WHY INVEST IN TURKISH ICT SECTOR?
AGENDA

Executive Summary 03
Turkish ICT Sector Outlook 05
Growth Drivers in Turkey 11
Opportunities in Turkish ICT Sector 22
Start-up Ecosystem 38
Success Stories 43
Executive Summary
Executive Summary

FAVORABLE INVESTMENT ENVIRONMENT

- Strong macroeconomic growth with increasing income per capita and a burgeoning middle class
- Favorable demographics with a dynamic, young and online population supporting the industry
- Cost-competitive ICT skills and communication data infrastructure
- Strong government support through technology and innovation ecosystems as well as incentives that focus on R&D

STRONG INTERNATIONAL PRESENCE

- Global ICT companies have been present in Turkey with significant activities, using Turkey as a managerial hub to access regional markets
- Successful partnerships with local companies to grow in the region, capitalizing on locals’ human capital, experience and networks

MARKET POTENTIAL

- World-scale domestic demand and strong ICT skills offer ample opportunities in telecommunications, e-commerce, gaming, cloud & data center operations, digital transformation of the Turkish industry, public investments, e-government projects and ICT use in automotive, healthcare and hospitality sectors

ROBUST GROWTH IN THE SECTOR

- Turkish ICT market surpassed USD 27 billion in 2018
- The backbone of the growth is the young and well-educated human capital that the country offers
- The ICT ecosystem is strongly backed by international and local companies, creating a diverse environment for all players

TURKEY HAS A GROWING ICT SECTOR OFFERING AMPLE OPPORTUNITIES IN MANY AREAS
Turkish ICT Sector Outlook
Turkish Information & Communication Technologies Sector

ICT Market Size (In billion USD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>31.6</td>
</tr>
<tr>
<td>2015</td>
<td>29.9</td>
</tr>
<tr>
<td>2016</td>
<td>31.2</td>
</tr>
<tr>
<td>2017</td>
<td>31.3</td>
</tr>
<tr>
<td>2018</td>
<td>27.4</td>
</tr>
</tbody>
</table>

The drop is due to changing currency rates, although by TRY, it is recorded as an unprecedented average growth of 17% in 5 years.

2018 ICT Market Breakdown
Shares of Subsectors

- Hardware: 38%
- Services: 21%
- Software: 41%

Source: TUBISAD ICT Market Data 2018

TURKISH ICT MARKET HAS SURPASSED USD 27 BILLION AND REACHED A WORKFORCE OF ALMOST 130K IN THE LAST FIVE YEARS.
**Foreign Trade**

**Turkey Has Nearlly Doubled Its Exports Since 2014 - Reaching Over USD 1 Billion While Broadening Its Export Markets**

**ICT Exports**

*Exports (Million USD)*

<table>
<thead>
<tr>
<th>Year</th>
<th>IT-Service</th>
<th>IT-Hardware</th>
<th>IT-Software</th>
<th>CT-Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>68</td>
<td>72</td>
<td>105</td>
<td>66</td>
</tr>
<tr>
<td>2015</td>
<td>74</td>
<td>84</td>
<td>167</td>
<td>74</td>
</tr>
<tr>
<td>2016</td>
<td>104</td>
<td>505</td>
<td>150</td>
<td>67</td>
</tr>
<tr>
<td>2017</td>
<td>110</td>
<td>110</td>
<td>137</td>
<td>833</td>
</tr>
<tr>
<td>2018</td>
<td>110</td>
<td>73</td>
<td>110</td>
<td>773</td>
</tr>
</tbody>
</table>

Source: TUBISAD ICT Market Data 2018

**...While Broadening Its Export Markets**

- 82% to Europe
- 4% to Asia-Pacific
- 6% to Americas
- 8% to Middle East and Africa
**Major Players**

**OUT OF 139,000 EMPLOYEES**

- 56% have a university degree
- 32% are women
- 21% are R&D personnel
- almost 70% are younger than 35

**LARGE-SIZED LOCAL AND INTERNATIONAL COMPANIES IN THE ECOSYSTEM**

- **THERE ARE OVER 2,000 COMPANIES IN TURKISH ICT SECTOR WHERE BOTH LOCAL AND INTERNATIONAL PLAYERS ARE ACTIVE**

**USD 16 billion of international investment attracted since early 2000s**

**Source:** TUBISAD ICT Market Data 2018, BT Haber Bilsim 500 2017 List, Fortune 500 2018 List, Deloitte Technology Fast 50 Turkey 2017, CBRT
EARLY STAGE INVESTMENTS IN ICT COMPANIES IN TURKEY ARE ON THE RISE

TURKISH ICT SECTOR IS POISED TO FURTHER GROW WITH M&AS AND NEW ENTRANTS

Source: Startups.watch Turkish Entrepreneurship Ecosystem 2018
3 out of top 10 VC-backed exits in Europe during 2018 were Turkish!

Source: Startups.watch Turkish Entrepreneurship Ecosystem 2018
Growth Drivers in Turkey
Robust Economy

Ranking of Economies by GDP at PPP

Real GDP Growth (Index: 2002=100)

13th LARGEST ECONOMY IN THE WORLD

Turkish economy has more than tripled over the past 15 years and is promising more growth in future.

**Turkish Economy**
*(GDP at current prices, USD Billion)*

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP (USD Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>236</td>
</tr>
<tr>
<td>2018</td>
<td>784</td>
</tr>
</tbody>
</table>

**TRIPLING INCOME PER CAPITA**
*(GDP per capita at purchasing power parity)*

- **2002**: $10,685
- **2018**: $27,956

Source: IMF, TurkStat, Euromonitor
Favorable Demographic

...HALF OF POPULATION UNDER AGE 30

Turkey

Working Age Population (15-64) (Index: 2014=100)

Europe

Total Dependency Ratio (%: Age 0-14 & 64)/Age 15-64)

Growth Drivers in Turkey

Source: Turkstat, Eurostat, UN, 2018
Skilled & Cost-Competitive Labor Force

Annual Number of University Grads in ICT & Engineering Fields (2018)

- **46,255** Engineering Undergraduate
- **5,144** Engineering Graduate
- **918** ICT Undergraduate
- **501** ICT Graduate

Source: Ministry of National Education Council of Higher Education, Turkstat, stackoverflow.com

Number of Grads from Vocational & Technical High Schools (In Thousands)

- 2002: **177**
- 2017: **682**

Labor Force by Education Level

- **2002**
  - University: 10%
  - High School and below: 90%

- **2018**
  - University: 24%
  - High School and below: 76%

Over 120K professional software developers in Turkey
## Skilled & Cost-Competitive Talent Pool

**Availability of Qualified Engineers**
*(10=Available; 0=Unavailable)*

<table>
<thead>
<tr>
<th>Country</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>6.92</td>
</tr>
<tr>
<td>Poland</td>
<td>6.41</td>
</tr>
<tr>
<td>Romania</td>
<td>6.02</td>
</tr>
<tr>
<td>Czechia</td>
<td>5.35</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>5.13</td>
</tr>
<tr>
<td>Hungary</td>
<td>5.02</td>
</tr>
<tr>
<td>Slovakia</td>
<td>4.88</td>
</tr>
</tbody>
</table>

## Average Salaries for Software Developers
*(with 3-5 year experience)*

<table>
<thead>
<tr>
<th>City</th>
<th>USD K, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td>99</td>
</tr>
<tr>
<td>Boston</td>
<td>80</td>
</tr>
<tr>
<td>Tel Aviv</td>
<td>67</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>56</td>
</tr>
<tr>
<td>Berlin</td>
<td>52</td>
</tr>
<tr>
<td>London</td>
<td>50</td>
</tr>
<tr>
<td>Barcelona</td>
<td>34</td>
</tr>
<tr>
<td>Dubai</td>
<td>32</td>
</tr>
<tr>
<td>Istanbul</td>
<td>18</td>
</tr>
</tbody>
</table>

**Source:** IMD World Competitiveness Yearbook Executive Opinion Survey based on an index from 0 to 10; Daxx software developers salaries, Poyraz Consultancy, Eurostat, OECD, BLS, Turkstat
Skilled & Cost-Competitive Talent Pool

Distribution of ICT Specialist by Age (%)

**Distribution of ICT specialist by age, 2018 (%)**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>EU 28</th>
<th>Estonia</th>
<th>Bulgaria</th>
<th>Romania</th>
<th>Poland</th>
<th>Czechia</th>
<th>United Kingdom</th>
<th>Germany</th>
<th>France</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-74 years</td>
<td>151</td>
<td>120</td>
<td>107</td>
<td>87</td>
<td>69</td>
<td>62</td>
<td>45</td>
<td>42</td>
<td>39</td>
<td>22</td>
</tr>
<tr>
<td>15-34 years</td>
<td>154</td>
<td>117</td>
<td>111</td>
<td>89</td>
<td>66</td>
<td>62</td>
<td>47</td>
<td>46</td>
<td>39</td>
<td>23</td>
</tr>
</tbody>
</table>

**Remuneration of Management/Engineer**

*Total base salary plus bonuses and long-term incentives*

USD K, 2017

Source: IMD World Competitiveness Yearbook Executive Opinion Survey based on an index from 0 to 10; Daxx software developers salaries, Poyraz Consultancy, Eurostat, OECD, BLS, Turkstat
Data Infrastructure

Fixed and Mobile Broadband Subscriptions (in millions)

BROADBAND SUBSCRIPTIONS DOUBLED SINCE 2010 TO REACH 69 MILLION, EUROPE’S 4TH BIGGEST ONLINE POPULATION

Source: OECD Broadband Portal, 2018 June
Turkey’s GERD (gross expenditure on R&D) is 1% of GDP.

Turkey ranks 19th in GERD financed by business enterprises.

Source: Global Innovation Index 2018

Technoparks & R&D Centers

- **64** Technoparks (an additional **20** underway)
- **53K** employment in over **5,345** companies
- **5%** international companies
- **>1000** companies with academia partnership
- Total export is USD **4.3 Billion**

R&D Centers

- **1,188** R&D Centers
- **58K** employment; **18%** with graduate degree in ICT
- **14%** international companies

Universities

- 10 universities in Top 1000; 2 in Top 500 (QS World University Rankings 2019)
- Over 1100 academicians in ICT

Out of 63 countries, Turkey ranks

- **26th** in female researchers ratio
- **11th** in R&D productivity by publication

Source: IMD Digital Competitiveness Index 2018

Technoparks and R&D Centers make important contributions to innovation ecosystem and technology development

Growth Drivers in Turkey

ICT INVESTMENTS AND R&D ARE CONSIDERED PRIORITY INVESTMENTS AND CAN BENEFIT FROM VARIOUS LUCRATIVE INCENTIVES

Ministry of Industry and Technology

Incentives

**Main Incentive Tools**

<table>
<thead>
<tr>
<th></th>
<th>General Incentives</th>
<th>Regional Incentives</th>
<th>Incentives for Strategic Investments</th>
<th>Project Based Incentives</th>
<th>R&amp;D Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Tax Reduction</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>VAT/Custom Duty Exemption</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Social Security Premium Support</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Income Tax Withholding Support*</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Interest Support**</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Land Allocation</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Partnership (Equity Investment by Gov.)</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Guarantee of Purchase by Gov.</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Energy Cost Support</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

**Tax Deduction:** Reduced tax rates for investor’s income (50-90%) until the total deduction reaches a certain percentage of capex. (15-65% of capex, in the case of project based incentives up to 200% of capex). For R&D investments, all R&D expenditures are deducted from tax base.

**VAT Exemption:** Investment machinery and equipment imported and/or locally provided within the scope of the incentive certificate will be VAT exempt.

**Customs Duty Exemption:** Investment machinery and equipment imported within the scope of the incentive certificate will be customs duty exempt.

**Interest Rate Support:** For investment loans, a certain portion of the interest share will be covered by government. (3-7% points for TL-denominated, 1-2% points for forex-denominated loans) (500K-900K TL).

**Land Allocation:** Government land will be allocated for the investments, if no land is available in OIZs.

Income Tax Withholding Exemption will provide exemption from income tax withholding (only for Region 6).

**Source:** Ministry of Industry and Technology, MSTI

*Provided that investments, except R&D, are made in Region 6,
**Provided that investment, except R&D, are made in Regions 3, 4, 5 or 6 within the frame of the Regional Incentive Scheme
Incentives Through Innovation Lifecycle

TUBITAK 1514 VC Support Program is launched to support the VC ecosystem in Turkey

Angel Investors are exempt from income tax by 80-100% at the amount of their investment

Technostartup Incentives:
Cash support up to 500K TRY

Product / Project Development
Tubitak programs:
Cash support up to 60-80% of the project budget

Commercialization
Technoparks and R&D Centers:
Income Tax Exemption
Tax cuts up to 25-40% of the personnel cost

Manufacturing
Technoinvestment Incentives:
Cash support up to 10M TRY for SMEs,
2M TRY for large companies

Growth & Competition
Patented sales:
Income Tax & VAT Exemption
Opportunities in Turkish ICT Sector
Opportunities In Sub-Sectors

- Telecommunications
- E-Commerce
- Fintech
- Gaming
- Cloud & Data Center

Digital Transformation
Public Investments & E-Government
ICT in Mobility
ICT in Healthcare
ICT in Hospitality

TURKEY OFFERS SOLID FUNDAMENTALS FOR PROFITABLE INVESTMENTS IN THE ICT SUBSECTORS
## Telecommunications

<table>
<thead>
<tr>
<th>Strong growth of the market</th>
<th>Growing export</th>
<th>Fixed and mobile broadband subscriptions in Turkey have exceeded</th>
<th>355,028km of fiber-optic with 2.8 million subscribers (as of 2018 Q4)</th>
<th>A high mobile / smartphone possession rate of 98.7% - 19th in the world</th>
<th>Strong ecosystem with local and international players with a total of 33K employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>– almost doubled to 87 Billion TRY in the last 5 years</td>
<td>– USD 110Million in 2018</td>
<td>– 74 million in 2018 – an impressive penetration rate of 90%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Telecommunications

TRY 38 billion has been invested on telecom infrastructure since 2014 (tender amounts for 2015 are included in year 2015)

Investments
(Billion TRY)

Growth in the Sector is Driven by National Broadband Strategy Targets to Reach by 2023:

- **Fixed & Mobile broadband penetration rate** 130%
- **Internet Usage Rate** 80% of population (between ages 16-74)
- **100Mbps speed for at least 100% of households**
- **Fiber Internet Subscription** 10 million

**E-Commerce**

| E-commerce market in Turkey continues to grow with an average annual growth of 33% since 2014, reaching TRY 59.9 Billion | Fixed and mobile broadband subscriptions in Turkey have reached a total of 74 million in 2018 – an impressive penetration rate of 90% | Online shoppers rate of 67% - a population of over 30 Million | Potential in mobile phone shopping – a mobile shoppers rate of 50%, which is higher than that of USA, UK, Spain and Brazil | Turkey is home to global e-commerce giants and received many international investments |

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**Source:** TUBISAD E-Commerce Report 2018, press excerpts

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**TURKEY’S E-COMMERCE MARKET HAS REACHED 60 BILLION TRY IN 2018 - OVER USD 12 BILLION**
TURKEY’S ONLINE RETAIL RATIO IS 5.3% IN 2018, WHICH REPRESENTS A MINIMUM 2X GROWTH OPPORTUNITY:

Source: TUBISAD E-Commerce Report 2018, press excerpts

Online retail/total retail ratio is calculated by dividing retail e-commerce size used in this study over total retail sector size in Turkey estimated that Euromonitor. Online and mobile shoppers are based on internet users who reported that they shopped online (desktop vs mobile) one month ago.
Fintech

A strong banking system with an educated workforce

Europe’s biggest credit and debit card market – 213 million (by 2018)

Total amount of card payments at around USD 170 Billion (in 2018)

Share of online payments is 17% with around USD 29 Billion

Turkey’s strategic location within a 4-hour flight distance from London and Dubai

Turkey’s vision of turning Istanbul into a regional finance center

Turkish government’s support in developing and promoting the Turkish fintech ecosystem

Source: BKM statistics, Deloitte Turkey Fintech Ecosystem 2017, Fintech Istanbul Fintech Progress Report 2016, Turkish Fintech Ecosystem Map v6.03 by finteachtime

CAN TURKEY BE THE NEXT FINTECH HOTSPOT?

TURKEY IS TRANSFORMING INTO A FINTECH HUB, WITH OVER 200 COMPANIES AND AN ONLINE PAYMENT MARKET OF ALMOST USD 30 BILLION
Source: BKM statistics, Deloitte Turkey
Fintech Ecosystem 2017, Fintech Istanbul
Fintech Progress Report 2016, Turkish
Fintech Ecosystem Map v6.03 by fintechtime
Gaming

Total generated game revenue in 2018 is USD 853 Million. 15% yearly growth is forecasted. 30 million active users in Turkey spending 70% of their gaming time (total game time spent) on PC - 3rd highest in the world after Poland and Russia. An ecosystem that consists of over 600 large & small companies including indies – exports in 2018 exceeded $1Billion

Turkey’s gaming market has passed USD 853M in 2018, 18th largest revenue in the world.

With Strike of Kings announcement we are investing USD 5 million in 2017 in the Turkish game market with our mobile MOBA game. Turkey is one of the countries with the highest potential in mobile gaming. It is also very important in terms of the bridge between Europe and Asia and between West and East. A game that is successful in the east must be the first station to spread to the West from Turkey.

Vincent Gao
Marketing Director, Tencent Overseas Markets

Source: Gaming In Turkey Turkish Game Market 2018 Report, TOGED, gaminginturkey.com, AdColony&Nielsen Research
Cloud & Data Center

Public cloud market in Turkey is USD 97 Million in 2017

There are 43 Tier II and Tier III data centers (centers that belong to banks and private companies are excluded) and 2 Tier IV data centers

A total of 100,000m² white space is estimated – 35,000m² for data center operators, 10,000 m² for banks, 35,000m² for companies and 20,000m² for public institutions

Data center investments are incentivized - lower energy costs, fiber optic infrastructure, land etc.

10% of companies in Turkey use cloud computing services whereas this ratio increases to 20% for large size companies (with >250 employees)

Regulation requires data systems for telecom companies and banks in the country

Capital Markets Board Communiqué in 2018 Jan requires data systems of all public companies to be in the country – postponed

There are 24 Tier III data centers run by operators - 40K m² white space

355,028 km Fiber length

VoD (Video-on-Demand) Market in Turkey

- VoD market in Turkey has reached USD 171 Million in 2017
- Turkey to remain MEA market leader, with USD 257 Million in SVOD revenues by 2021, out of USD 1.2 Billion total
- Netflix and Amazon in the market as well as Turkish VoD platforms like BluTV and PuhuTV
  - Turkish content is widely popular in Eastern Europe, Middle East and Latin America - amounts for 25% of all TV show transactions around the world

Source: IDC Middle East, Turkey, And Africa IoT Trends 2017, Eurostat 2017, TELKODER Data Center Report 2017, Data Center Map 2019, Uptime Institute 2017, Research and Markets MEA OTT TV and Video Forecasts
Digital Transformation

**TURKEY HAS ANNOUNCED ITS DIGITAL TRANSFORMATION ROADMAP ON ITS ROAD TO BECOME A REGIONAL LEADER IN SELECTED TECHNOLOGIES**

<table>
<thead>
<tr>
<th><strong>DIGITAL TURKEY PROGRAMME</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INFRASTRUCTURE</strong></td>
</tr>
<tr>
<td>• 1 Gbps speed for 100% of industry zones and technology development zones</td>
</tr>
<tr>
<td>• Attendance to international studies on data communication standards</td>
</tr>
<tr>
<td>• Development of a national industrial cloud platform</td>
</tr>
<tr>
<td><strong>SUPPLIERS</strong></td>
</tr>
<tr>
<td>• 1000 medium and large sized digital technology suppliers</td>
</tr>
<tr>
<td>• USD 1 Billion capital investment for technology firms</td>
</tr>
<tr>
<td>• 10 Digital Technology Excellence Centers</td>
</tr>
<tr>
<td><strong>TECHNOLOGY</strong></td>
</tr>
<tr>
<td>• Technology Roadmaps for Focus Technologies (Cloud, Big data, AI, Autonomous Robots etc.)</td>
</tr>
<tr>
<td>• 50 Applied Research Centers for Focus Tech</td>
</tr>
<tr>
<td>• 60K R&amp;D personnel in Focus Technologies</td>
</tr>
<tr>
<td>• 2500 Digital Innovation Projects in R&amp;D Centers</td>
</tr>
<tr>
<td>• 250 patents in Digital Technologies</td>
</tr>
<tr>
<td><strong>HUMAN CAPITAL</strong></td>
</tr>
<tr>
<td>• 100 Thematic Technical Colleges</td>
</tr>
<tr>
<td>• 400 Digital Technology High School Teachers</td>
</tr>
<tr>
<td>• 100K Digital Technology High School Graduates</td>
</tr>
<tr>
<td>• 5K Phd Graduates in Digital Technology</td>
</tr>
<tr>
<td>• 30K Phd Students in Digital Technology</td>
</tr>
<tr>
<td>• 50 Continuous Education Centers in Digitalization</td>
</tr>
<tr>
<td>• 10K Companies to attend Digitalization Trainings</td>
</tr>
<tr>
<td>• 300K workforce to gain digital competence</td>
</tr>
<tr>
<td><strong>USERS</strong></td>
</tr>
<tr>
<td>• 10 Digital Transformation Centers</td>
</tr>
<tr>
<td>• 81 Digital Transformation Information Centers</td>
</tr>
<tr>
<td>• 500 Consultants on Digital Transformation of the industry</td>
</tr>
<tr>
<td>• 7000 Companies to benefit from Transformation Centers</td>
</tr>
<tr>
<td>• 2500 Companies to develop high digital expertise</td>
</tr>
<tr>
<td><strong>GOVERNANCE</strong></td>
</tr>
<tr>
<td>• Digital Transformation Platform to include all stakeholders</td>
</tr>
<tr>
<td>• Committees on education, data communication standards and focus technologies to be established</td>
</tr>
</tbody>
</table>

Source: Ministry of Industry and Technology Digital Turkey Roadmap 2018
E-Government

Digital Transformation Office of Turkey was established in 2018 to coordinate the digital transformation of the Turkish government, as well as develop strategies and oversee projects in cyber security and AI.

Public ICT investments have reached a total of 50Billion TRY since 2002 - 5Billion TRY in 2018

Education, transportation-communication and public security with larger shares

FATIH project is a comprehensive project that is designed to enhance education through technology and create equal opportunity base for students and schools - Includes hardware (interactive boards, tablets, printers), high speed internet for every school, data centers, management and content software and trainings

Selected e-government services provided for businesses:

Start and grow
- Centralised Corporate Body Information System (MERSIS)
- Registration of a new company
- Commercial business and company interrogation
- Intellectual property rights
- Submission of data to statistical offices

VAT and Customs
- VAT declaration, electronic payments
- Corporate tax

Staff
- Social contribution payments for employees
- National council on occupational safety and health web portal

Public Contracts - eProcurement

Environment related permits


TURKEY IS ON TRACK WITH ITS COMPREHENSIVE 2016-2019 EGOVERNMENT STRATEGY AND ACTION PLAN
E-Government

Percentage of individuals using the internet for obtaining information from public authorities in Turkey

Percentage of individuals using the internet for downloading official forms from public authorities in Turkey

Percentage of individuals using the internet for sending filled forms to public authorities in Turkey


NUMBER OF SERVICES PROVIDED THROUGH EGovT PORTAL HAVE INCREASED BY 73% AND REACHED OVER 3K SINCE 2017
### ICT in Mobility

**Turkey is a Manufacturing and Engineering Center in Automotive and Already an Export Hub for the European Automotive Industry**

- Highly integrated to the global industry with 13 OEMs manufacturing passenger cars, LCVs and heavy-duty trucks - around 1.5 million vehicles
- 6th largest domestic market in Europe - around 1 million vehicles
- Export hub for the European market - 75% export
- Well-trained human capital - cost competitive and high-quality production and engineering
- Increasing R&D activities - 9 R&D Centers play a dominant role in exporting engineering services
  - **Ford Otosan R&D Center** is among Ford’s top 3 global R&D Centers
  - **Tofas Fiat R&D Center** is Fiat’s only R&D Center outside of Italy serving the European market

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Source: company websites, expert interviews
Healthcare Campus Transformation

The Turkish Government initiated a transformation project to modernize the public hospitals and unite the smaller regional hospitals within one campus. That led to a PPP (Public-private partnership) hospital project pipeline with a total capacity of +50,000 beds and total investment of USD 16 Billion.

32 projects are announced, some of which are already tendered. As of today, 9 hospitals are opened; 12 projects are under construction, 10 has ongoing tenders.

Medical Tourism

Sector has grown by 15% every year since 2010

Over 550K visitors in 2018 with over USD 1 Billion spending

ICT in Healthcare

Turkey has 970 public and over 560 private hospitals, some of which are PE-backed:

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th># of Hospitals</th>
<th># of Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLP CARE</td>
<td>29</td>
<td>5330</td>
</tr>
<tr>
<td>Acibadem</td>
<td>16</td>
<td>2271</td>
</tr>
<tr>
<td>Memorial</td>
<td>6</td>
<td>1617</td>
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<tr>
<td>Bahat</td>
<td>10</td>
<td>1476</td>
</tr>
<tr>
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<td>10</td>
<td>1380</td>
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<td>900</td>
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<tr>
<td>MEMORIAL</td>
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<tr>
<td>MEDICLINIC</td>
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<tr>
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<td>Kolan</td>
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<tr>
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<td>43,645</td>
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<tr>
<td>Kolan</td>
<td></td>
<td>166,000</td>
</tr>
</tbody>
</table>

Turkey is investing USD 16 Billion to modernize public hospitals through PPP projects...

Source: TOBB Healthcare Report 2017, PWC Capital Projects and Infrastructure Spending Outlook to 2023
ICT in Hospitality & Tourism

Istanbul as a global congress destination

Ranked 8th in the world in 2014 with 130 congresses

Antalya has the highest number of tourists

Antalya is the most preferred city in Turkey based on the number of incoming foreign visitors. Antalya has over 500 4-star and 5-star hotels in its neighbourhood.

There are over 13K registered accommodation facilities in Turkey. Over 9K are licensed by municipalities, whereas over 4K facilities hold tourism operation licenses. The total bed capacity exceeds 1.5 million.

By the end of 2017, there were more than 165 hotel chains in Turkey, 15% of which is owned by international investors.

The total number of chain hotels is over 800.

HOSPITALITY BUSINESSES IN TURKEY

- Over 95% has broadband connection and a website
- 56% receives orders via website
- 67% uses social media


Turkey is the 6th most popular tourist destination in the world, attracting more than 45M tourists
Start-up Ecosystem
Startup Ecosystem

Turkey ranks 37th out of 137 countries in the Global Entrepreneurship Index 2018, where

- its strongest areas are startup skills, product innovation and high growth
- its weakest areas are risk acceptance and internationalization

Most funded verticals in 2018 are Fintech, SaaS, and Marketing-tech

The drop is mainly due to
- planned investment periods of many VC funds ending in 2017
- Treasury Undersecretariat’s co-funding program approval process ending in 2019

Source: Startupswatch Turkey Entrepreneurship Ecosystem 2018, The State of Turkish Startup Ecosystem 2019
Some of the Largest Deals in 2010-2019

- **Global marketplace**
  - *Ebay* acquired Turkish leading marketplace *Gittigidiyor*

- **2010**
  - *Chinese Alibaba* paid USD 728 Million for the 82% stake of the Turkish e-commerce company.

- **2011**
  - German takeout food company bought Turkish *yemeksepeti.com* for USD 589 Million.

- **2012**
  - *Zynga* bought 1010 maker *Gram Games* for USD 250 Million.

- **2013**
  - *Naspers’s PayU* bought fintech startup *Iyzico* for USD 165 Million.

- **2014**
  - *Sovos* acquired Turkish e-invoice startup *Foriba*.

- **2015**
  - *Microsoft* acquired Turkish open-source firm *Citus Data*.

- **2016**
  - Australia based software developer paid USD 295 Million for Turkish *OpsGenie*.

- **2017**
  - Chinese *Alibaba* paid USD 728 Million for the 82% stake of the Turkish e-commerce company.

- **2018**
  - *Global marketplace* *Ebay* acquired Turkish leading marketplace *Gittigidiyor*.

- **2019**
  - *Chinese Alibaba* paid USD 728 Million for the 82% stake of the Turkish e-commerce company.

Source: Startups.Watch
Startup Ecosystem Map

FUNDING

Business Angel Networks

Accelerator Funds

Local Investors & VCs

Corporate Investors

Business Angels

Crowdfunding

FFs/Grants

Local GE & PEs

Accelerator Funds

Local Investors & VCs

Corporate Investors & GE & PE

Foreign VCs

Foreign GEs & PEs

Source: Startups.Watch
Startup Ecosystem Map

SUPPORTING

Accelerators (Run By Universities, TTO, Technoparks, NGOs)

Accelerators (Run By Banks)

Living Labs

Accelerators (Privately Held)

Mentor Trainers

Media (English)

Technoparks

Investor Analytics

Community Centers

Mentor Movement

NGOs & Organizations

Top 3 Startup Friendly Companies

Government

Deal Rooms / Investment Platforms

Source: Startups.Watch
Success Stories
Success Stories

Founded in 1984, Cisco Systems, Inc. is an American multinational technology conglomerate that develops, manufactures and sells networking hardware, telecommunications equipment and other high-technology services and products. The largest networking company in the world, Cisco's FY'18 Revenue is USD 49.3 billion with an employee count of 74,200 globally.

Cisco has been present in Turkey for years and has invested in various areas, one of which is training programs in the tech industry through the Cisco Networking Academy Program. Trainings have been provided through this program since early 2000s.

In 2018, Cisco opened an innovation center in Istanbul, Turkey in a bit to develop solutions for the digital era.

American multinational information technology company that not only provides hosting and consulting services from computers to nanotechnology, but also manufactures and markets computer hardware, middleware and software.

IBM has been operating in Turkey since the 1930s, and since then has participated in various projects. Projects have included working together with Turkish local bodies, both governmental and NGO, to strengthen the governance practices of community organizations who are implementing a range of local initiatives that promote economic development and growth.

ZTE, Chinese multinational ICT solutions vendor acquired nearly half of Turkish Netas' shares in 2017. This is considered one of the biggest transactions in technology development investments in Turkey.
SAP SE is a German-based European multinational software corporation that makes enterprise software to manage enterprise resources, business operations and customer relations.

Founded in 1972, SAP currently has operations in over 180 countries and has labs in only 20 countries, one of which is in Turkey.

SAP SE sees Turkey as the "main hub" for digital transformation and Turkish engineers carry out "mega" projects in Turkic republics, Russia, Africa, the Middle East and Europe.

American multinational technology company that develops, manufactures, licenses, supports and sells computer software, consumer electronics, personal computers and related services.

Founded in 1975, in 2017, Microsoft reported revenue was 110 billion dollars with over 131,300 employees.

Microsoft Turkey is used as a managing center for the Middle East and Africa regions, composed of 79 countries.

Chinese multinational networking, telecommunications equipment, and services company.

Founded in 1987, Huawei is currently the largest telecommunications equipment manufacturer in the world, as well as the second largest smartphone manufacturer in the world.

Huawei begun its operations in Turkey in 2002. Currently, in its Turkey office, Huawei has over 1,500 employees, an R&D center, training center, and a customer’s solutions and integration experience center.
Investment Office, the official investment advisory body of Turkey, is a knowledge-center for foreign direct investments and a solution partner to the global business community at all stages of investments. It provides customized guidance and qualified consulting before, during and after entry into Turkey.

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