consultants, managers, academicians, and university students for the 17th time this year at the Aegean Human Management

Summit. Maxion İnci Wheel Group continues its journey with courage with many award-winning projects in different categories

Maxion İnci Wheel Group, which carries out its operations with the awareness that human is the most important resource in business life, contributed to and participated in the Summit as its main sponsor. Maxion İnci Wheel Group, which has a holistic approach to Human



Resources and has many pioneering and exemplary applications, has won many awards in this field. At the PERYÖN Human Value Awards, the Group won first prize in 2020 in the category of "Value Creating Applications", in the field of Digital Transformation in Human Resources, and in 2021 in the category of "Applications Supporting Quality of Life" with its strong Health, Safety, Environment and Quality Policy..●

## The Semester Finale of the Water Explorer Program Initiated in Turkey by Maxion İnci Wheel Group Was Held

*The spring activities of the international Water Explorer Program, which aims to raise water awareness among students aged 8-14, were carried out with the support of the Maxion İnci Wheel Group.*

**M**axion İnci Wheel Group, which made sustainability one of the foundations of corporate culture, took responsibility for solving water problems as part of this understanding and realized the spring period of the Water Explorer Program, which aims to raise water awareness for students around the world. Within the scope of the Water Explorer Program, training, bazaars and festivals were held, and projects were produced to provide solutions to existing problems. The event, in which the works of 5 schools (Çağatay Uluçay Primary School and Mehmet Keskinoglu Secondary School from Manisa and Şehit Yüzbaşı Ali Rıza Sadak Primary School, Şehit Yüzbaşı Ali Rıza Sadak Secondary School and Bahar Yıldırım Primary School from Izmir) were shared and their presentations were evaluated by the jury, ended with the awarding of prizes at different categories to the participating schools.



Water Explorers were evaluated by a jury composed of Nilay Dökümcü from WWF (World Wildlife Fund), Faculty Member of Karadeniz Technical University Sürmene Faculty of Marine Sciences, Marine Transportation and Management Engineering and 4th Antarctic Expedition Leader Prof. Dr. Ersan Başar, Journalist from Dünya Newspaper Fatoş Karahasan, Faculty Member of Manisa Celal

Bayar University Bioengineering Department Assoc. Dr. İrem Deniz Can, Journalist from Ege'de Son Söz Newspaper and 2440th District Rotary Governor Nedim Atilla, program executive Founder and Managing Director of Mikado Sustainable Development Consulting Serra Titiz, and Director of Shared Functions at Maxion İnci Wheel Group Gülçin Tekin..●





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## Automotive Supply Industrialist Sarigozoglu Is In Kocaeli

*With 65 years of innovative and entrepreneurial tradition, Sarigözoğlu started its investment in Kocaeli Başiskele.*

**T**he company, provides die and press metal stamping services to Mercedes, Fiat, Renault, M.A.N, BMW, Porsche, Mitsubishi-Fuso, Otokar, Bosch and especially Ford Otosan, adds a new one to its several plants throughout Turkey.

The foundation of the facility, which will produce new generation electric vehicle inputs in Kocaeli Başiskele, was laid with the participation of Ford Otosan competent professionals and Başiskele Mayor Mehmet Yasin Özlü.

The facility, which will start production in the first quarter of 2023, will not only produce parts for environmentally friendly vehicles, but will also be equipped with environmentalist features in the building project. Renewable energy and rainwater harvesting systems are the leading features in the project.

Robot-automated production and



**Mr. Mustafa Sarigözoğlu and Mr. Levent Sarigözoğlu**

assembly equipment will be used at the facility in accordance with the industry 4.0 concept. Logistics execution will also be digitized and shipments can be made in minutes.

Under the spiritual leadership of the late founder Mr. İsmail Sarigözoğlu, the second generation

representatives Mr. Mustafa Sarigözoğlu and Mr. Levent Sarigözoğlu were present at the ceremony. The most striking thing at the ceremony was the active participation and energetic impact of the family and the company's third generation young managers.●

## YEPSAN is still growing in its 35<sup>th</sup> year

*YEPSAN Automotive, which is a global supplier of important brands in our country and the world, celebrates its 35th anniversary.*

**W**ith the venture of four partners, notably Mehmet Baş and Salim Balci, YEPSAN was established in 1987 and continues its activities in Kayapa OIZ. For the leading automotive industry, it manufactures shaped and assembled sheet metal components, primarily body, chassis, engine, safety group, and airbag parts. YEPSAN rewarded a total of 63

employees who worked for 10 and 25 years at the Summer Festival organized as part of the 35th Anniversary Events. Speaking at the opening of the Summer Festival, in which YEPSAN's employees and their families also joined, Executive Board Member Ali Baş stated, "YEPSAN has been making significant contributions to the economy of our Bursa and

our country since the day it was established. We produce, provide employment, and export for our Bursa and country. YEPSAN means trust, quality, and success. We are among the suppliers of well-known brands from our country and around the world."

Baş thanked the company's founders, employees, and their families in his speech and indicated that the 35th-anniversary celebration events will continue in the following days, and stated, "YEPSAN continues to grow, and we are trying our best to raise the bar for success even higher."●





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# Nothing is more impressive than a clever idea that no one expected.

Making complete electric motors ourselves may have been a surprise decision, but it was a logical one, too. We have comprehensive experience of mechanical components, production processes, and winding technology, as well as an understanding of how vehicles work as a whole. This enabled us to create a range of exceptionally efficient engines, something that surprised many people.

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**SCHAEFFLER**

# Digital Transformation In Energy Gains Pace For Electric Vehicles

*As licenses for electric charging stations are being distributed, in addition to incentives for fast charging, efforts for a digital transformation in clean energy are accelerating for electric and smart vehicles*

**T**he number of devices that we must charge or use batteries for is constantly growing. This nowadays particularly goes for electric vehicles (EV), not to mention other devices such as smartphones, smart watches, tablets, headsets, speakers and smart scales.

Be it for transport or entertainment, almost every device we use now requires a battery, sensor, processor and software. A similar story of transformation is happening in the energy sector. It is necessary to plan correctly which vehicle will need how much energy and where.

A digital transformation in the energy industry is a must to correctly plan and understand the ever-growing energy need. There is a need for such investors who look long-term in order to set up a smart energy network.

**In Turkey, the number of electric vehicle charging units is estimated to reach 54,000 in 2023, before folding to 1.1 million by 2030 and 4.8 million by 2040..**

One out of every two vehicles sold around the world are expected to be electric by 2030. The number of electric vehicles on the road around the world will hit 125 million by the end of this decade, according to International Energy Agency (IEA) forecasts. This volume increase indicates a 17.5% share in sales and a 7.5% share in inventory.

The share of electric vehicles is seen reaching 16% by 2024, a figure that is estimated to hit 95% in the European car market by 2035.

Although the automobile itself is



*Schneider Electric Turkey General Manager Ismail Yamangil speaks during an event in Istanbul, June 29, 2022.*

what many see in Togg, it is the ecosystem that covers mobility and technology that matters even more, as frequently emphasized by the executives of the consortium developing Turkey's domestically manufactured all-electric car.

It is necessary to have technology initiatives when it comes to the transformation of energy, the analysis of consumer behavior and autonomous driving. Therefore, mobility-oriented technology initiatives are seen grabbing more investment.

Schneider Electric Turkey General Manager Ismail Yamangil says they are focused on providing solutions with their partners to ventures that obtain licenses and that are required to meet conditions stated in the by-laws published by the Energy Market Regulatory Authority (EPDK).

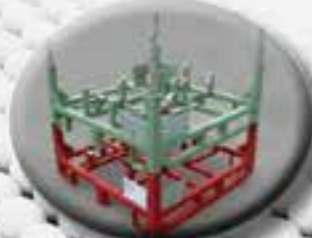
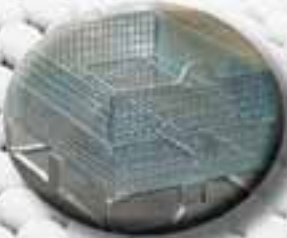
"These solutions can be directly providing an electric vehicle charger, as well as projects such as planning and installing the energy infrastructure of the relevant buildings or facilities, increasing capacity if necessary, or providing energy from renewable sources," said Yamangil. ●





**Stock Systems**

- a. Standard Steel Pallet
- b. Special Steel Pallet



# Our Industrialists Should Have a Goal to Produce Their Own Power

*Energy Investors Association (GUYAD) is a non-governmental organization established by companies investing in renewable energy sources, especially solar energy, for power generation, in Turkey and the world.*

## Cem ÖZKÖK

Energy Investors Association  
(GUYAD)  
Chairman of Board

### ENERGY INVESTORS ASSOCIATION (GUYAD)

**A**t the point we have reached today, the whole world has accepted the importance of independence in energy, and it has been the first item of the country's goals and agenda. The leading groups that foresighted this situation long ago and have been striving on this issue for almost two decades, came together and established GUYAD to promote, support, and pave the way for renewable energy investments.

Since the beginning of 2017, GUYAD has developed innovative, competitive, concrete, and feasible solutions for renewable energy technologies and green energy investments. It knows the investing conditions very well and strives to create a predictable environment that is compatible with the environment. Moreover, since it knows how important it is to access finance in the energy industry, which is a capital-intensive industry, it aims to contribute to the formation, development, and strengthening of renewable energy-related exchange, derivatives, and other markets that will play a role in the development of renewable energy, and developing solutions in cooperation with financial institutions.



Thus, GUYAD, which is the fastest growing association in Turkey and represents 95% of the Turkish renewable energy industry, has managed to gather 38 of the largest groups in Turkey under its roof.

### Renewable energy and Turkey's renewable energy potential

As you know, while our world aimed to limit global warming to 1.5°C, the energy supply began to experience problems with the Russo-Ukrainian War. The shortage in supply has boosted energy prices. There is no decrease in energy prices even though a recession is expected. Although the countries have begun to investigate the possibilities of making up for the deficiency by using other productions, the deficit in the supply-demand balance, which could not be eliminated, pushed the countries to activate all their energy potentials, regardless of being carbon-free or clean energy.

Currently, Turkey does not have a supply problem in terms of imports. However, the most important issue for Turkey is the increase in energy prices. This increase fuels the current account deficit and inflation. The solution is to search for cheaper production methods using domestic and national resources. We need to reduce our dependence on imported resources and aim for independence in energy.

There are very good incentives for our industrialists who want to generate their own energy. Each step taken using these incentives will ensure being at least 2 steps ahead in the future. Therefore, our industrialists should aim to produce their own energy.

### Turkey's renewable energy potential is very large compared to the whole of Europe.

The total wind power potential is about 48,000 MW including the sea and land. On the other hand, considering the total annual radiation value of about 1500 kWh/m<sup>2</sup>, it can be stated that Turkey has an annual solar power potential of about 380 billion kWh. Although we are at the forefront in Europe in terms of solar energy potential and in the world in terms of geothermal energy potential, our pride in these potentials will only make sense if we can use them. We have installed power of 8335 MW for solar energy, 10,930 MW for wind energy, and 1686 MW for geothermal energy. Although it makes 20,951 MW in total, it is far below our potential. It is up to our industrialists to use this potential. ●



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## The German Act on Corporate Due Diligence Obligations in Supply Chains Will Also Create Obligations for Turkish Companies

# Corporate Due Diligence Obligations in Supply Chains

| KURT & PARTNERS

### Özlem KURT

*Kurt&Partners Law Firm*

**I**n the world globalized economy, although global supply chains offer important opportunities for economic and social development, they also present serious risks and violations of human rights and environment laws. The responsibility to respect human rights and environmental laws in global supply chains has been put on a legal footing for the first time by the German Act on Corporate Due Diligence Obligations in Supply Chains ("The Act", "LkSG"). The Act creates an obligation for businesses to conduct human rights and environmental due diligence at all the levels of their supply chains. By this newly regulated obligation, German companies' responsibility no longer ends at its own factory gate but applies throughout the entire supply chain, including the countries outside of Germany. There are also various international regulations on the issue such as UN Guiding Principles on Business and Human Rights, and EU Directive.

The Act, which shall enter into force in 2023, primarily focuses on preventing human rights and environmental law violations. The Act shall not only affect the undertakings that fall under its scope but also be of importance to those domestic and foreign companies who are in the supply chain thereof.

The undertakings covered by the Act are those having (i) their principal place of business, statutory seat

or any branch in Germany and (ii) three thousand or more employees in Germany. The threshold related to the number of employees shall be applied by reducing to thousand employees from 01.01.2024.

The main obligation imposed on undertakings covered by the Act is due diligence and reporting, which is always required for the direct suppliers and, in certain circumstances, for the indirect suppliers.

The sanctions regarding the implementation of the Act are mainly regulated as monetary fines.

Considering that Turkey exported 17 billion 705 million USD to Germany

in 2021, Turkish supply companies are expected to be significantly affected by the Act. German companies have to comply with the obligations for preventing human rights and environmental law violations, as well as inspect whether their suppliers operating in Turkey in a manner that is the obligation of human rights and environmental law.

Within the scope of compliance with the Act, Turkish Companies are mainly expected to fulfil the following obligation: "establishing a risk management and analysis system for human rights and environmental law violations; establish a written human rights policy; obtaining compliance commitments from its own suppliers; establishing control mechanisms; having an independent institution conduct a risk analysis etc."

In this context, we consider that German companies and their all-level suppliers should prepare as early as possible in order to be able to implement corresponding duties of care in accordance with the Act in time and make necessary arrangements in their supply contracts.

Considering that this process will continue with EU regulations and other local regulations in EU, it will be inevitable for all Turkish companies supplying to EU countries to take serious steps towards harmonization.

We, as Kurt & Partners, are ready to serve in the new era with our experience in legal compliance and supply chain processes. ●





ECE R14, ECE R16, ECE R17, ECE R21, FMVSS 202, FMVSS 207, EuroNCAP gibi dünya standartlarına göre koltuk, koltuk başlığı, torpido ön panel, emniyet kemeri, airbag sistemleri veya komple araç gövdesi üzerinde güvenlik testleri gerçekleştirilmektedir.

**SLED TEST SİSTEMİ**

Max Kuvvet : 3,1 MN  
Max Hız : 90 km/h  
Max İvme : 122 g  
Max Yük : 4.000 kg  
Test Manekeni : HYBRID III (%5, %50, %95), Biorid II

**9 PİSTONLU HİDROLİK TEST SİSTEMİ**

- Bağımsız 9 hidrolik piston
- 3 eksenle eş zamanlı konum ölçümü
- 50 kN @ 0,5 sn çekme kapasitesi
- 6 pistonda 500 mm, 3 pistonda 1000 mm max strok

**STATİK YÜK TEST SİSTEMİ**

- 3 adet sırtlık servo piston  
Max Strok : 320 mm  
Max Hız : 100 mm/dak  
Max Kuvvet : 5000 N
- 3 adet başlık servo piston  
Max Strok : 300 mm  
Max Hız : 100 mm/dak  
Max Kuvvet : 5000 N

**ENERJİ EMİLİM TEST SİSTEMİ**

- 6,8 kg ağırlığında, 165 mm çapında rijit yarı küre.
- 2 adet ivmeölçer (500 g)
- Entegre Hızölçer

# Turkish Startup Ecosystem

In 2020, 178 Million Dollars was invested in the Turkish entrepreneurship ecosystem. By 2021, the total investment amount exceeded 1 Billion Dollars. The reason for this increase was a few startups that received mega-investments. After the recordbreaking 2021, it was a matter of curiosity how 2022 would go. The ecosystem record was broken in the first 6 months of this year!

## \$1,4B

### Total Amount

\$1.4 Billion was made in the first half of 2022.

## 161

### Total Deals

158 startups received investment in 161 investment rounds.

## \$400.000

### Median Amount

The median investment amount was \$400,000 in the H1'22.

### Industry

## \$771Mn

Food/Market  
Delivery

## \$336Mn

Gaming

## \$127Mn

AI & ML

## 20 startup

Fintech

## 12 startup

Gaming

## 12 startup

AI & ML

## 12 startup

Healthcare

## 563

### Investors

A total of 563 investors, including angel investors, made investments.

## 110

### Foreign Investors

A total of 110 foreign investors, including angel investors, made investments.

## 22

### Crowdfunding

22 startups received investment through crowdfunding platforms.

## 27%

### has Women Co-founder

27% of startups that received investment this year have at least 1 female founding partner.

## \$239Mn

### Amount

Startups with at least 1 female co-founder received a total investment of \$239 million.

## 61%

### First Funding

This year, 61% of the startups (96 startups) received investment for the first time.

Source: StartupCentrum



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**NOVOMA**

# Autonomous Vehicles Passed through IT Valley



**R**obotaxi competition, in which young people who develop original designs and algorithms in the field of autonomous vehicle technologies, competed. While Team IMU was the team that made the most original software in the original vehicle category, Beu Ovat was the team with the best team spirit. While Raclab was chosen as the team that made the most original software in the ready-to-use vehicle class, Talos was chosen as the team with the best team spirit.

## AUTONOMOUS VEHICLES IN SMART CITIES

A Serdar İbrahimcioğlu, IT Valley General Manager, stated that as IT Valley, mobility technologies are at the forefront of their work in the field of civil technologies, and said: "The dominant mobility system in the smart cities of the future will be carried out with autonomous vehicles.

We also continue our efforts to ensure that our young people become producers of this technology, not consumers. The Robotaxi Passenger Autonomous Vehicle Competition, hosted by IT Valley in 2019, shows improvement in terms of both participation and competition

conditions every year. This year, the tracks have been designed much more in line with the actual traffic patterns."

## HAS RAISED OUR HOPES

Reminding that IT Valley also hosts Togg, General Manager İbrahimcioğlu said: "We continue to the projects that aim to carry the positive effects of digital transformation in the field of disruptive technologies to all areas of civilian technologies. In our country, the results of our competition, which aims to increase human value in mobility technologies and to enable young people to test themselves in this field, have raised our hopes for our young people

*21 teams competed in the original vehicle category and 9 teams competed in the ready-made vehicle category in the Robotaxi Competition, which was held under the stakeholder of TÜBİTAK and HAVELSAN and under the leadership of IT Valley, Turkey's technology and innovation base.*

again. I congratulate all the teams participating in the competition. "

## BOLLARDS HAVE BEEN REPLACED BY LANES

The Robotaxi Passenger Autonomous Vehicle Competition, which was held for the first time in 2018 within the scope of TEKNOFEST, was also held within TEKNOFEST and under the main sponsorship of IT Valley since 2019. The teams have struggled on a more difficult track this year. Unlike previous years, the racing area has been made more suitable for real traffic. This year, autonomous vehicles competed by following the lanes, not the bollards.

## "CHANGE LANE" COMMAND

The track, which was a single lane in previous years, has now become a double lane. Vehicles were given the command "Change lane". For the first time this year, the racing vehicles tried to achieve one of the most challenging tasks, the intersection turning task. One of the novelties on the track was the handicapped spot. Driverless vehicles were asked to recognize the disabled parking sign and not to park in this section.●

## IT VALLEY

→ The intellectual foundations of Turkey's IT Valley were laid in 2011 and the physical foundations were laid in 2015. The valley, which started operations in 2019, has become Turkey's largest technology development region as of 2021. IT Valley is a platform where science is transformed into technology and technology becomes a product and commercialized. Within this platform, studies are carried out to strengthen the ecosystem in the categories of Mobility, Connection Technologies, Cyber Security, Design Technologies, Smart Cities and Gaming Technologies, each of which has its own clusters.





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MADE IN TURKEY

# Anadolu Isuzu Becomes a Member of the UN Global Compact

*Turkey's commercial vehicle brand Anadolu Isuzu adds new ones to its determined steps towards the achievement of sustainability goals. Anadolu Isuzu has taken its place among the leading companies by signing up for the UN (United Nations) Global Compact, one of the most important corporate sustainability platforms in the world.*

**I**n line with its sustainability goals, Anadolu Isuzu became a member of the Global Compact initiative of the United Nations. UN Global Compact, which Anadolu Isuzu has supported by becoming one of its signatories, addresses the main responsibilities of the business world in the field of sustainability in line with the 10 basic principles determined in the fields of human rights, labor standards, environment and anti-corruption. Companies that adopt these principles and support them by incorporating them into their strategies, policies and procedures contribute to the preparation of the ground for long-term success in addition to fulfilling their core responsibilities towards people and the world.

UN Global Compact, one of the world's most important platforms in the field of corporate sustainability, offers a framework for companies to fulfill their responsibilities in achieving Sustainable Development Goals. In line with its sustainability goals, UN Global Compact conducts various programs to mobilize future business leaders, redesign business models and unlock new opportunities.

Tuğrul Arkan, General Manager of Anadolu Isuzu, stated the following: "As Anadolu Isuzu, sustainability is one of our main priorities. As a company, we have taken many steps so far intending to minimize the environmental effects of both the vehicles we produce and all our operating processes. We attach special importance to developing

and diversifying our product range with our zero emission fully electric models as well as our alternative fuel, 100 percent biogas compatible CNG engine models. Also, we have, to a great extent, completed our efforts to switch to renewable energy in production. We aim to further increase the use of innovative biomaterials in our vehicles in the coming period.

As a company, we contribute to the circular economy with our practices and continue our efforts with an approach that focuses on sustainability by adopting a zero-waste methodology. Finally, we are very proud and happy to be a member of the United Nations Global Compact initiative. With the awareness of our responsibility for the protection of the environment, we will continue to lead our sector by taking forward steps, implementing new projects and taking an active place in important initiatives". ●



## WINNER OF 2022 AWARD FOR SUSTAINABLE BUS OF THE YEAR IN EUROPE

→ Anadolu Isuzu, which started the exportation of its fully electric midibus NovoCITI Volt with Frech market in 2021, won the "Sustainable Bus of the Year 2022" award in Europe with its alternative CNG fueled and 100 percent biogas compatible model Kendo/Interlinear. In line with its sustainability goals, Anadolu Isuzu was one of the leading companies that made a commitment to reduce emission levels and signed the international Science Based Targets Initiative (SBTi), which strives against the negative effects of climate change and global warming worldwide. Anadolu Isuzu has also participated in the "Drive to Zero" initiative, which works to reach the 100 percent zero emission target in sales by 2040 in the commercial vehicle sector.



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## Mercedes-Benz Türk is the Company with the Most Patent Applications in the First Half of 2022

# Mercedes-Benz Türk is the Patent Champion

**Attaching great importance to research and development activities since the day it was founded, Mercedes-Benz Türk has made a total of 621 patent applications since 2014.**

**D**r Zeynep Gül Koca,  
Mercedes-Benz Türk  
Bus Development Body

**Director**, said: "Thanks to its various competencies, our Istanbul R&D Center occupies a very important position in the global network of our roof company, Daimler Truck. Our Istanbul R&D Center, which provides sustainable solutions and aims to prioritize innovation and transformation, carries out important works in this direction. The exterior design parts we are developing for buses using bio-based plastic raw materials recycled from various wastes are the best example of this.

We will contribute to the circular economy and sustainability while aiming to reduce carbon footprint, reduce costs and contribute more to recycling using these and similar raw materials. Among the examples, we can count the material used in the bumpers of the Tourrider, which we offer to the North American market, for adjusting the coating under the vehicles to the level of under the vehicle, and for shock absorption in the event of a collision. We would like to thank all our Bus

R&D team for their added value to both our brand and our country." Melikşah Yüksel, Mercedes-Benz Türk Truck R&D Director, said: "With our R&D Centers located in Istanbul and Aksaray, we made 112 patent applications in the first half of the year, demonstrating our leading position in this field with concrete figures.

We can summarize the subjects of our patent applications in general as trailer, cabin, engine systems, electric vehicle battery systems and engine battery systems. As for the truck product group, we made 90 new patent applications in that period. We have a signature in the development of battery systems for future electric trucks and new technologies to be used on the vehicle. As Mercedes-Benz Türk Trucks R&D team, we are proud to contribute to the development of the trucks of the future." ●

## MERCEDES-BENZ TÜRK FILED 122 PATENT APPLICATIONS IN THE FIRST SIX MONTHS OF 2022

→ Mercedes-Benz Türk Truck and Bus R&D teams continue their R&D and innovation activities without slowing down. In the first 6 months of 2022, the Mercedes-Benz Türk Truck R&D team applied for 90 patents, while the Mercedes-Benz Turkish Bus R&D team applied for 22 patents, making a total of 112 patent applications. Thus, Mercedes-Benz Türk, the company that filed the most patent applications in the first 6 months of 2022, has filed a total of 621 patent applications since 2014.

→ Mercedes-Benz Türk, which received the R&D Center Certificate for the first time in 2009 with the Istanbul R&D Center, which was put into operation within the Hoşdere Bus Factory, started R&D works in bus and truck product groups from this date. The company accelerated its work on truck product group with the R&D Center established in Aksaray in 2018.







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Lokasyon/Location: Almanya/Germany

Almanya/  
Germany

CAVO AUTOMOTIVE NA INC

Faaliyet/Scope: Kalite ve Mühendislik Ofisi/  
Engineering and Quality Office

Lokasyon/Location: Kanada/Canada

Kuzey Amerika/  
North America

CAVO AUTOMOTIVE SLOVAKIA S.R.O

Faaliyet/Scope: Üretim Tesisi/Production Facility

Lokasyon/Location: Slovakya/Slovakia

Slovakya/  
Slovakia

Türkiye/  
Turkey

CAVO OTOMOTİV TİC.VE SAN. A.Ş.

Faaliyet/Scope: İdari Merkez, Üretim Tesisi/  
Headquarter-Production Facility

Lokasyon/Location: Türkiye/Turkey



**ARIBA, the latest product of a group of university students and experts from Istanbul Technical University, went on a Türkiye tour as developers seek to raise awareness for harnessing renewable energy for solar vehicles**



## Solar-powered Turkish Vehicle Hits the Road For National Tour

*Ahead of a trip to Belgium to join a competition, ARIBA ZES X, a solar-powered vehicle developed by a team from Istanbul Technical University (İTÜ), started a tour of the country. The tour, which will end on Aug. 12, sees the car traveling from Istanbul to the capital Ankara, stopping over in the cities of Bursa, Eskişehir and Konya for a journey covering 1,300 kilometers (810 miles).*



→ Türkiye boosted its shift to solar power, increasing its installed solar power over the last decade, with renewable investments expected to accelerate in the period ahead. Its journey of producing energy from solar power started at just 40 megawatts (MW) back in 2014. It has now reached 7,816 megawatts, according to data compiled from the Energy and Natural Resources Ministry. Türkiye's multiple support schemes throughout the years saw the installed solar power capacity rise to 249 MW in 2015, before rocketing to 833 MW a year later. Still, the biggest leap was seen in 2017, when the figure reached 3,421 MW, a 311% year-over-year increase, according to the data. Some 1,149 MW of installed capacity was added in 2021 alone. Türkiye's renewable energy capacity is predicted to grow by over 50% through 2026, according to the International Energy Agency (IEA).

**M** The team has produced 10 different solar-powered cars so far and is now sponsored by an energy company. Their tour aims to demonstrate that vehicles can operate without harming the environment, according to the developers. Along the route, they will hold several events to promote the car and the use of renewable energy for vehicles. In September, the car will be showcased at the European Solar Challenge in Belgium, a 24-hour endurance race for solar cars across the world in which they compete on a former Formula One track.

Ufuk Çay, captain of the solar car crew, says the vehicle is "80%" locally made and contains a high ratio of carbon fiber. Çay told reporters in the northwestern province of Bursa where ARIBA (whose name

is derived from Turkish words for "bee" and "car") drove through a busy thoroughfare.

The latest ARIBA model can reach a speed of 140 kph and weighs only about 160 kilograms (350 pounds). "We won titles in previous solar car challenges and hope to repeat our success," Çay says. He said they were striving to build cars compatible with road standards for other types of vehicles. "Its battery capacity is good enough for driving for about 400 kilometers. When fully exposed to sunlight, it can travel with an average of 70 kph without battery consumption," he said.

The İTÜ Solar Car Team was established in 2004 as one of the first initiatives for solar-powered vehicle development. It wrapped up the production of its first car, ARIBA, in 2005, one year before a new model of the car was developed. Both cars dominated a 2006 Formula G race in Türkiye for solar cars. They kept accumulating awards in other solar car races in the country in the following years, before going international at World Solar Challenge in 2009.

In 2015, the team produced the country's first four-seat solar car called "Aruna" and in 2016, it received the Brain Sport Award at European Solar Challenge. In 2018, the team's ARIBA 8 hit the road for its first Türkiye tour, visiting Çanakkale, Bursa, Eskişehir and Ankara. ●





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### SCHAEFFLER HONES A BETTER WHEEL BEARING

A new wheel bearing design by German parts supplier Schaeffler promises efficiency improvements for battery-electric vehicles, according to the company.



### VAUXHALL IS WORKING ON AN ELECTRIC ASTRA HOT HATCH



According to Vauxhall design chief Mark Adams, a hot hatch Astra is in the works, and it will be based on the fully electric Astra that will arrive in 2023. There's still no timeline for the release of the hot hatch Astra EV, but presumably it may not happen before 2024.

### STELLANTIS TO INVEST \$99 MILLION AT THREE ENGINE PLANTS



Stellantis announced today that it will invest a total of \$99 million in three North American plants for production of a new four-cylinder turbocharged engine. Investments will be made at the Dundee Engine Complex in Michigan, the Kokomo Casting Plant in Indiana and the Etobicoke Casting Plant in Toronto.

### HYUNDAI AND KIA SET THEIR SIGHTS ON LUNAR 'MOBILITY SOLUTIONS'

The South Korean automakers said last week that they'll collaborate with a group of research institutes to develop "mobility solutions" for the moon.



### 2023 BMW 7 SERIES BRINGS DOWN THE HOUSE WITH 'THEATER SCREEN'

BMW's redesigned 2023, 7 Series has upped the ante on in-vehicle entertainment with an optional Theater Screen system that transforms the rear compartment into a media room on wheels.



### UNITY GAME SOFTWARE TO POWER NEW MERCEDES-BENZ INFOTAINMENT DOMAIN

Cellular video games and real-time 3D platform developer Unity Applied sciences will energy the infotainment area of the brand new Mercedes-Benz working system.



## SUPPLIERS



### DENSO HELPING ITS ENGINEERS LEARN NEW SKILLS FOR THE EV AGE

To fill the need for EV and autonomous vehicle engineers, Denso plans to retrain its

## NEW CARS



### RODIN FZERO: V10 WEAPON AIMS TO BE WORLD'S FASTEST CAR

New Zealand firm's £1.8m creation weighs less than an F1 car and is due a road version



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## Kutes Starts A New Iron Age With The Goal Of Green Casting

*Kutes, Turkey's leading casting brand with 30 years of experience, is bringing in the new iron age with a sense of responsibility to its business partners, employees, the world, and the future. Kutes, which launched the "Kutes Operational Excellence Program" for this new era, works on projects primarily focused on sustainability and the environment, TPM, Industry 4.0, innovation, operational sustainability, and digital transformation.*

**K**utes, which started the new iron age with the strength gained from its 30 years of experience and its long-term view, continues its operations unabated under the umbrella of Kutes Döküm ve Kutes Makine. Kutes has made the production stages traceable from A to Z, and has become a pioneer in instantly tracking the order status of its customers, more than 350 employees who are experts in their fields and 10 quality certifications, P&D and innovation studies, advanced technology investments, and specifically the initiated digital transformation and the barcode system.

Kutes supports national and worldwide brands in the automotive, hydraulic, pump, air conditioning, sub-industry, railway, construction, agriculture, and construction machinery sectors by producing products that fulfill the various needs of different industries. Continuing its operations in its 151 thousand square meter facilities, 30 thousand of which are indoor, Kutes has an annual capacity of 50 thousand tons of casting and 80,000 hours of



**Kutes, which initiated the "Operational Excellence Program" for the future, which is identified as the new iron age, carries out projects centered on TPM, Industry 4.0, innovation, operational sustainability, and digital transformation, as part of its responsibility to its customers, future generations, and the world."**

processing with 13 CNCs, with more than 40 million Euros invested in the last five years.

Kutes, which initiated the "Operational Excellence Program" for the future, which is identified as the new iron age, carries out projects centered on TPM, Industry 4.0, innovation, operational sustainability, and digital transformation, as part of its responsibility to its customers, future generations, and the world."





### 100% green production with 100% green energy

With the 240 kWh solar power plant investment made on the roof of the Kutes Makine factory, Kutes supplies 60 percent of the energy it consumes from its own production as green energy, recognizing sustainability as an essential part of the business culture. Kutes Döküm decreased its flue gas emissions to 5 ppm by installing 630,000 m<sup>3</sup> dust extraction equipment. Kutes, which acquired a supply license from EMRA this year in order to meet the target of 100 percent green energy and 100 percent green production, intends to source its supply from renewable energy producers as a result of this license. Kutes plans to invest 2 million Euros in sustainability and preventing climate change in 2022, increasing its total capacity to 1240 kWh with a 1000 kWh new rooftop solar power plant. Taking action for the waste disposal and sand recycling facility, Kutes will plant at least 1 million saplings in 10 years with a 20 million TL afforestation project, in line with its goal of becoming carbon negative.

### Leading brand in digital transformation and innovation

Kutes constantly improves itself by closely following the needs of its business partners, adhering to the motto of continuous innovation. Kutes continues its P&D and innovation studies for the best in product variety, quality, and lead times, while serving its business partners with 10 quality certifications, more than 350 employees, and over a thousand different products.

**Continuing its operations in its 151 thousand square meter facilities, 30 thousand of which are indoor, Kutes has an annual capacity of 50 thousand tons of casting and 80,000 hours of processing with 13 CNCs, with more than 40 million Euros invested in the last five years.**

Kutes pioneered in making the production phase processes traceable from A to Z with the barcode system, and has Turkey's first fully integrated line with the horizontal molding line deployed at the end of 2018. Kutes will establish smart production lines with digital field and quality management investments in order to increase production flexibility even further with the Industry 4.0 movement and digital solutions. Kutes prioritizes TPM (Total Productive Management) studies in order to improve employees' operational and problem-solving skills and to maximize the efficiency of production equipment through continuous improvement activities.

### Fast logistics with its strategic location

Kutes' strategic location in Çorlu, Turkey's third largest industrial region, located between Istanbul and the European Union, provides advantages to its business partners. It offers fast logistics with a distance of 35 kilometers to the sea port, 100 kilometers to Istanbul Airport, the world's largest airport, and 155 kilometers to the European Union border. ●



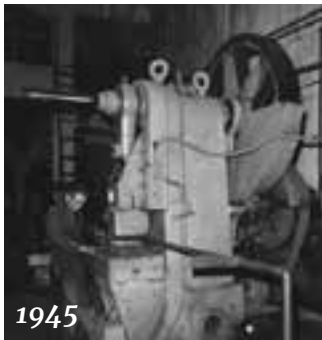
*Kutes constantly improves itself by closely following the needs of its business partners, adhering to the motto of continuous innovation. Kutes continues its P&D and innovation studies for the best in product variety, quality, and lead times, while serving its business partners with 9 quality certifications, over 325 employees, and over a thousand different products.*

# OLGUNCELIK

Leading Technology

## Leading Manufacturer of Leaf Spring, Suspension Solutions, Light-weight Products and Technology Solutions

*OLGUNCELIK is one of the leading manufacturers of Leaf Spring, Suspension, Light-weight products and Technology Solutions to the national and global vehicle manufacturers with the superior quality, customer-oriented, flexibility, innovation and result-oriented approaches.*



The story of OLGUNCELIK which carefully carries the burden of the customers with its strong infrastructure and innovative character, started in Izmir in 1945.

As a result of outstanding efforts for Industrialization and Development, as well as strong investments in Production and Engineering Technologies, the story starting more than 75 years ago in a small workshop, today increasingly continues in two modern production facilities in the Manisa Industrial Zone.



### Solution Partner of Global Vehicle Manufacturers

OLGUNCELIK assures to be not only a supplier but also a solution partner for all customers. From design to extensive manufacturing, internationally certified OlgunCelik products are well tested to provide the optimal performance and highest durability in all road conditions. OLGUNCELIK's main product solutions are; Parabolic Leaf Springs, Conventional Leaf Springs, Z-Type Leaf Springs (Air Linkers), Composite Leaf Springs.





## OLGUNCELIK Test Center

In virtue of our hi-tech hydraulic testing systems which allow the application of all load and environmental conditions on vehicle components without any loss during the use of road vehicles, we experience the justified proud of owning the facilities that can fulfill all the verification needs of our valuable customers within the global automotive industry.



## International Quality Systems & Certifications

Each one of OLGUNCELIK processes and parts comply with the international quality standards. The certified categories are; Daimler Category A, FORD Q1, IATF 16949:2016 Automotive Quality Management System, ISO 9001:2015 Quality Management System, ISO / IEC 27001:2018 Information Security Management System, ISO 45001 Occupational Health and Safety Management System, ISO 14001:2015 Environmental Management System, TSE582, EAC (Eurasian Conformity Mark)



## Research & Development Center



The Research and Development Department of OLGUNCELIK was registered as an accredited Research and Development Center by the Ministry of Industry on 18 June 2010. With its working experience at the "Full-Service Supplier" level, the creative and innovative R&D team takes critical responsibilities in the future vehicle projects as the design and strategic development partner of global vehicle manufacturers. OLGUNCELIK strongly believes in the benefits of cooperation with academic networks and continues developing innovative projects supporting graduate and doctoral studies together with academic advisors who are experts in their fields.

## Sustainable Quality

OLGUNCELIK always strive to ensure the highest quality production in its modern quality control laboratory with the state-of-the-art equipments and applications made by expert team of engineers.

## Divisional Organization

OLGUNCELIK switched to the Divisional Organization Structure in 2021 to more power on through producing value-added product and service solutions in accordance with the ever-evolving and changing technology. OlgunTech Business Unit consantrates on Technology and Light-weight Product Solutions, Olgun Automation Business Unit consantrates on Industry 4.0 , Robot and Automation Applications and Olgun Suspension Business Unit consantrates on Leaf Spring and Suspension Solutions.



## Light-weight Parts & Technology Solutions

In Industry applications where electrical applications are increasing their effectiveness day after day, OLGUNCELIK has launched OlgunTech business unit which focuses on Light-weight Solutions and Technologies. By developing high value-added technologies independently from the product, sector and material, OlgunTech sheds the light on the future with the aim of responding to the weight reduction expectations of the industries.

Since 2013, OlgunTech is working on Glass and Carbon Fiber Reinforced Plastic materials in collaboration with well-known domestic and global institutes. OlgunTech offers Leaf Spring solutions developed and manufactured from glass fiber reinforced plastic



## OLGUNTECH

materials for domestic and foreign customers with its know-how, analytical engineering competencies and infrastructure of composite production machinery and equipment.

Alongside with Composite Leaf Spring development and production activities, OlgunTech is effectively taking part in weight reduction activities together with its customers in Automotive Industry on diversified body, chassis, engine and powertrain components.

Participating in a multinational project team which is collaborating to develop alternative materials composed of recycled carbon fiber and natural fibers that would be utilized in automotive and aerospace industries, OlgunTech team is representing our country within European Union incentive projects.

Olgun Çelik, as being one of the key players in Turkish Commercial Vehicle market growth story, targets to position itself as a Global Technology Leader by sustaining its EU Light Commercial Vehicle Leaf Spring Market Leader position with vast experience and engineering know-how.

## ARMA FIXING SYSTEMS



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Assan Hanil, one of Kibar Group's automotive companies, was established in 1997 with the partnership of Seoyon E-Hwa which is the leading automotive supplier in South Korea, started production as an OEM Part Supplier in the automotive industry.

While Assan Hanil was supplying parts only for Hyundai Assan in the early years of its establishment, it has become one of the most important suppliers of Ford Otosan as of 2005. In the upcoming years, Assan Hanil has added Isuzu, Honda, AGCO, Mercedes-Benz Turkey and Turkey's Automobile Initiative Group (TOGG) to its customer portfolio respectively. In addition, Assan Hanil is one of the main suppliers for M2 Light Commercial Vehicle (H350), which is a joint project between Karsan and Hyundai Motor Company (HMC).

In 2019, Assan Hanil started up Aksaray Plant for producing for Mercedes-Benz Turkey and Gölcük Plant for producing for Ford Otosan. With over one thousand and four hundred specialized employees working in its plants covering a total area of 175 thousand m<sup>2</sup> in five different locations; three in Kocaeli, one in Bursa and one in Aksaray; the company performs automation based production activities with high technology.

The production quality of Assan Hanil has been certified with ISO 9001-2015, ISO 14001, ISO/IEC 27001-2013, TS 45001 (OHSAS), IATF 16949-2016, Ford Q1, Hyundai 4-Star Quality System, and Daimler OSA Category-1 Certificates. Assan Hanil carries out innovative projects aiming for weight reduction, cost optimization and quality enhancements in its R&D Center established in 2010 and has 66 Industrial Property Rights registered and another 11 in the evaluation process.

Today, Assan Hanil is a supplier of driver and passenger seat as well as door panels, front and rear bumper, instrument panel, console, carpet, FEM Carrier, blow molding parts, headlining, glove box, and various interior and exterior plastic components. Assan Hanil became one of 5 companies worldwide which design, develop and manufacture air suspension driver seat.

Assan Hanil is a member of UN Global Compact since 2013 and develops all processes in respect to sustainability through main areas of product development, supply chain and manufacturing. The company offers unique lightweight solutions to its customers with sustainability focus. A strategic partnership agreement has been made with a global electronic part manufacturer to produce electronic parts.

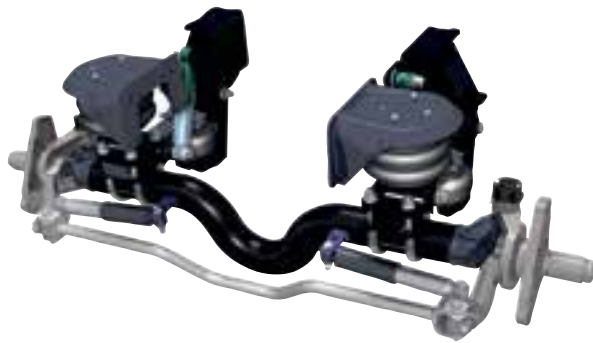




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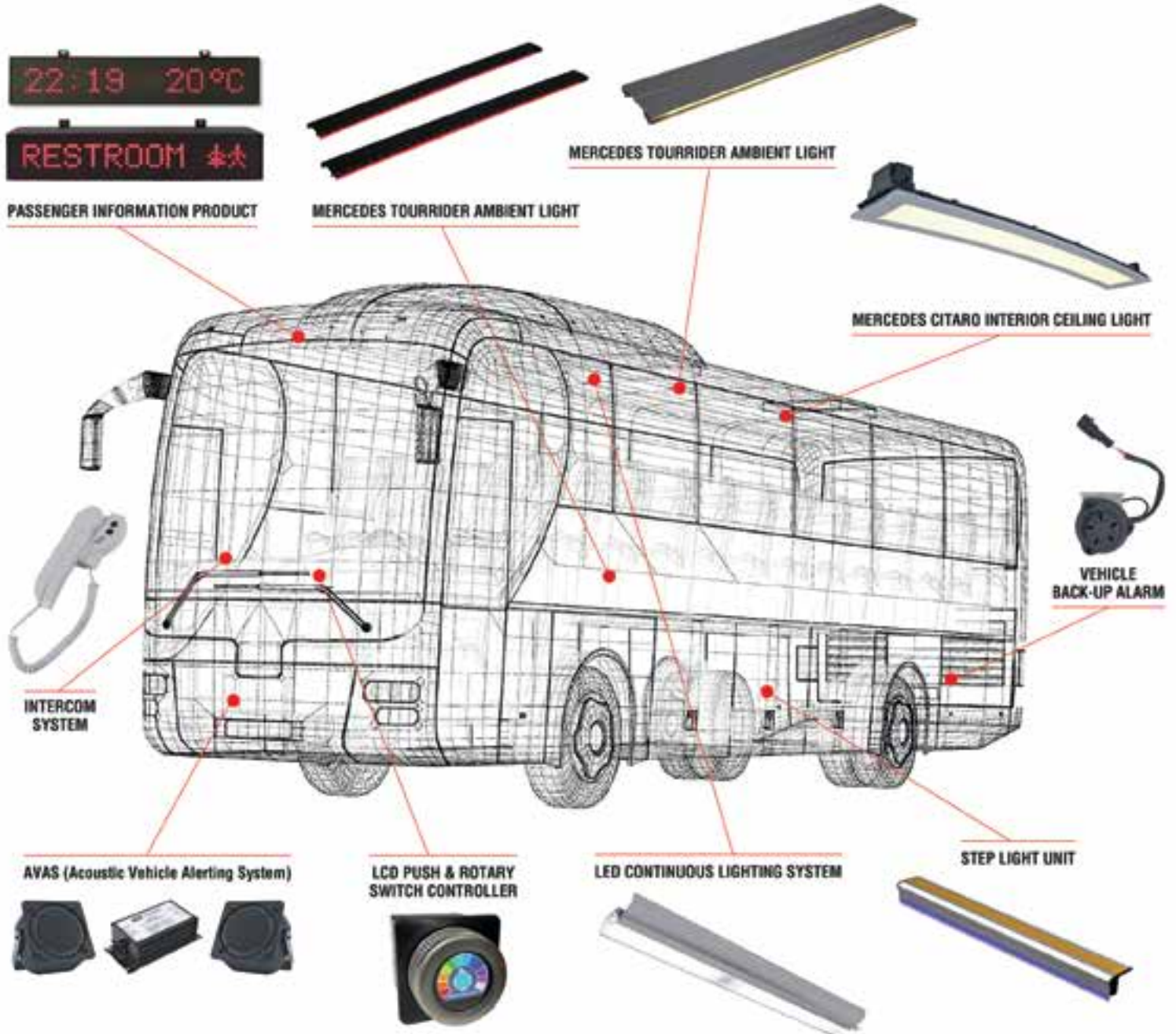




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## Festo San. ve Tic. A.Ş.

Aydınlı İstanbul Anadolu Yakası  
Organize Sanayi Bölgesi Mah.  
Üniversite Cad. No:45  
34953 Tuzla/İstanbul  
Tel: 444 1 378 Faks: 0 216 585 00 50  
info.tr@festo.com www.festo.com.tr

# FESTO



Headquartered in Esslingen - Germany, Festo is a global company operating in 176 countries through 61 independent companies and over 250 branch offices worldwide. Festo has a unique place among global leaders of pneumatic and industrial automation systems.

Festo San. ve Tic. A.Ş. was founded in Turkey in 1989. It has been providing its customers with products and solutions as well consultancy services, customized solutions, technical support and technological trainings, through specially trained experts and professional staff, over 30 years in the field of industrial automation.

The company meets the demands of its customers efficiently via its head office in İstanbul - Tuzla, and branch offices and service centers in İstanbul - İkitelli, Adana, Ankara, Bursa, Mersin, Eskişehir, İzmir, Samsun, Gaziantep and Kayseri.

Festo provided trainings to about 55.000 people in seminar activities and combined the vocational training with technological

laboratories to ensure that the trainees can reach an optimum level at which they can be useful for the industry practically and theoretically. Besides providing training and knowledge, Festo establishes turn-key advanced technology training laboratory for companies.

Festo Turkey also acts as the group coordinator of 30 countries and Festo organizations located in Iran, the Caucasus and the Arabian Peninsula. At Festo design center in Turkey, special products or product modifications are made both for Turkey and for the countries of the region.

In order to increase sales and improve service quality, and to provide a "punctual" service to its customers, Festo has been producing various pneumatic cylinders and control panels with CE certification, and been providing complete automation solutions and services specifically designed for the machinery manufacturers in our country since 1995.



# Ensure the Success!



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## GREEN Chemicals AŞ



GREEN Chemicals is a multi-partnered company established in 1995. Providing service for;

- Water Treatment (WET-Treat®)
- Waste Water Treatment (WASTE-Treat®)
- Metal Surface Treatment (MET-Treat®)
- Oil & Gas Technologies (OIL-Treat®)
- Adhesives (GREEN ADH-Tech®)
- Mining Technologies (MINE-Treat®)
- Geothermal Technologies (GEO-Treat®)
- Engineering Areas

Operating nationally and internationally, GREEN Chemicals is a leader company always displaying continuous growth and high performance. Our offices are located in Turkey, Europe, UK, Brasil, Africa, Iran, Russia, Middle East and Azerbaijan. GREEN Chemicals exports to 35 different countries.

With a strong R&D unit supported by universities and international firms represented by the company as well as its local and foreign engineers trained at doctorate level; our expert teams closely follow up new technology. GREEN Chemicals reserves 6% of the revenue to R&D activities. Within this direction, our high quality environmentally-friendly products designed by our expert teams are introduced to the industry through reliable and economic

services by means of our engineers whose first priority is customer satisfaction.

### GREEN Chemicals has;

- 12000 m2 factory & office area
- 50000 ton/year production capacity
- 7000 pallet capacity

Our purposes are;

- To keep a close watch on newest technology and to use it in our processes,
- To decrease input cost of companies prioritizing / increasing the quality at the same time,
- To protect process life and provide long life,
- To maximize process efficiency, minimizing operating cost at the same time.

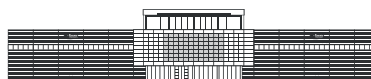
GREEN Chemicals has adopted a principle to provide the best services to the industry in the most economic manner by means of both its own expert team as well as national and international dealer chain composed of 300 people.

All our products are produced in our factory that has ISO 9001, ISO 14001, ISO 18001, TS 16949, QUALICOAT, Halal, Kosher, NSF certificates.

GREEN Chemicals is awarded as the most successful chemical company in 2015.



Taysad OSB 2. Cad No:7 41420 Çayirova | KOCAELİ



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## NORM FASTENERS

# NORM FASTENERS

### ABOUT NORM FASTENERS

As Norm Fasteners, we were founded in 1973 and became a company of Norm Holding in 2017. Today we are one of the leading companies of the fasteners industry thanks to our all in-house integrated production system including R&D, engineering, machining, tooling, and coating competencies with strong supply chain management and a wide global logistics network.

Through our experienced engineers, high production capacity and advanced technological infrastructure; we maintain to create value for our business partners and prioritize our activities in R&D and innovation fields.

Due to our customer-oriented approach; we operate in 8 countries with 13 sales & logistics centers, more than 2000 employees and 4 R&D and design centers in order to meet our customers' expectations better and offer innovative solutions with our patented products.

As a Full Service Provider we serve many main and sub-industry such as automotive, white goods and defense with domestic and imported products in order to respond our customer demands outside our production range.

**Our Products:** Male - Female Fasteners, Spacers, Bushings, Ball Pins Studs, Locking Nuts, Locking Bolts, Nylon Insert Nuts, Welding Nuts, Welding Bolts, Screws, Washers.



### CERTIFICATES

- |                       |                   |                   |                   |
|-----------------------|-------------------|-------------------|-------------------|
| ● EN 15048-1: 2007    | ● ISO 50001: 2018 | ● ISO 14001: 2015 | ● TS EN ISO 4017  |
| ● EN 14399-1: 2015    | ● ISO 9001: 2015  | ● ISO 45001: 2018 | ● TS EN ISO 4032  |
| ● ISO/IEC 27001: 2013 | ● IATF 16949      | ● TS EN ISO 4014  | ● TS EN ISO 13918 |

### CONTACT US:

Atatürk Organize Sanayi Bölgesi 10007 Sokak  
No: 1/1 Çiğli 35620 İzmir Türkiye  
Tel: + 90 232 376 76 10

info@normfasteners.com  
www.normfasteners.com  
Linkedin: norm-fasteners  
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**ÖZTÜRK ENDÜSTRİYEL PLASTİK KALIP METAL SAN. VE TİC. LTD. ŞTİ.**

**ÖZTÜRK**

**Industries**  
Ein Unternehmen der ÖZTÜRK Gruppe

**ÖZTÜRK**

**Endüstriyel**  
Öztürk Grup İştirakidir



**Velbert**



Ismail Öztürk, Feridun Öztürk



**Manisa**



**Ihr Spezialist für Spritzgusswerkzeuge und Kunststoffteile im Bereich Automotive!**

**+Kabelkonfektion**

- 1992 Gründung in Velbert / BRD als Familienunternehmen.
- 2008 Aufbau des türkischen Werks in Manisa - Türkei.
- 2018 Ausbau 12 500 m2 und Betreuung von unserem Competence Center Deutschland.
- Tätigkeiten: Formenbau, Kunststoffverarbeitung, Metall- und Kunststoff- Bearbeitung, Montage, Kabelkonfektion
- Kommunikation auf Deutsch und Englisch.
- 30-jährige Erfahrung in der Branche ermöglicht es uns, einen umfassenden Service anzubieten, von der Konstruktion über die Werkzeugherstellung, bis hin zum fertigen Teil.
- Zertifizierung nach IATF 16949

**Your specialist for injection molds and plastic parts in the automotive sector!**

**+Cable Assembly**

- 1992 founding in Velbert / Germany as a family company.
- 2008 Construction of the Turkish plant in Manisa - Turkey.
- 2018 expansion of the Turkish plant on 12 500 m2 surface and support from our Competence Center Germany.
- Activities: Mold making, plastic injection, metal and plastics processing, cable assembly.
- Communication in English and German.
- 30 years experience in the sector enabling us to offer an all-inclusive service from design to tooling up to the finished part.
- IATF 16949 Certification

**ÖZTÜRK ENDÜSTRİYEL PLASTİK KALIP METAL SAN. VE TİC. LTD. ŞTİ.**

Öztürk Manisa +90 (0) 236 213 07 10 - sales@ozturk-manisa.com

**Competence Center Germany**

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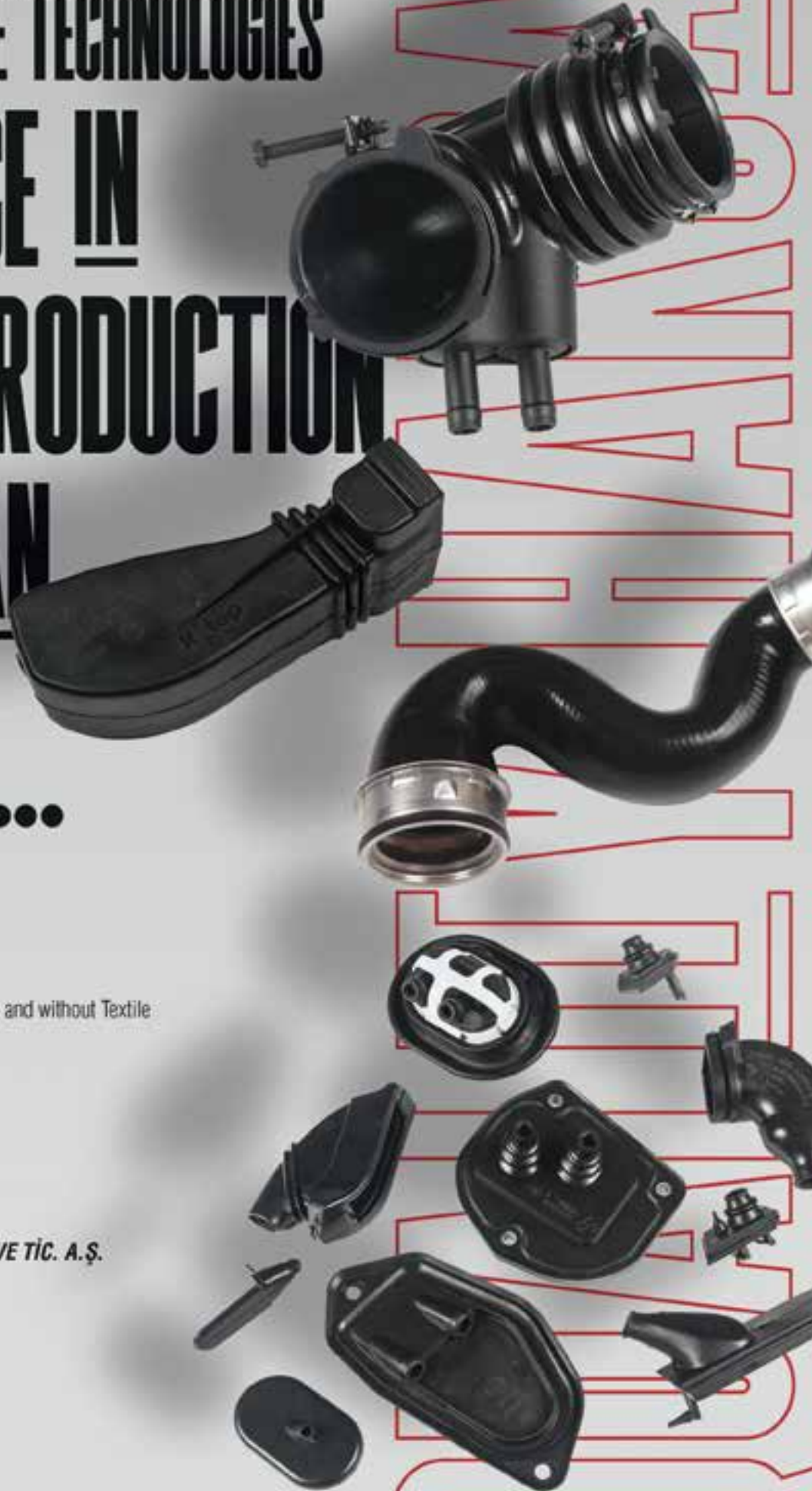
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and Rubber Compound

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## SARIGÖZOĞLU A.Ş.



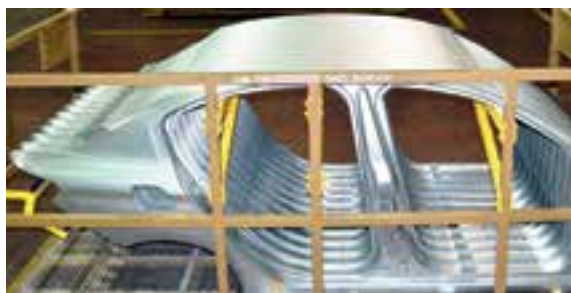
### A BRIEF HISTORY OF SARIGOZOGLU

Founded in 1957 by İsmail SARIGÖZOĞLU in İzmir, SARIGÖZOĞLU provides services to leading OEMs of the automotive industry such as Ford, TOFAŞ, Mercedes, Renault, Bosch, BMW, Volkswagen, Audi, Bentley, Jaguar, Porsche, thanks to its knowledge, experience and technological power.

Sarigözoğlu acknowledges prioritizing customer requests as part of company culture. The company is constantly growing and developing with its investments in Manisa in 1976, Aksaray in 1999 and finally Bursa in 2009 and currently pursues the sheet metal stamping and die production in automotive and white goods sectors for three generations with 5 factories and 1100 employees in 3 different cities. A new investment operation is planned in Kocaeli, and the plant has started its construction phase.

As one of the advanced suppliers of the automotive industry, it has a wide range of products, from large exterior panel parts of vehicles called cosmetics, to subassemblies with robotic welding systems, to thick chassis parts.

The company, where innovation and sustainability has become a philosophy of life, is currently a strategic partner in the projects of hydrogen fueled heavy commercial vehicles while producing parts for electric vehicles.



### PRODUCTS GROUPS

- Passenger cars
- Commercial vehicles
- Trucks' sheet metal stamping parts, tooling and assembling
- Chassis parts
- Inner and outer panels
- Upper & under body parts
- Complete side panels
- Roof, inner and outer hoods
- Fenders, tunnel and base parts
- Inner & outer doors
- Door beams
- Seat parts
- Windshield panel frame
- Engine bracket parts
- Suspension pots
- Deck lid parts

### QUALITY CERTIFICATES

- ISO 9001 : 2015
- ISO 14001 : 2015
- IATF 16949 : 2016

### LOCATIONS IN TURKEY

- |                    |         |
|--------------------|---------|
| ● TOOLING PLANT    | MANISA  |
| ● STAMPING PLANT   | MANISA  |
| ● STAMPING PLANT   | BURSA   |
| ● STAMPING PLANT 1 | AKSARAY |
| ● STAMPING PLANT 2 | AKSARAY |
| ● STAMPING PLANT   | KOCAELI |

[www.sarigozoglu.com.tr](http://www.sarigozoglu.com.tr)  
[info@sarigozoglu.com.tr](mailto:info@sarigozoglu.com.tr)



## OPAS OTOMOTIV PLATINLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ



### WELCOME to DODUCO TURKEY

Founded as a family company in 1974, OPAS is a manufacturer and trader of aftermarket and genuine spare parts for buses, commercial industrial and agricultural vehicles. Almost in 50 years, OPAS's customers have trusted the company as a reliable, durable and precise aftermarket specialist since the Company has continuously innovate, transform and evolve its technologies, constantly refining and improving products for our customers.



While only manufacturing ignition systems for automobiles in its early years, the company later achieved the technology and the manpower to produce every component of ignition systems by improving its wide product range. Distributors and magneto point sets, distributor caps, different types of capacitors, ignition coil sets and distributor rotors, heavy-duty induction coils, new age ignition coils, sensors, lambda sensors and flow meters can be considered among the company's leading products.

OPAS, which received a license (know how) from the German firm DODUCO KG. DR. E. Dürrwachter, became the most important producer of ignition systems in World trade. As a result of a relationship based on mutual trust since 1996, the entire production base in Germany which has been bought by OPAS via contract, was brought to Turkey. Later, with the Doduco firm being bought by BERU A.G., one of Germany's important firms, OPAS has become a long time supplier of BorgWarner BERU Systems GmbH before continuing as the new supplier of Federal Mogul Aftermarket GmbH starting with 2013. After the integration of BERU A.G. and BorgWarner, OPAS has been the supplier in accordance to the same agreement done beforehand. Thanks to its management policy and its ideals about not compromising on quality, OPAS was awarded with the certificate of quality: TS EN ISO 9001:2008 by both the IQNet and the Turkish Standards Institution. The company still proceeds with its planned study about Total Quality Management.

OPAS, while expanding its supply network both domestic and abroad, created a marketing and supply organization in order to meet the demands of internal and external market. OPAS has been continuing its marketing and selling operations successfully by dividing the regions with a dealership system in Turkey. Among the foreign countries OPAS exports to are ENGLAND, GERMANY, ITALY, ROMANIA, SOUTH AMERICAN COUNTRIES (ARGENTINA, CHILE, BRAZIL and others), RUSSIA, IRAN, EGYPT, LEBANON, ALGERIA, TURKISH REPUBLIC OF NORTHERN CYPRUS, SYRIA, JORDAN, IRAQ and NORTH AFRICAN COUNTRIES.

Since its entrance to the automotive supply industry, OPAS has been one of the leading companies in the market. While maintaining this characteristic feature since the beginning, OPAS will continue to be actively strong in the forthcoming years.

### OPAS OTOMOTIV PLATINLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ

Merter Tekstil Merkezi, Mehmet Nesih Özmen  
Mahallesi Kasım Sok. No:14 Güngören 34169  
İstanbul/Türkiye



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Phone: +90 212 642 90 50  
Fax: +90 212 557 90 97  
e-mail: info@opasauto.com

SEGER A.Ş.



#### Sejer is growing with giant steps

Established in Bursa, Sejer continues its global trade adventure, which it started with horn production in 1981, by expanding its product range. Sejer demonstrates its product quality, which is accepted all over the world, as in horn production, in the light bulbs it includes as a commercial product in its product range and in the battery group that it sells only to the foreign market.

Sejer, which brought the product to the packaging stage in a record time by producing 1 horn in 4 seconds with its state-of-the-art production lines, continues to be the supplier of the world's leading automotive giants by exceeding the borders of Turkey. Sejer, which has managed to enter the top 10 in the world in horn production and sales with its annual capacity exceeding 15 million; In addition to global automotive companies such as Renault, Isuzu, Audi, Honda, Mercedes-Benz, Volkswagen, Tesla, Nissan, Ford, Dacia, it is now proud to supply horns to TOGG, Turkey's first and only domestic car.

Stepping into e-commerce in the 40th anniversary of its establishment, Sejer aims to increase customer satisfaction by bringing its products together only with the last consumers in the domestic market as soon as possible on the website [www.segerauto.com](http://www.segerauto.com).

Sejer, which has the capacity to design products, manage business processes, develop and produce with more than 370 employees in 2 factories operating in Turkey and China; It also contributes significantly to the foreign trade volume of the country by exporting to more than 70 countries in Europe, America, Africa and Asia.

Sejer has not only been a company that has been operating in production and sales for 40 years, but also shows a highly sensitive approach to important social issues such as gender equality and women's empowerment with all its departments from the management level to its employees. Witnessing that the automotive industry, in which it is a part, is also undergoing a major change, Sejer took the first step in 2021 to make the concept of sustainability a part of its corporate culture.

Sejer offers products that respect human, environment and nature with production and quality standards to the OEM sector and the end consumer; It sees it as a responsibility to prevent negative situations in traffic and human life caused by products that do not meet the standards and cannot meet the needs because they are produced under the stairs.

Demirtaş Dumlupınar OSB Mah. Mustafa Karaer Cad.  
No:22 16110 Osmangazi – BURSA / TÜRKİYE

[www.seger.com](http://www.seger.com)  
[info@seger.com](mailto:info@seger.com)





SISMAK

# SISMAK

GIVE DIRECTION TO LIFE

Sismak was founded in 1980 with the purpose of designing, manufacturing, and assembling steering gear in compliance with quality system standards such as IATF 16949, ISO 9001 and ISO 14001.

In order to increase product performance and fulfil the demands conveyed by the customers, The Engineering Department carries out APQP, DFMEA and PFMEA studies.

The most important element of the Sismak process comprised of the stages of Planning, Purchasing and Production is the repeatable product quality.

During the first stage of production, time planning of assembly and production equipment is carried out with ERP software in order to fulfil customer demands.

Test and controls conducted in line with international quality system standards are maintained in all production and final stages.

Sismak is continuing its production in İzmir where it has Airport, Sea Port and main routes which is an advantage for transport.

Sismak has various product range with 23 different brand and 295 models.

Sismak manufacturing facilities have a yearly capacity is 354.000 pcs.

Carrying out its activities based on the principle "Change is the most important part of development", Sismak continues to produce and develop with its renewed logo in 2016 and its slogan;

**"Give Direction to Life".**



İzmir Atatürk Organize Sanayi Bölgesi  
10007 Sokak No:13 Çiğli 35620- İZMİR-TÜRKİYE

[www.sismak.com](http://www.sismak.com)



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OLGUN**SUSPENSION**

OLGUN**TECH**

OLGUN**AUTOMATION**

## TEKNO KAÜÇUK SANAYİİ AŞ



Tekno Kauçuk is one of the leading rubber part manufacturer for automotive and home appliance industries since 1959. Besides its 17.500 m<sup>2</sup> headquarter located in Gebze Industrial Zone, it has three more plants in Turkey, in Manisa (1.500 m<sup>2</sup>), TAYSAD Industrial Park (6.000 m<sup>2</sup>), Kaynaşlı/Düzce (compounding 16.000 m<sup>2</sup>).

In these plants, Tekno Kauçuk is producing wiring harness grommets, air brake diaphragms, rubber-metal bonded antivibration parts for the automotive industry, door gasket, and inlet/outlet hoses for washing machines.

Considering the strategy to be located near to the customer by being in co-operation with strong partners, Tekno made several successful Joint Ventures in Mexico, India and Turkey.

Supported by 63 years of experience and technical view, Tekno is not only one of the global leaders in manufacturing but also designing and developing parts and always presents the best solutions for its partners.

### PRODUCTS AND SERVICES

#### Products

- Rubber-Metal Anti-Vibration Parts
- Rubber Diaphragms Used in Air Brake Chambers
- Wiring Harness for Electrical Systems
- Door Bellows and Inlet/ Outlet Hoses Used in Washing Machines

#### Services

- Product Design and Development, Analyse and Test Services
- 3 Axial Elastomer High Characterization (Up to 600Hz)
- Compound Development
- Shock and Vibration Test Centre
- Climatization Tests
- Structural and Acoustic Noise Measurements



### Tekno Kauçuk Sanayii AŞ

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Gebze-Kocaeli / TURKEY

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TEZMAKSAN MAKINA SAN. VE TIC. A.Ş.



As Tezmaksan, we have been the pioneer of firsts in many fields, from production to sales, from industrialization to digitalization of Turkey, throughout our machining journey that has grown since 1981.

With the TEZMAKSAN brand, we offered the CNC Machine Analysis Platform KAPASİTEMATİK, the Parkurda.com B2B e-commerce platform that brings together the stakeholders of the machining industry, and the CUBEBOX robotic automation systems that we offer to localize the robotic automation systems, speed up production and meet export demands.

We continue our work at our three facilities in Istanbul Bayrampaşa, Istanbul Kırac and Istanbul Thrace Free Zone with a total indoor area of 40 thousand square meters. With our regional directorates in Adana, Ankara, Bursa, İzmir and Konya, we provide sales and after-sales technical services to our customers from the closest points. We are the leading company in the industry with our 220 employees, most of whom are engineers and technicians, and 40 global local and foreign brand representations.

As a company that provides full service to our customers with production, project consultancy and turnkey special projects, we will continue to create value for all our stakeholders in the future by conducting our activities at international standards with an understanding of corporate governance, customer satisfaction, sustainability and social responsibility.



**TEZMAKSAN MAKINA SAN. VE TIC. A.Ş.**  
İSTANBUL / MERKEZ: Abdi İpekçi Caddesi No:129,  
34040 Bayrampaşa / İSTANBUL

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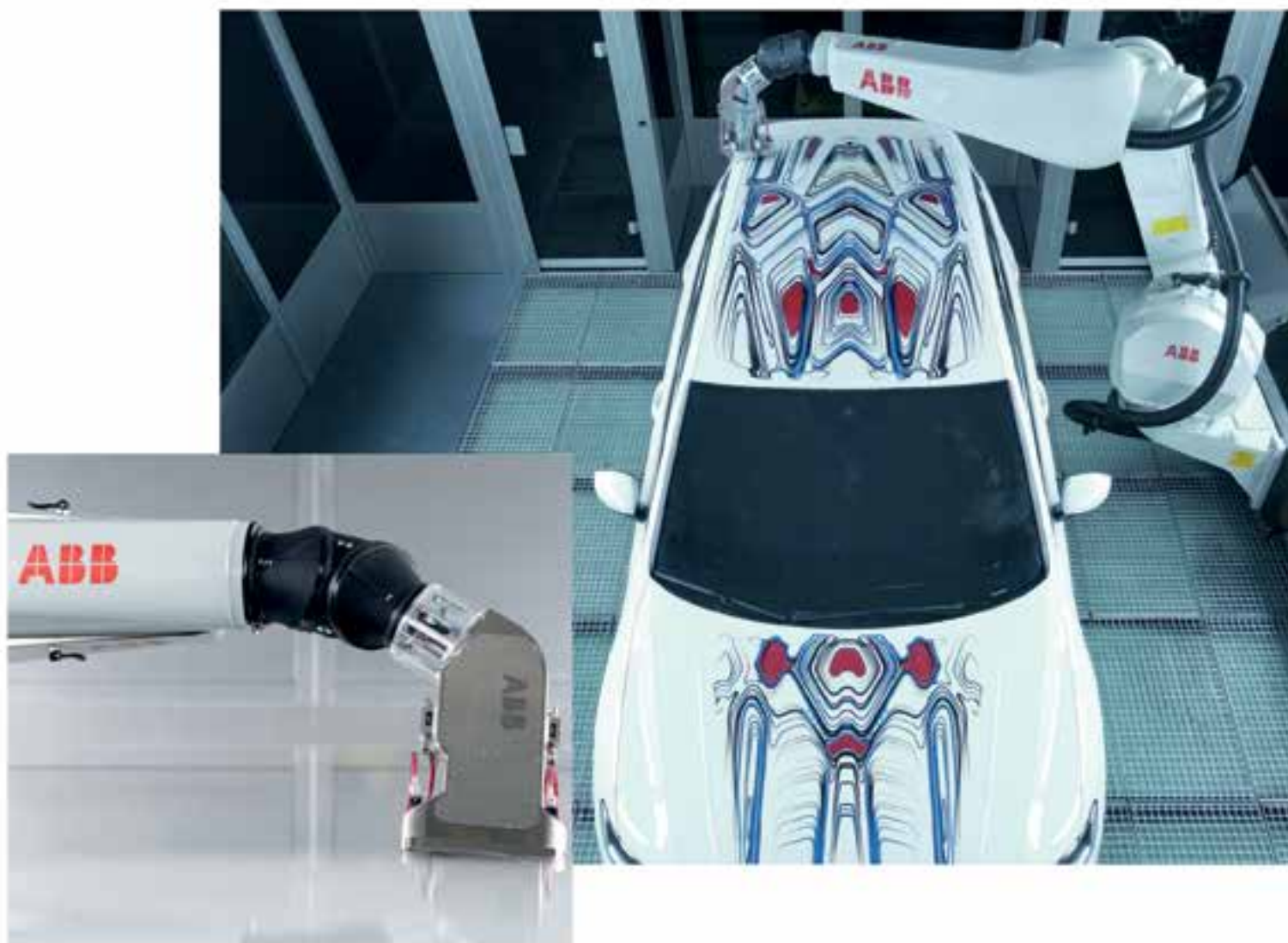
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## PixelPaint

### Non-overspray for two-tone painting

ABB's PixelPaint non-overspray technology eliminates the need for time-consuming masking and demasking methods for two-tone painting in the automotive industry, significantly reducing time and costs, improving productivity, and expanding possibilities for customized paint schemes to meet customer demand.

Today's consumers are increasingly demanding individualized paint schemes for their vehicles, featuring either a contrast color or a personalized paint finish or design. Satisfying this demand is now made easier with ABB's PixelPaint solution, which incorporates an inkjet head, dosing control package, an IRB 5500 paint robot and easy-to-use RobotStudio programming software for two-tone and decorative painting applications. <https://new.abb.com/products/robotics/functional-modules/pixelpaint>

