MOBILITY INDUSTRY IN TÜRKİYE 2024
INVEST IN TÜRKİYE

ASSIST YOU BEFORE, DURING AND AFTER YOUR ENTRY INTO TÜRKİYE

PRIVATE SECTOR APPROACH WITH PUBLIC SECTOR CAPABILITIES

A GOVERNMENTAL AGENCY REPORTING TO THE PRESIDENT

ACTING AS YOUR SOLUTION PARTNER

General & customized business information & Sectoral analysis & reports
Facilitating your investment at all stages
Site selection support to find appropriate location/land for your investment
Matchmaking with local partners & establishing business linkages
Arrangements of meetings with governmental bodies and other stakeholders
Project launch & Press release Services
Facilitating your visit to Türkiye
AFTERSALES

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AGENDA

1 - INVESTMENT ENVIRONMENT IN TURKİYE

2 - AUTOMOTIVE INDUSTRY IN TURKİYE

3 - E-MOBILITY ECOSYSTEM IN TURKİYE
DOMESTIC + ACCESSIBLE MARKETS

Customs Union with the EU allows direct access to the EU Market

DOMESTIC MARKET + EU MARKET + FREE TRADE AREA

CUSTOMS UNION with the EU allows direct access to the EU Market

996 MILLION CONSUMERS

448 MILLION in EU

463 MILLION in FTA AREA

85 MILLION in TÜRKİYE

Source: IMF; Ministry of Trade, TurkStat; Population as of 2021 *in ratification process
STRATEGIC LOCATION

HUB FOR MULTINATIONALS TO MANUFACTURE, EXPORT AND MANAGE

Working Hours Intersect with 16 Time Zones

PROXIMITY TO MAJOR MARKETS
1.3 billion people and $28T GDP in Europe, MENA and Central Asia at 4 hour flight-distance

CONNECTIVITY
Turkish Airlines connects you to 340 destinations in 129 countries

MANUFACTURING & EXPORT HUB FOR MULTINATIONALS
AS WELL AS MANAGEMENT HUB FOR MULTINATIONALS

Exporting 85% of its production
- Exporting 87% of its production

B/S/H/
89 countries

Cargill
66 countries

Microsoft
70 countries

Nestlé
Production base for MENA

BOSS
Its largest production facility worldwide

B/S/H/
22 countries

63 countries

knauf
80 countries

TOYOTA

Ford

SANOFI
14 countries

ge healthcare

30 countries

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FAVORABLE DEMOGRAPHICS

HALF OF POPULATION UNDER AGE OF 32.7 CREATING DYNAMIC LABOR FORCE AND FISCAL DISCIPLINE

**WORKING AGE POPULATION**
(15-64+) (Index: 2014=100)

**TOTAL DEPENDENCY RATIO**
(%, Age 0-14 & 65+)/Age 15-64)

Source: Turkstat, Eurostat, UN, 2019
SKILLED AND COMPETITIVE LABOR FORCE

ANNUAL NUMBER OF GRADUATES
(thousands)

<table>
<thead>
<tr>
<th>Level</th>
<th>2002</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>287</td>
<td>904</td>
</tr>
<tr>
<td>Vocational &amp; Technical High School</td>
<td>177</td>
<td>430</td>
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</table>

AVAILABILITY OF SKILLED LABOR FORCE
(10=Available; 0=Unavailable)

<table>
<thead>
<tr>
<th>Country</th>
<th>2023</th>
</tr>
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<tbody>
<tr>
<td>Türkiye</td>
<td>6,16</td>
</tr>
<tr>
<td>Czechia</td>
<td>6,04</td>
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<td>Poland</td>
<td>5,25</td>
</tr>
<tr>
<td>Slovakia</td>
<td>4,74</td>
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<tr>
<td>Romania</td>
<td>4,44</td>
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<tr>
<td>South Africa</td>
<td>3,65</td>
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<tr>
<td>Bulgaria</td>
<td>3,43</td>
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<tr>
<td>Brazil</td>
<td>3,36</td>
</tr>
<tr>
<td>Hungary</td>
<td>3,35</td>
</tr>
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</table>

AVAILABILITY OF COMPETENT SENIOR MANAGERS
(10=Available; 0=Unavailable)

<table>
<thead>
<tr>
<th>Country</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czechia</td>
<td>6,64</td>
</tr>
<tr>
<td>Türkiye</td>
<td>5,63</td>
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<tr>
<td>Poland</td>
<td>5,54</td>
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<tr>
<td>South Africa</td>
<td>4,51</td>
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<tr>
<td>Romania</td>
<td>4,4</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>4,00</td>
</tr>
<tr>
<td>Brazil</td>
<td>3,85</td>
</tr>
<tr>
<td>Slovakia</td>
<td>3,11</td>
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</tbody>
</table>

LABOR FORCE BY EDUCATION LEVEL

<table>
<thead>
<tr>
<th>Level</th>
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<tbody>
<tr>
<td>University</td>
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<tr>
<td>High School</td>
<td>42.2</td>
</tr>
<tr>
<td>Vocational &amp; Technical High School</td>
<td>10.0</td>
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</table>

LABOR COST PER HOUR IN MANUFACTURING

<table>
<thead>
<tr>
<th>Country</th>
<th>$, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>396</td>
</tr>
<tr>
<td>Germany</td>
<td>304</td>
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<tr>
<td>France</td>
<td>258</td>
</tr>
<tr>
<td>UK</td>
<td>242</td>
</tr>
<tr>
<td>Slovakia</td>
<td>176</td>
</tr>
<tr>
<td>Poland</td>
<td>146</td>
</tr>
<tr>
<td>Türkiye</td>
<td>129</td>
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<tr>
<td>Czechia</td>
<td>106</td>
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<tr>
<td>Romania</td>
<td>91</td>
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<tr>
<td>Hungary</td>
<td>81</td>
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<tr>
<td>Bulgaria</td>
<td>48</td>
</tr>
</tbody>
</table>

REMUNERATION OF MANAGEMENT/ENGINEER
Total base salary plus bonuses and long-term incentives

<table>
<thead>
<tr>
<th>Country</th>
<th>SK 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>6,64</td>
</tr>
<tr>
<td>Germany</td>
<td>5,63</td>
</tr>
<tr>
<td>France</td>
<td>5,54</td>
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<tr>
<td>UK</td>
<td>4,51</td>
</tr>
<tr>
<td>Slovakia</td>
<td>4,40</td>
</tr>
<tr>
<td>Poland</td>
<td>4,00</td>
</tr>
<tr>
<td>Türkiye</td>
<td>3,85</td>
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<tr>
<td>Czechia</td>
<td>3,11</td>
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<tr>
<td>Romania</td>
<td>128</td>
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<tr>
<td>Hungary</td>
<td>106</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>91</td>
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</tbody>
</table>

Source: Ministry of National Education, Council of Higher Education, Turkstat, IMD World Competitiveness Yearbook Executive Opinion Survey based on an index from 0 to 10, Eurostat, ILO
AGENDA

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3 - E-MOBILITY ECOSYSTEM IN TURKİYE
13 OEMs. 8 of THEM ARE MULTINATIONALS.

# of Global OEMs

- Türkiye: 8
- Poland: 5
- Czechia: 4
- Hungary: 4
- Slovakia: 4
- Romania: 2
- Serbia: 1
30+ OUT OF 100 BIGGEST GLOBAL SUPPLIERS ARE IN TÜRKİYE

STPONG PRESENCE OF GLOBAL TIER-1 SUPPLIERS
LEADER OF THE REGION IN AUTOMOTIVE

Automotive Production in 2023
Thousands unit

World Automotive Production, 2023
Million

- **China (1)**
- **Usa (2)**
- **Japan (3)**
- **India (4)**
- **Germany (5)**
- **S.Korea (6)**
- **Mexico (7)**
- **Spain (8)**
- **Brazil (9)**
- **Thailand (10)**
- **Canada (11)**
- **Türkiye (12)**
- **Indonesia (13)**
- **France (14)**
- **Czechia (15)**

#1 in CEE
#3 in Europe
#12 in the World

Source: OICA
Vehicle Exports
(Million $)

2014 | 22,271
2015 | 21,156
2016 | 23,990
2017 | 28,535
2018 | 31,568
2019 | 30,594
2020 | 25,549
2021 | 29,343
2022 | 30,976
2023 | 35,004

Source: Automotive Manufacturers Association of Turkey, Turkish Exporters' Assembly, Turkstat

Top Auto Export Markets
2023 (Million $)

- France(1) | 3,671
- Germany(2) | 2,954
- UK(3) | 2,656
- Italy(4) | 2,566
- Spain(5) | 1,895
- Poland(6) | 1,418
- Slovenia(7) | 1,164
- Belgium(8) | 1,100
- USA(9) | 778
- Romania(10) | 722

Source: Automotive Manufacturers Association of Turkey, Turkish Exporters' Assembly, Turkstat
AGENDA

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3 - E-MOBILITY ECOSYSTEM IN TURKİYE
20 GWh annual capacity
Battery production has started by 2026

220 MWh annual capacity
Li-ion cylindrical battery cells
In June 2022

3 GWh annual capacity
Li-ion (LiFeP04) battery cells and ESS by 2024
**RECENT INVESTMENTS**

- 2+ bn USD investment by Togg
- EV and Battery Cell Production
- First model has rolled off the line by April 2023

- 3 bn USD investment by Ford Otosan
- Full-electric Transit model
- First model has rolled off the line by April 2022

- Renault announced 400 mn USD new investment in December 2023
- 4 new models including hybrid and EV by 2027

- ZF CVS opened up new facility in Sakarya/ Türkiye
- 40 m USD investment
- 5th production facility

- Renault announced 400 mn USD new investment in December 2023
- 4 new models including hybrid and EV by 2027

- 330 mn USD PHEV C-HR model investment by Toyota
- First PHEV plant of Toyota in Europe
- Started to production by November 2023

- 1+ bn USD battery cell investment by Siro (JV by Togg – Farasis)
- 20 GWh annual capacity
- Start production by 2026
Automotive manufacturers with electrified products in Türkiye

- Toyota, Corolla, CHR hybrid production, battery assembly
- Renault, Clio hybrid production, battery assembly
- Hyundai, İ20 & Bayon hybrid production (2020)
- Karsan, Electric bus and minibus development & production
- Otokar, Electric bus development & production
- Temsa Electric bus development & production
- Bozankaya, Electric bus development & production

Some of the global companies’ R&D on EV in Türkiye

- Ford Otosan field of work in EV technologies
  Electrical axle development
  LCV BEV concept development
  E-truck project
- AVL Engineering field of work in EV technologies
  System engineering
  Battery Management System
  Battery Pack Development Design and Analysis
  Module & Pack simulation
  Cost Engineering
  Production Design for assembly
- Valeo
  Hybrid vehicle systems & products
**Motor Vehicle Sales**

(Thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Passenger Cars</th>
<th>Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>967</td>
<td>1,233</td>
</tr>
<tr>
<td>2022</td>
<td>593</td>
<td>783</td>
</tr>
<tr>
<td>2021</td>
<td>562</td>
<td>737</td>
</tr>
<tr>
<td>2020</td>
<td>610</td>
<td>773</td>
</tr>
<tr>
<td>2019</td>
<td>387</td>
<td>479</td>
</tr>
</tbody>
</table>

Source: Automotive Distributors Association

**Passenger Car Sales**

(Thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0,2</td>
</tr>
<tr>
<td>2020</td>
<td>0,8</td>
</tr>
<tr>
<td>2021</td>
<td>2,8</td>
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<tr>
<td>2022</td>
<td>7,7</td>
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<tr>
<td>2023</td>
<td>72,2</td>
</tr>
</tbody>
</table>

Note: The data includes sales for ICE and LPG, Hybrid, and EV vehicles.
AS OF END of 2023, MORE THAN 140 COMPANIES HAS BEEN LICENSED BY EMRA, AND 12.510 CHARGING POINTS ARE IN OPERATION, OF WHICH 3.804 ARE DC.

In 2023, registered EV cars have been tripled, while charging points have been tripled, as well.
## EV and EV Technologies

1. Electric Vehicle Purchases Will Be Supported
2. Electric Vehicle Use Will Be Supported
3. Electric Vehicle Production Investments Will Be Supported and New Investments Will Be Encouraged.
4. Türkiye will be a “Regional Battery Production Center”
5. Secondary Use and Recycling investments will be supported.
6. Developing of Tier 1 and 2 suppliers producing Electrification Technologies will be provided.
7. The Advanced Material Support Program will be launched.
8. Charging infrastructure for electric vehicles will be completed.

## Critical Projects

- The projects on Battery and Innovative Energy Technologies are evaluated as ‘critical project’;
  - Development and/or manufacturing investments of battery module and pack
  - Battery cell investments
  - Development and manufacturing investments of battery pack sub-components
  - Battery test center investments
MOBILITY TECHNOLOGIES STRATEGIES, AND ROADMAP

- Battery Management System
- Battery Cell
- Cooling System
- Battery Recycling
- Infotainment
- HVAC systems
- Power & Powertrain
- Control
- ADAS (Automated Driver Assistance Systems)
- Autonomous Car Hardware Systems (sensor, camera, radar, telematics etc.)
- Power Electronics
- E-drive
- Motor and Inverter Cooling System
- Rectifier
- IGBT
- Charging Station
- DC/DC converter
- AC/DC rectifier
- V2V, V2I, V2X…
- ADAS (Automated Driver Assistance Systems)

Source: Ministry of Industry and Technology Mobility Strategy 2021
Support measures granted to the company:

- VAT Exemption
- Customs Duty Exemption
- VAT Refund
- Corporate Income Tax Reduction (tax reduction rate: 100%, rate of contribution: 100%, rate of support that can be used during investment period: 100% of the rate of contribution)
- Social Security Premium Employers’ Share Support (10 years)
- Income Tax Withholding Support (10 years)
- Qualified Personnel Support (maximum 360,000,000 TL)
- Interest Rate Support
- Land Allocation

Production of Electric Cars

Location: Bursa
Starting date: 30/10/2019
Investment duration: 13 years
Type of investment: New
Fixed investment amount: ~3,120,000,000 USD
Employment: 4,323
Production: 5 different models, 175K/year

Status as of 2021 June
Support measures granted to the company:

- VAT Exemption
- Customs Duty Exemption
- VAT Refund
- Corporate Income Tax Reduction (tax reduction rate: 100%, rate of contribution: 100%, rate of support that can be used during investment period: 100% of the rate of contribution)
- Social Security Premium Employers’ Share Support (10 years)
- Income Tax Withholding Support (10 years)
- Qualified Personnel Support (maximum 250,000,000 TL)
- Land Allocation
- Energy Support

(50% of its consumption for 10 years (from the date when the company starts activity and up to 200,000,000 TL)
Contact
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