



**Republic of Turkey  
Prime Ministry**

**Investment Support and  
Promotion Agency of Turkey  
(ISPAT)**

# **Turkish ICT Sector**

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# AGENDA

- **Turkish ICT Market**
- **Drivers of Turkish ICT Sector**
- **Incentives for ICT Sector**



# Turkish ICT Market



## Summary of Turkish ICT Market..

**Sizeable Domestic Market of \$32bn**

**Export Opportunities**

**Double-Digit Growth Performance**

**Ambitious Targets**

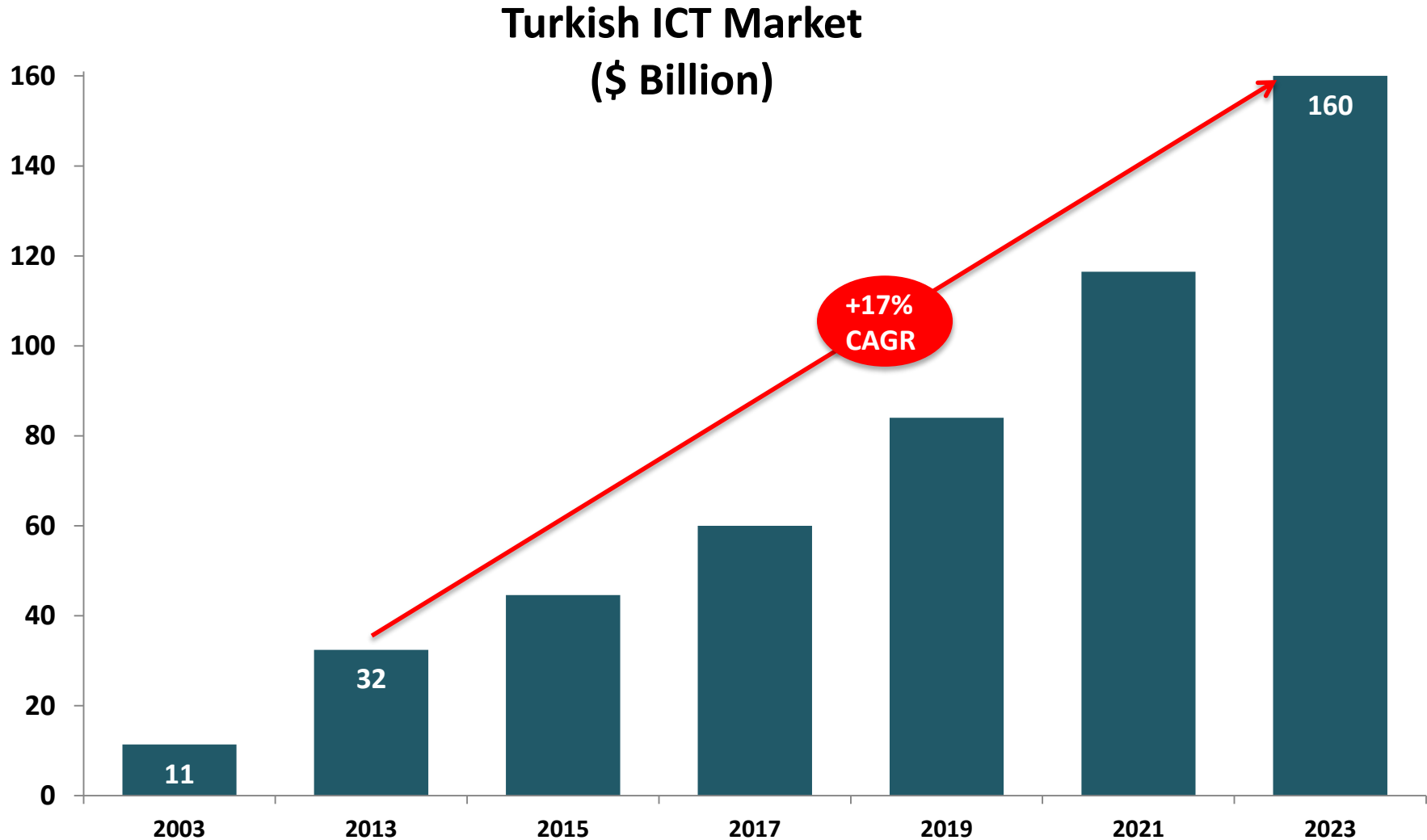
**Young & Dynamic Population**

**e-government**

**Skilled-Labor Force**

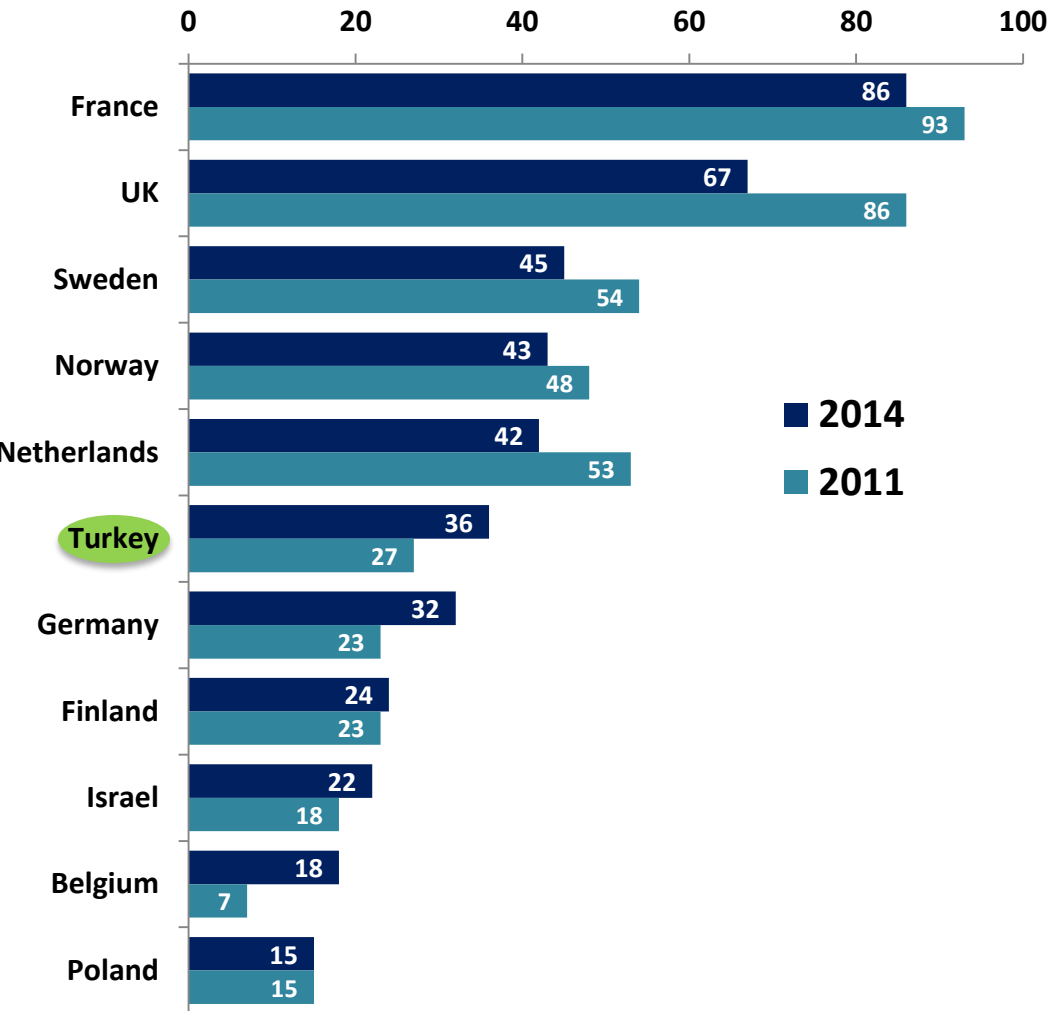
**Incentives**

Turkish ICT sector has performed robust growth in recent years exceeding \$30bn by 2013 and is expected to reach \$160bn by 2023..



Growth performance of Turkish IT companies has been also observed in international rankings..

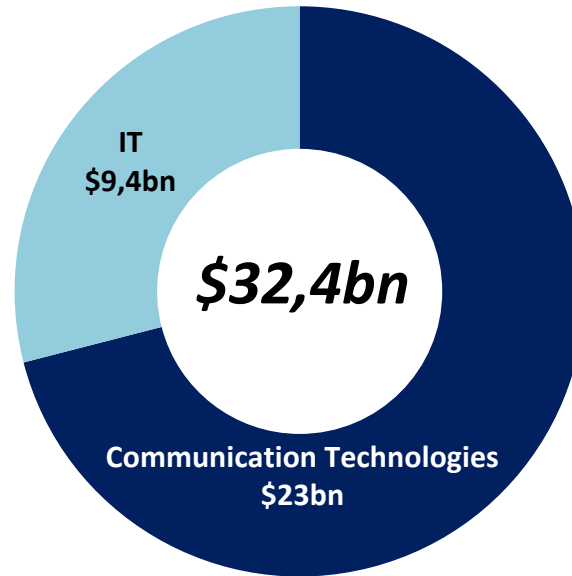
### Number of Companies in EMEA's 500 Fastest Growing Companies



# Turkish ICT sector is mainly dominated by communication technologies...

## Breakdown of Turkish ICT Market

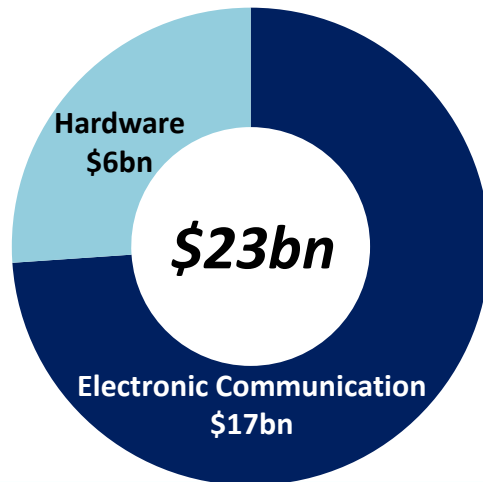
2014



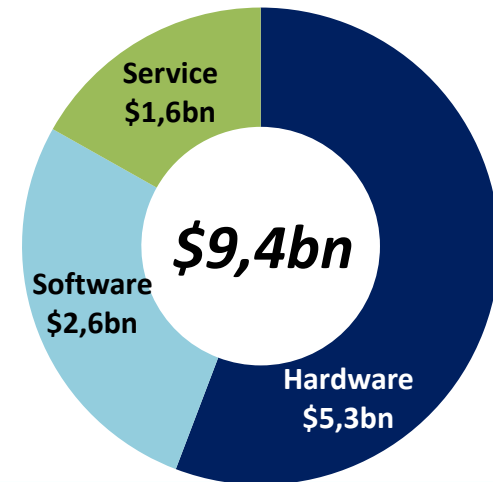
Potential growth areas:

- *Software*
- *Services*
- *Hardware*

## Communication Technologies Market



## IT Market

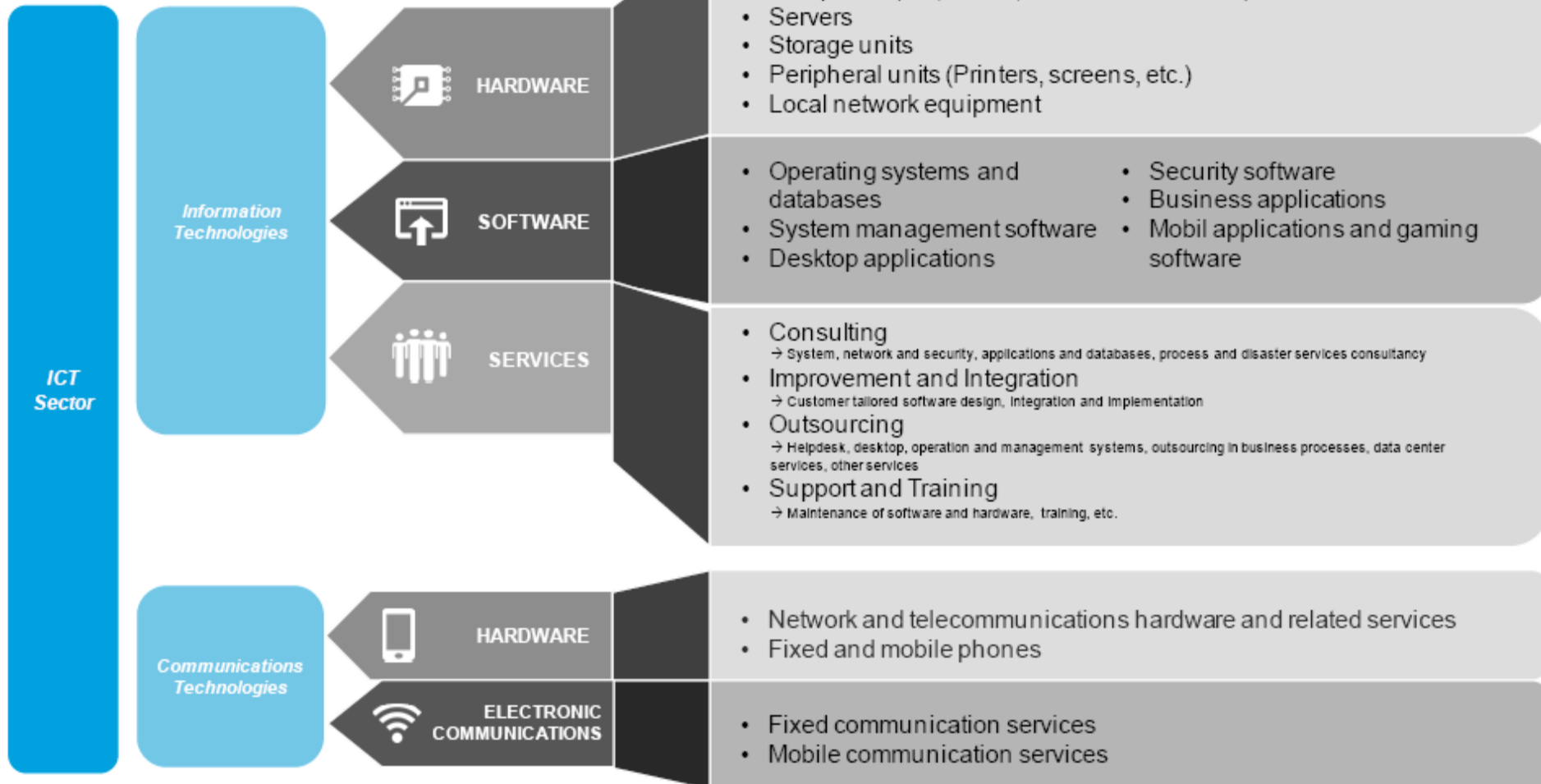


# Turkish ICT sector is getting more and more diversified...

## Turkish ICT Sector

### Sub-categories of the sector

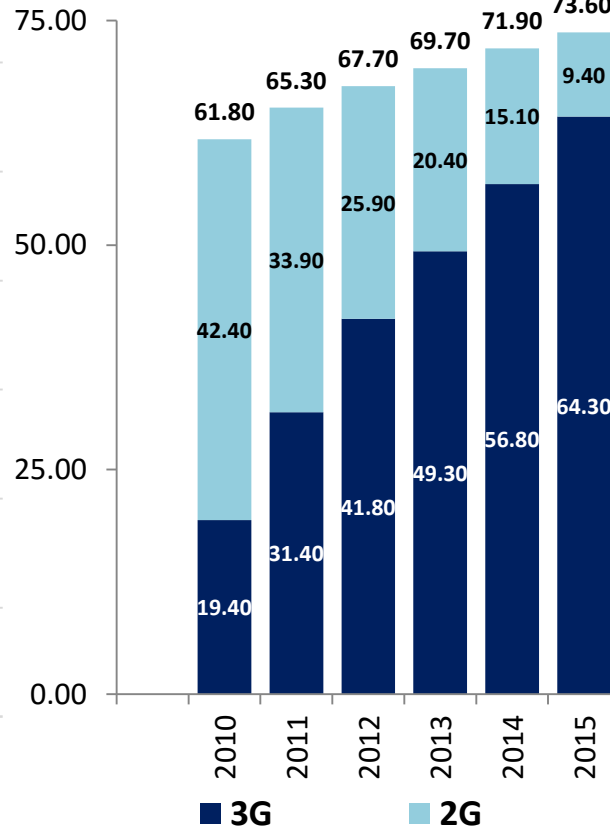
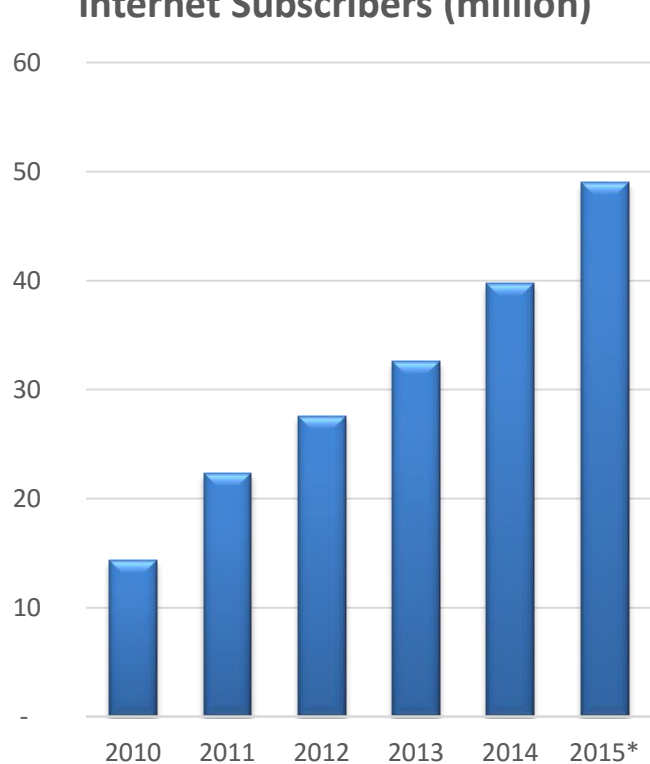
### Scope



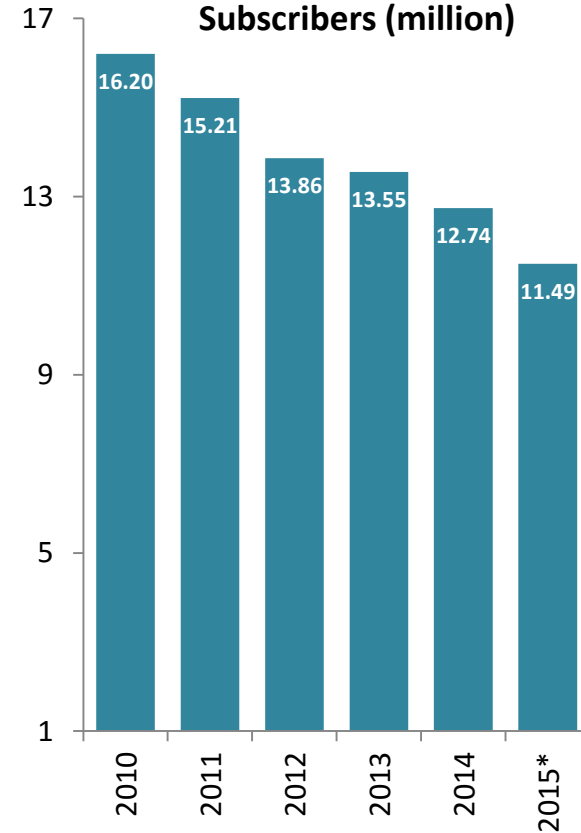
# Broadband internet and mobile phone penetration in Turkey have been rapidly increasing..

Increasing mobile internet usage driving the growth

### Number of Broadband Internet Subscribers (million)



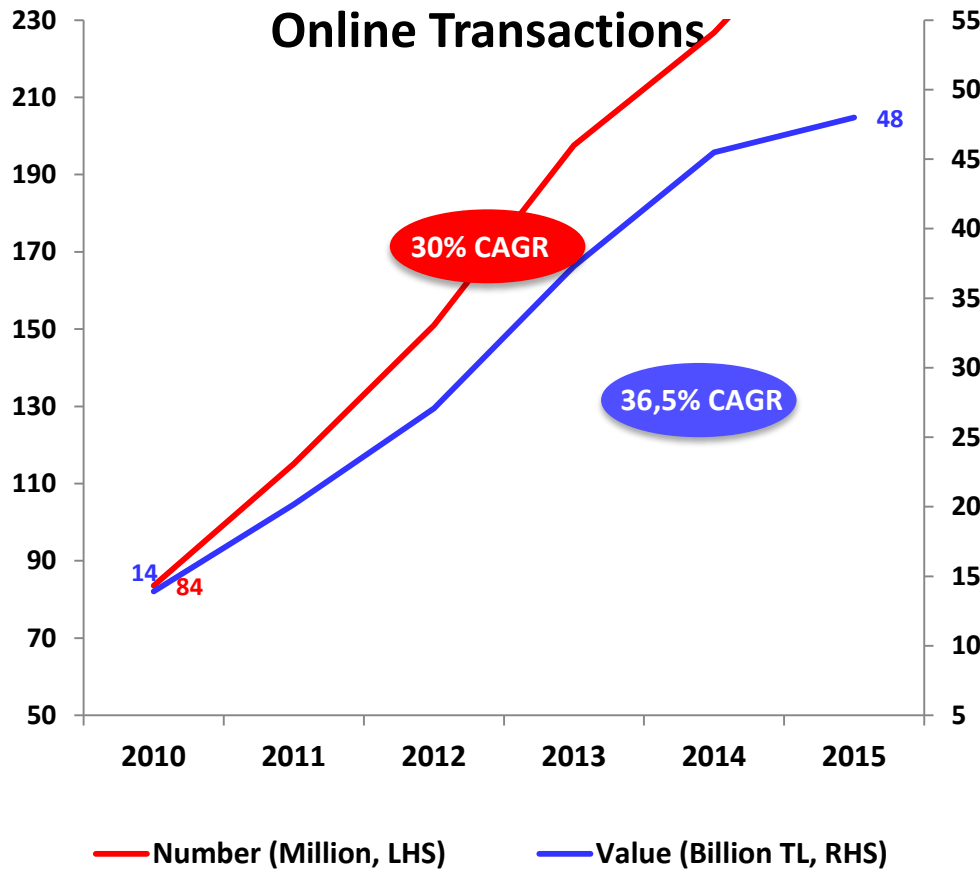
### Number of Landline Subscribers (million)



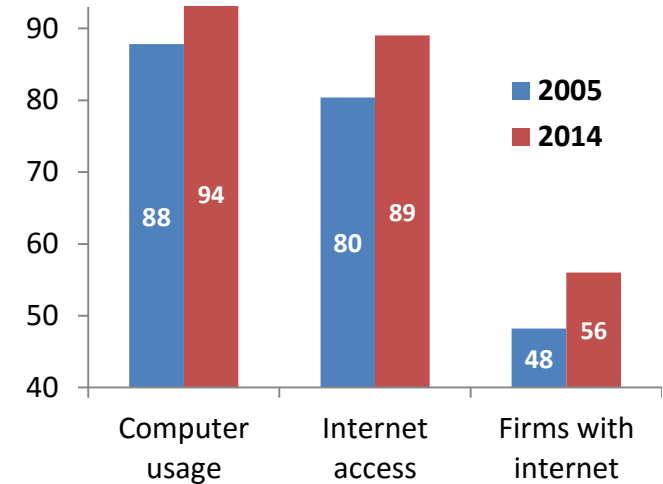
# ICT statistics show rapidly increasing usage among both Turkish households and enterprises...

**58 million credit cards**  
(2014)

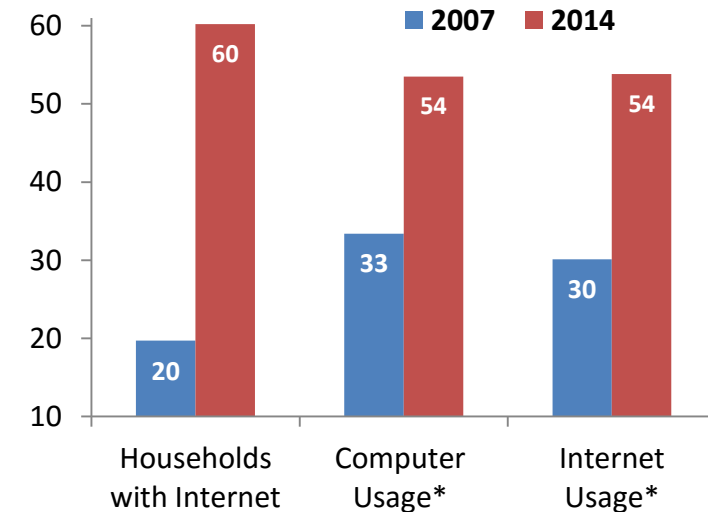
## Online Transactions



## Enterprise ICT Usage (%)



## Household & Individual ICT Usage (%)



*Source:* Interbank Card Center (BKM), domestic and international transactions with domestic cards as well as domestic transactions with international cards

*Source:* TURKSTAT \*16-74 age group

# Both local and foreign companies are active players in the Turkish ICT market...

## Key Players

### Top 10 ICT Companies in Turkey, 2013

	Company	Revenue (\$ Bn)
1	Turk Telekom	6,9
2	Turkcell	6,0
3	Vodafone	3,4
4	Avea	2,0
5	TTNET	1,8
6	GEN-PA	1,5
7	Teknosa	1,3
8	KVK	1,0
9	Indeks	0,8
10	Brighstar	0,7

### Turkey-based Sector Leaders, 2013

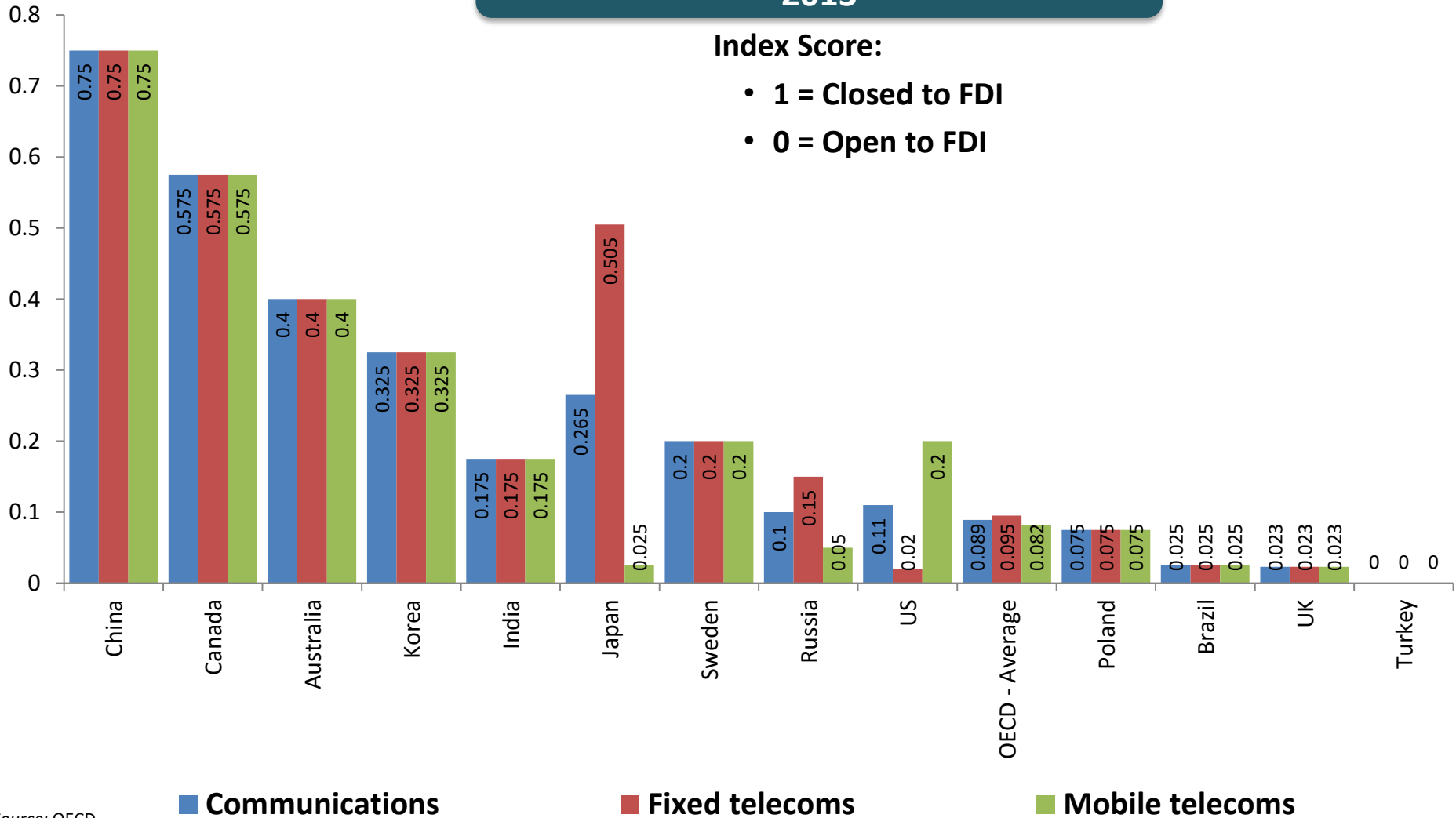
Company	Sector	Revenue (\$ Mn)
Airties	Hardware Manufacture	95
Innova	Software Manufacture	86
GEN-PA	Hardware Distribution	1.150
Indeks	Software Distribution	587

# Turkish ICT sector is more open to FDI than many countries...

## FDI Regulatory Restrictiveness Index 2013

Index Score:

- 1 = Closed to FDI
- 0 = Open to FDI

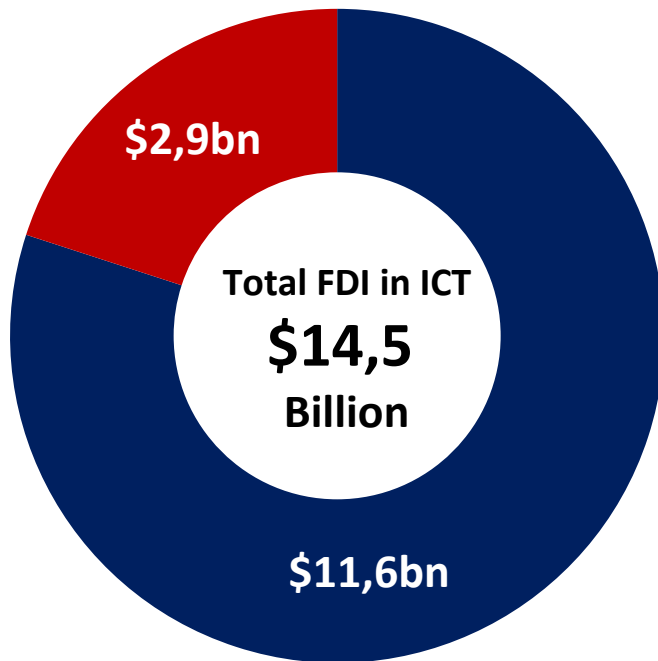


Source: OECD

The FDI Index gauges the restrictiveness of a country's FDI rules by looking at the four main types of restrictions on FDI: 1. Foreign equity limitations, 2. Screening or approval mechanisms, 3. Restrictions on the employment of foreigners as key personnel, 4. Operational restrictions, e.g. restrictions on branching and on capital repatriation or on land ownership

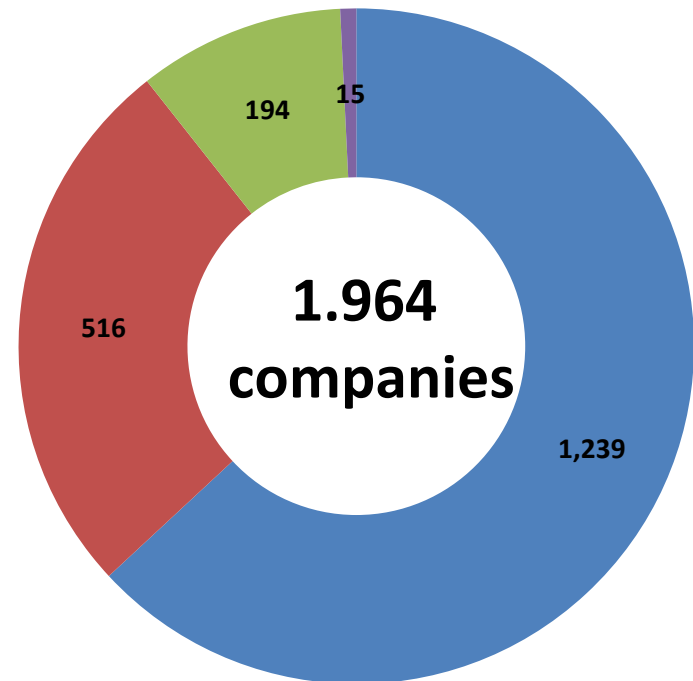
# Turkish ICT sector has been one of the most attractive sectors for foreign direct investment (FDI)..

FDI in Turkish ICT Sector, 2004-2014



- Information and Communication Services
- Manufacture of Computers, Electronic-Electrical and Optical Equipment

Number of Foreign Companies in Turkish ICT, 2014



- Computer and related activities
- Post & telecommunications
- Manufacture of radio, TV & communication equipment
- Manufacture of office, accounting & computing machinery

In addition to domestic market, there are also export opportunities...

## Foreign Trade

c.\$15 billion foreign trade of manufactured ICT products

Turkey's Foreign Trade of Manufactured ICT products, (\$ million)								
Manufacture of...	2011		2012		2013		2014	
	Export	Import	Export	Import	Export	Import	Export	Import
Electronic Components and Boards	72	1.021	98	1.057	116	1.108	108	1.246
Computers and Peripheral Equipment	117	3.133	122	3.147	148	3.483	157	3.548
Communication Equipment	151	3.403	233	4.030	204	5.450	193	6.005
Consumer Electronics	1.880	1.563	2.178	1.629	1.723	1.458	1.931	1.489
Magnetic and Optical Media	2	40	2	27	2	24	3	17
<b>TOTAL</b>	<b>2.223</b>	<b>9.160</b>	<b>2.634</b>	<b>9.890</b>	<b>2.193</b>	<b>11.523</b>	<b>2.391</b>	<b>12.305</b>

Over \$600 million foreign trade of ICT services

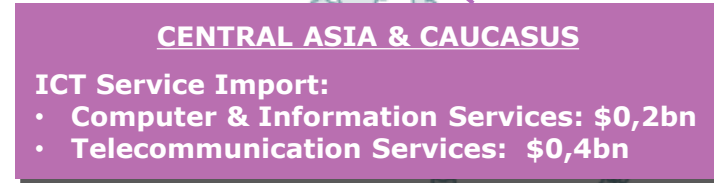
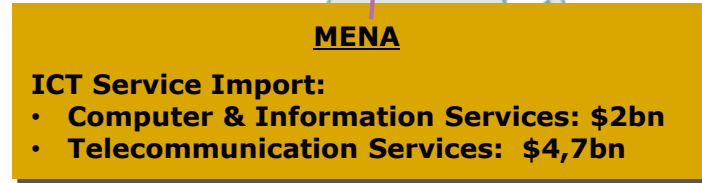
Turkey's Foreign Trade of ICT Services, (\$ million)						
	2011		2012		2013	
	Export	Import	Export	Import	Export	Import
Telecommunication services	451	268	417	282	345	239
Information services	18	38	17	13	19	22
<b>TOTAL</b>	<b>469</b>	<b>306</b>	<b>434</b>	<b>295</b>	<b>364</b>	<b>261</b>

Turkey has the potential to emerge as an ICT service center in the region as Turkey incentivizes export of services by exempting 50% of the export revenues from tax..

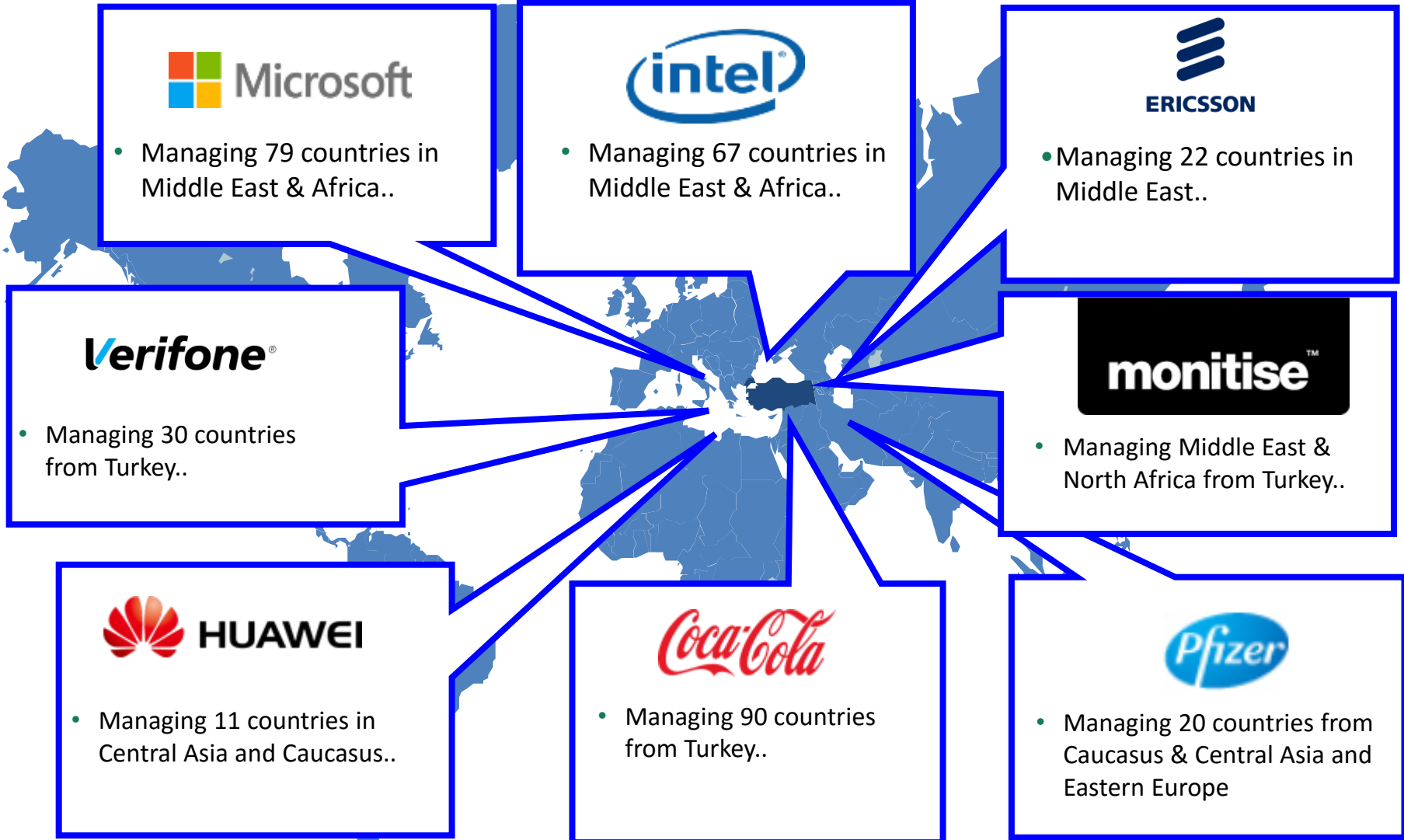
## Access to Multiple Markets

Over **\$135 billion** foreign trade of **ICT Services** at a **4-hour** flight distance from **Turkey**

### Import of ICT Services, 2013



Turkey is already being used as a management hub by multinational companies..



- Managing 79 countries in Middle East & Africa..



- Managing 67 countries in Middle East & Africa..



ERICSSON

- Managing 22 countries in Middle East..



- Managing 30 countries from Turkey..



- Managing Middle East & North Africa from Turkey..



- Managing 11 countries in Central Asia and Caucasus..



- Managing 90 countries from Turkey..



- Managing 20 countries from Caucasus & Central Asia and Eastern Europe

# Drivers of ICT Sector

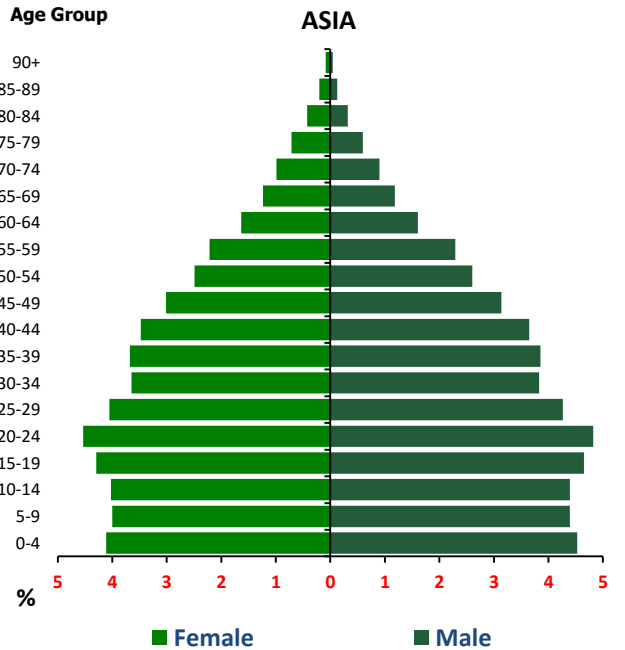
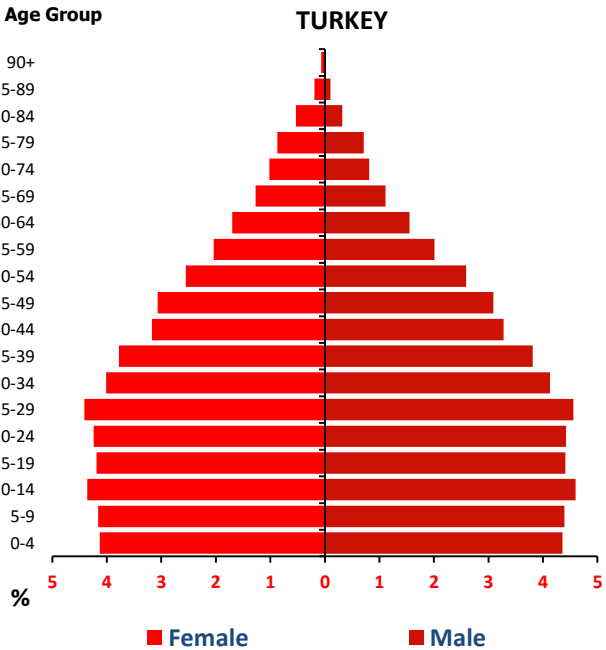
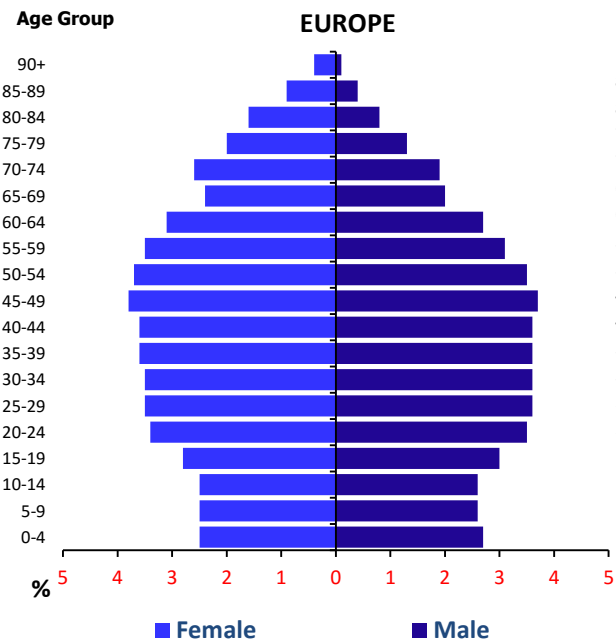


Turkey has a young and dynamic population, with half under the age of 30, making Turkey the country with the largest youth population in Europe...

**78 million young & dynamic people**



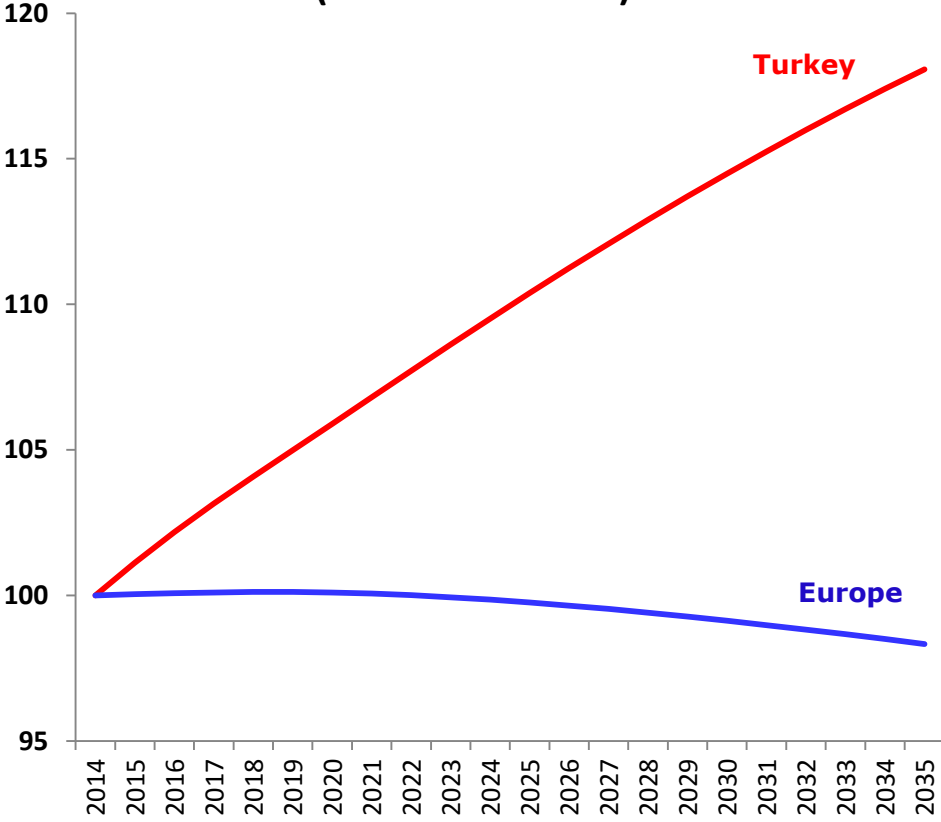
**Population Pyramid (%)**



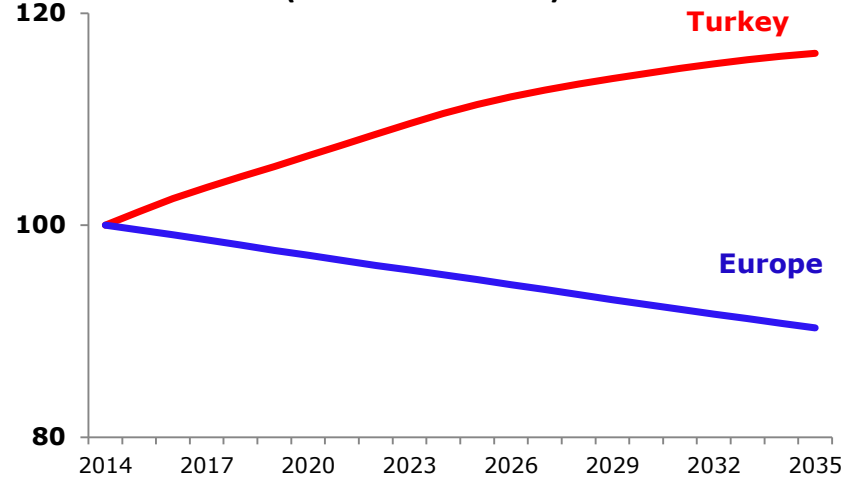
Source: Turkstat, Eurostat, UN, 2014

**Favorable demographic trend is here to stay for the next two decades with increasing working age population and low dependency ratio..**

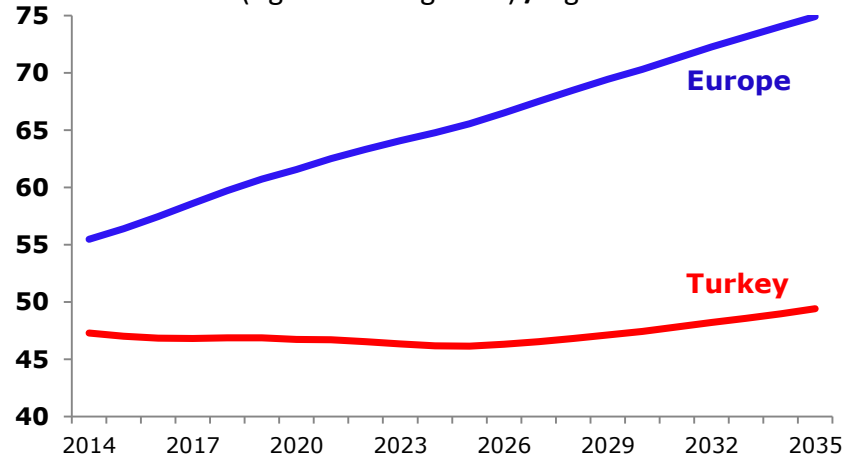
**Population Projections  
(Index: 2014=100)**



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



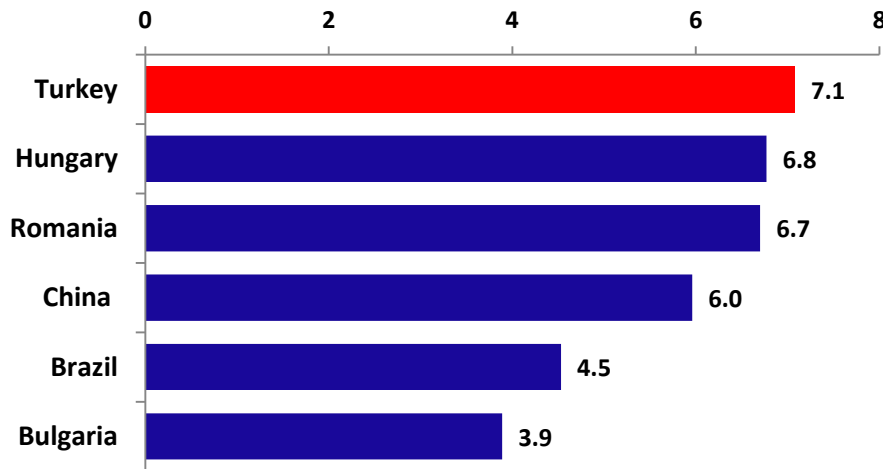
**Total Dependency Ratio (%)  
(Age 0-14 & Age 65+) / Age 15-64**



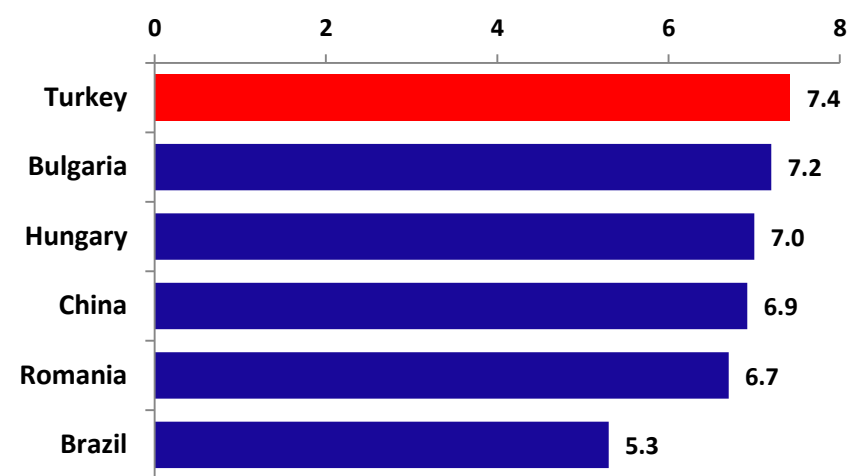
Turkey offers investors with necessary ICT skills and talents..

## Availability of ICT Skills, 2014

### Availability of Qualified Engineers



### Availability of IT Skills

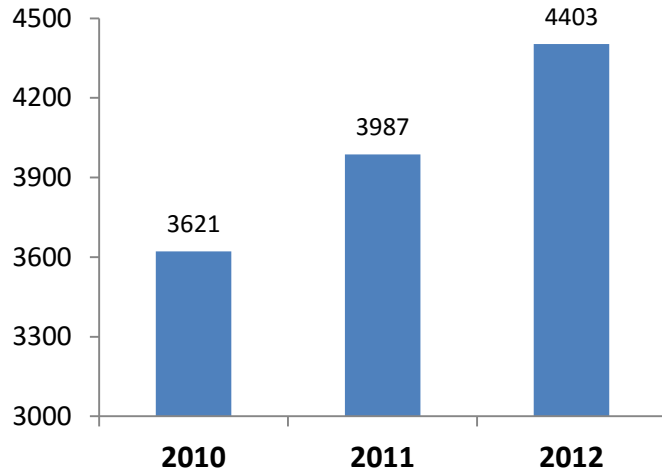


**Executive Opinion Survey based on an index from 0 to 10**

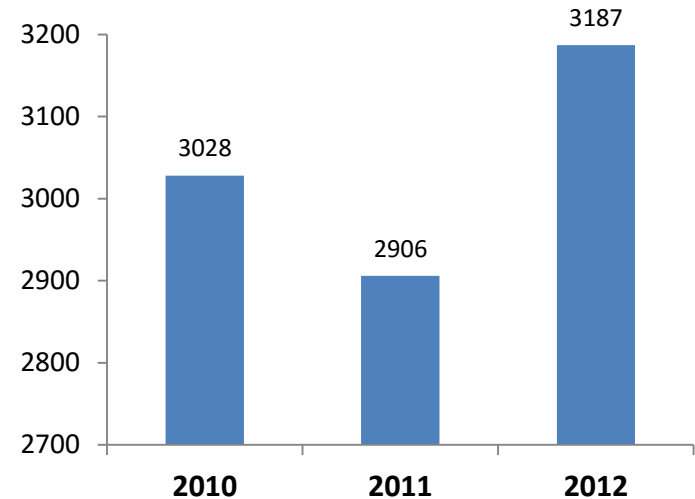
- **0 = Not available**
- **10 = Readily available**

# Turkish higher education does support the ICT industry through training world-class engineers and technicians...

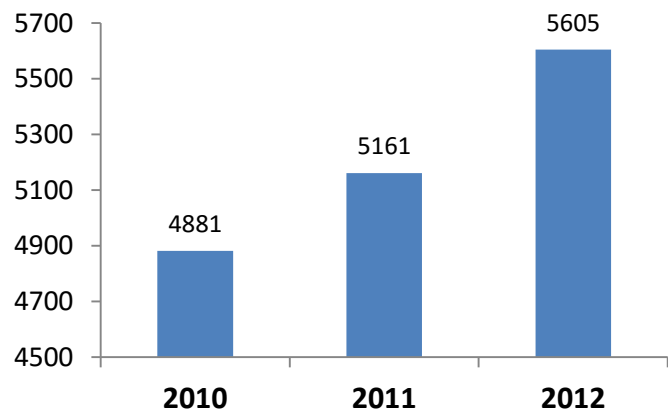
### Number of Annual Graduates in Electrical-Electronics Engineering



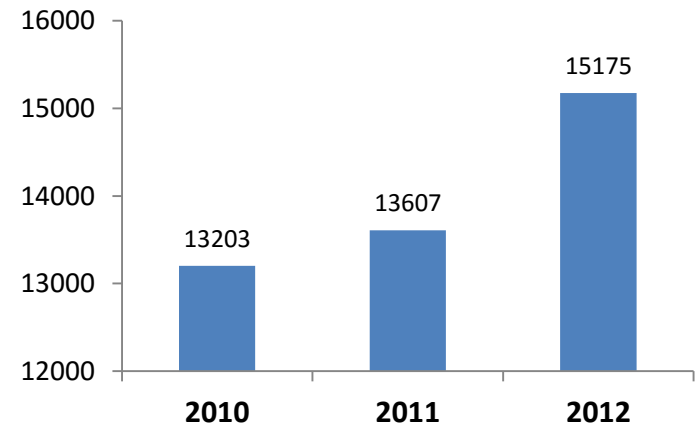
### Number of Annual Graduates in Computer Engineering



### Number of Annual Graduates in Mathematics



### Number of Annual Graduates in Computer Tech & Programming



**Turkish primary & secondary education also supports the ICT industry through enhanced usage of ICT products...**



**To integrate state-of-the-art computer technology into Turkey's public education system and provide tablets and internet access.**

- ✓ **Hardware & Software infrastructure**
- ✓ **Educational e-content and Management of e-content**
- ✓ **Effective Usage of the ICT in Teaching Programs**
- ✓ **In-service Training of the Teachers**
- ✓ **Conscious, Reliable, Manageable and Measurable ICT Usage**

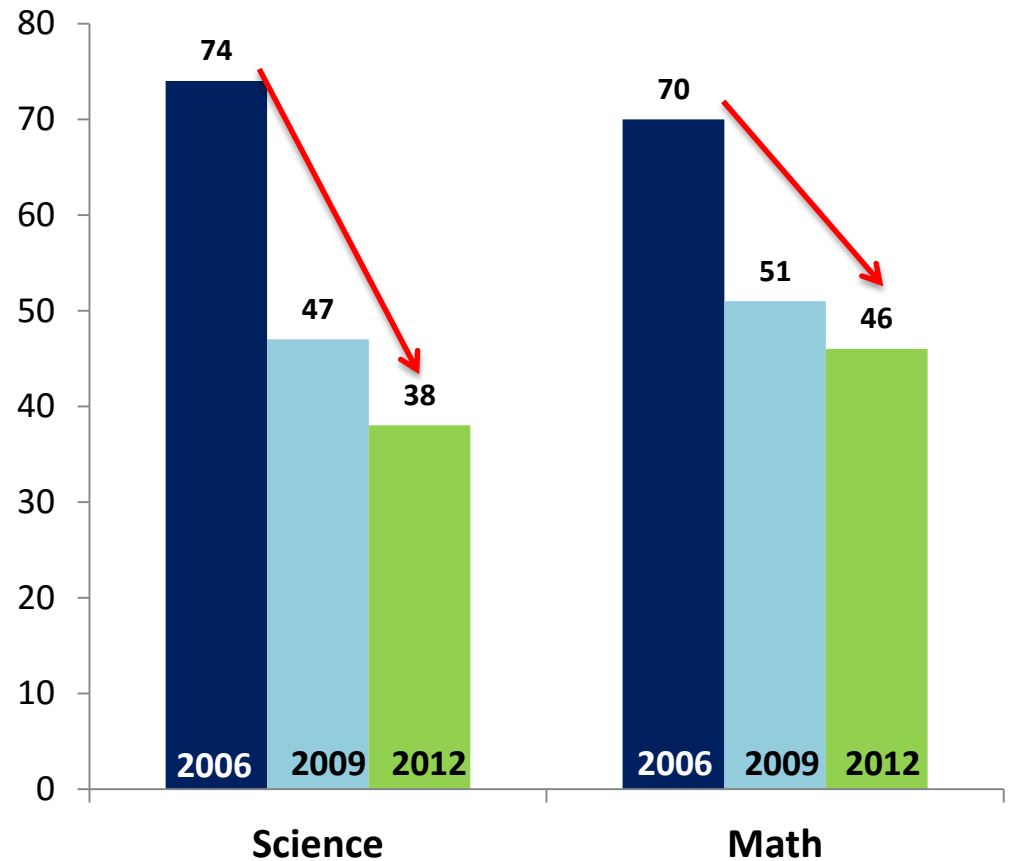
# Education policies have been yielding results...

	<u>Science Scores</u>		
	2006	2009	2012
OECD	498	501	501
Turkey	424	454	463

	<u>Math Scores</u>		
	2006	2009	2012
OECD	494	496	494
Turkey	424	445	448

## PISA Results Gap between Turkey and OECD Scores

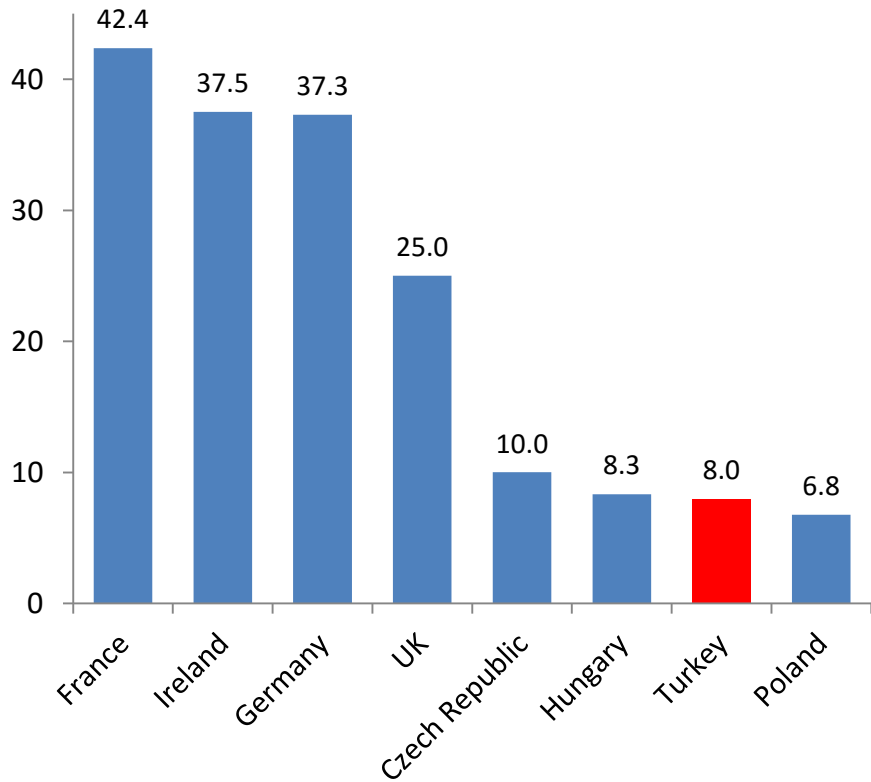


**PISA:** Programme for International Student Assessment of the competencies of 15-year-olds in reading, mathematics and science

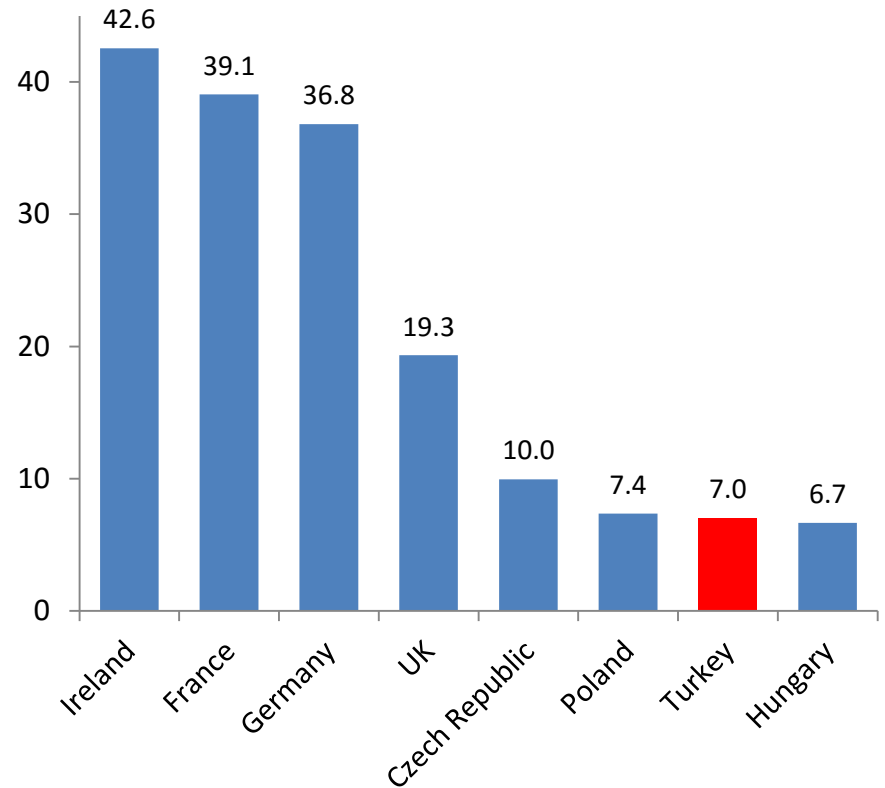
# Turkey offers a cost-competitive labor force in ICT manufacturing..

## Labor cost ICT Manufacturing, 2012

Labor cost per hour (€) in manufacture of *computer, electronic and optical products*



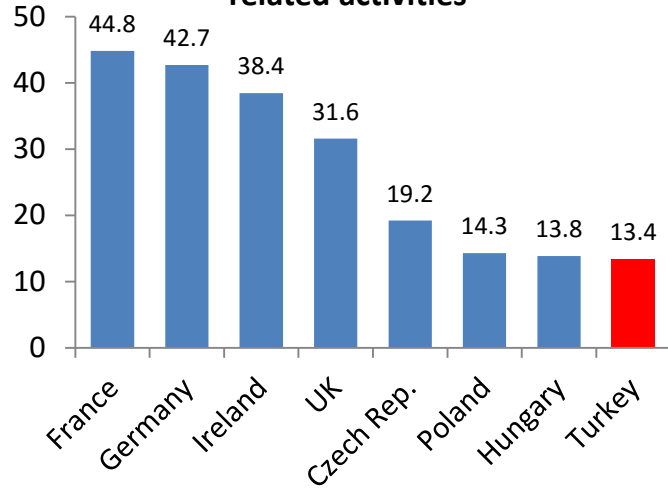
Labor cost per hour (€) in manufacture of *electrical equipment*



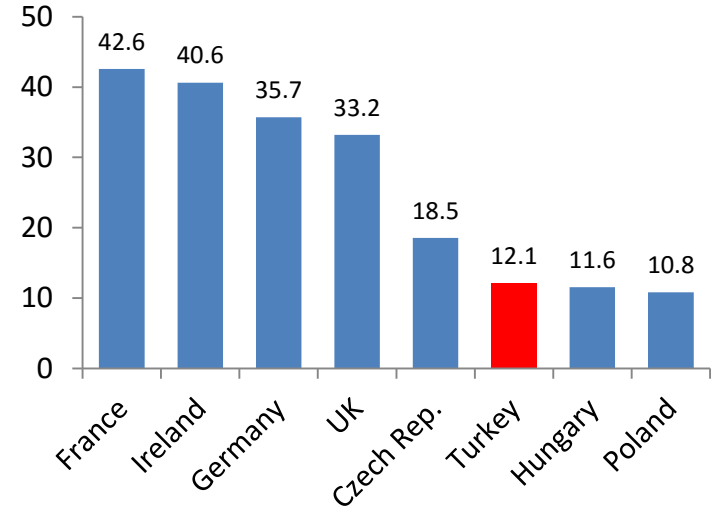
# Turkey has also a competitive edge in labor cost for ICT services..

## Labor cost ICT Services, 2012

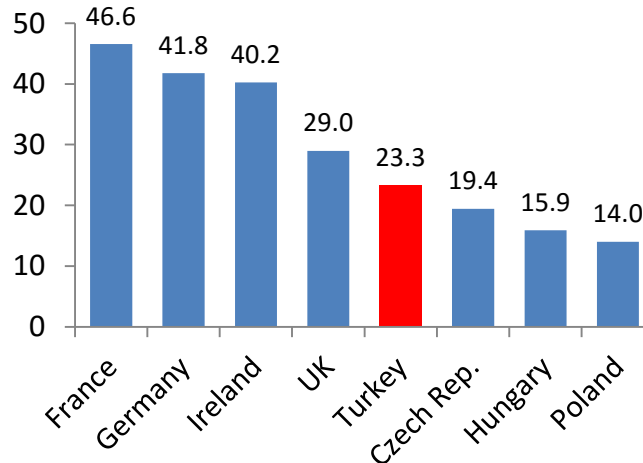
Labor cost per hour (€) in computer programming, consultancy and related activities



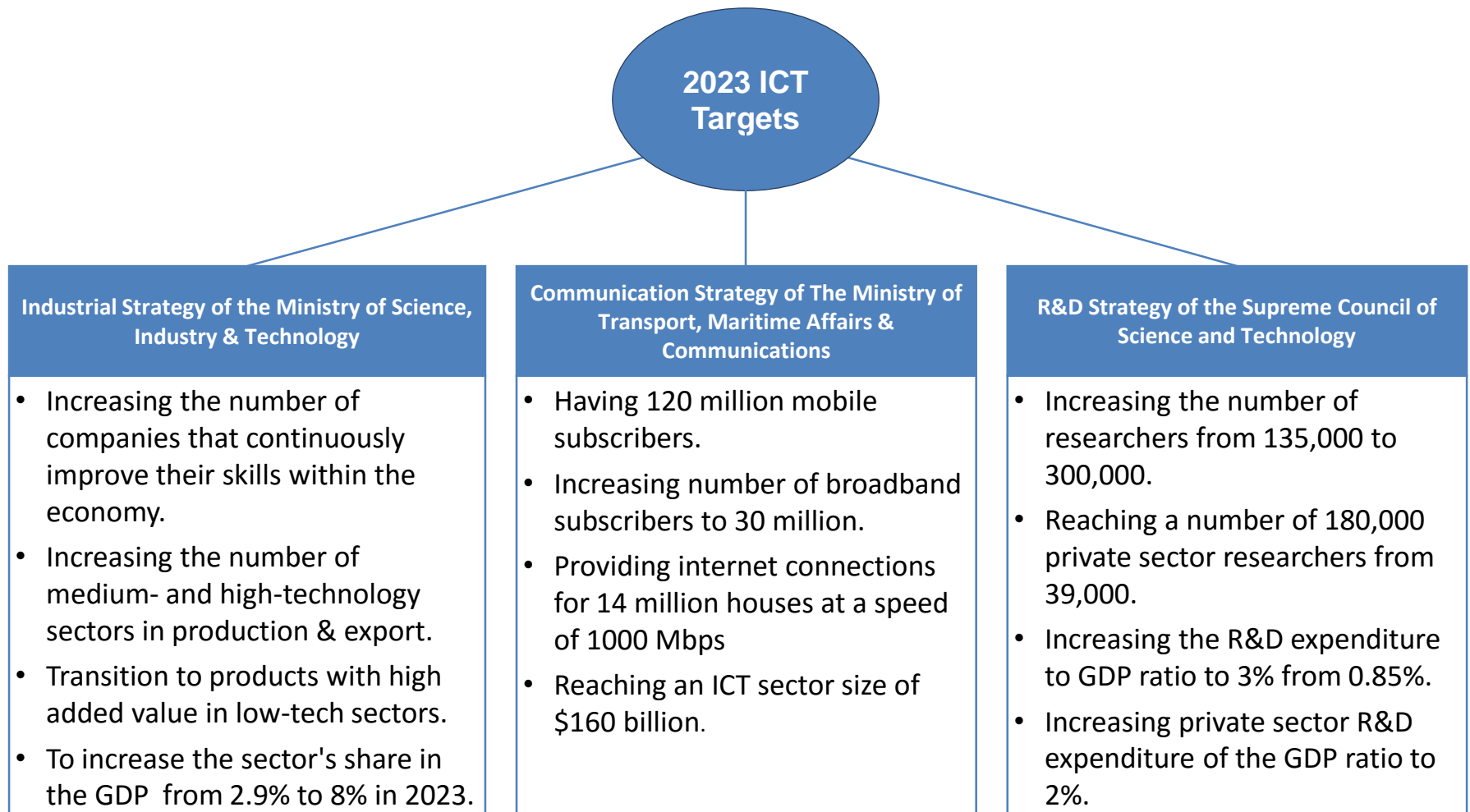
Labor cost per hour (€) in Information service activities



Labor cost per hour (€) in Telecommunications



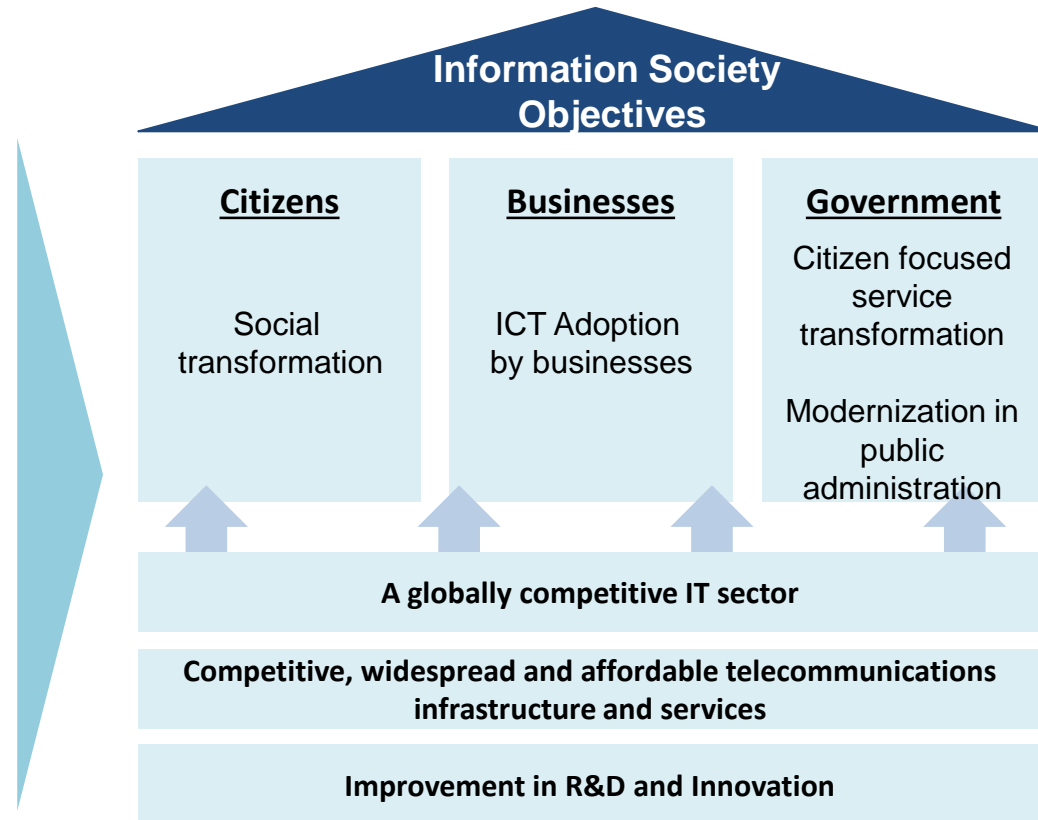
# The government has also set ambitious goals in ICT sector to ensure Turkey becomes an information society with a fully developed ICT sector by 2023



Major growth in Turkish ICT market is expected to be driven by public expenditure which has been increasing steadily as a result of information society strategy...

## Information Society

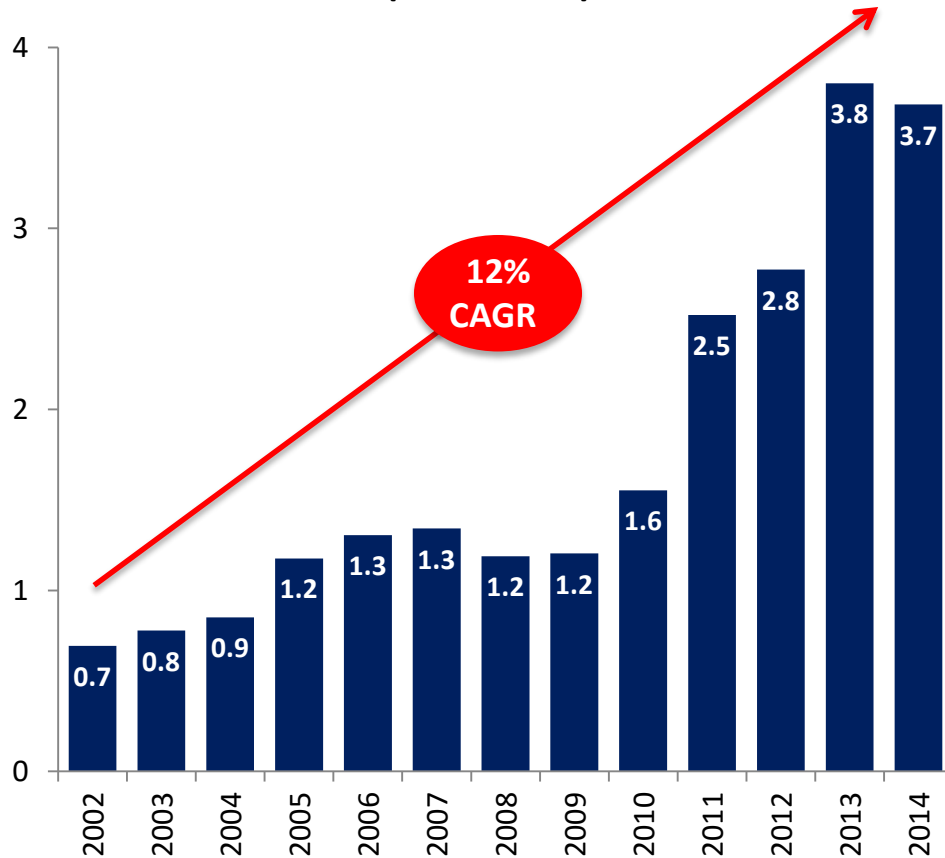
- Government's holistic e-transformation efforts started in 2003
  - Department of Information Society has been established under M. of Development for coordination of activities
- Since its inception, Turkey has made progress in improving its Networked Readiness Index (NRI) from 3.96 to 4.30 (on a scale from 1=worst to 7= best) between 2007 and 2014; moving the country ranking from 55 to 51<sup>1</sup>
- For the coming years, government focus is on transforming Turkey into an ICT hub



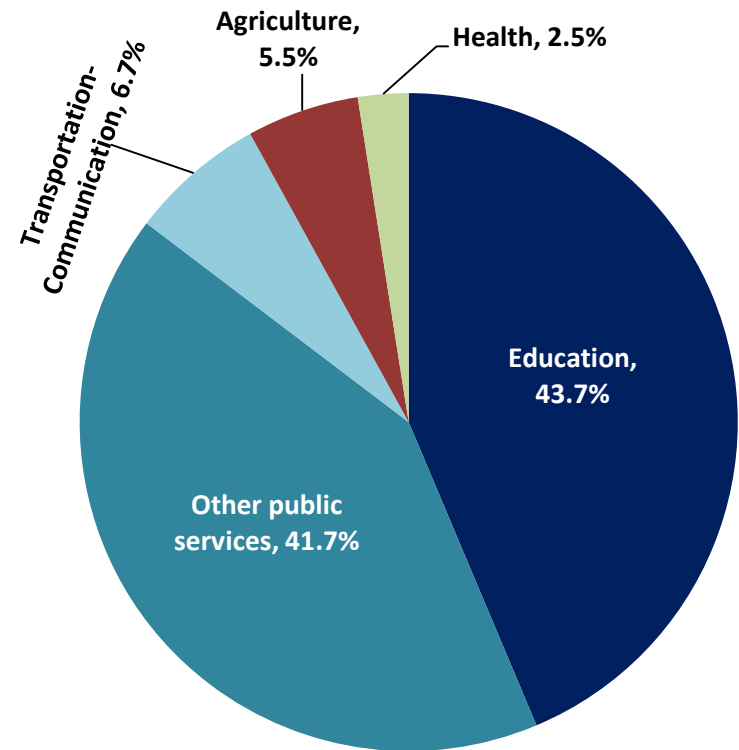
1. Source: WEF, NRI measures the propensity for countries to exploit the opportunities offered by ICT. The NRI has 3 components: the environment for ICT offered by a given country or community (Market, political, regulatory, infrastructure), the readiness of the community's key stakeholders (individuals, businesses, and governments) to use ICT, and finally the usage of ICT.

# Government has been a key driver of ICT development for Turkey's e-transformation...

## Government Investment in ICT (Billion TL\*)

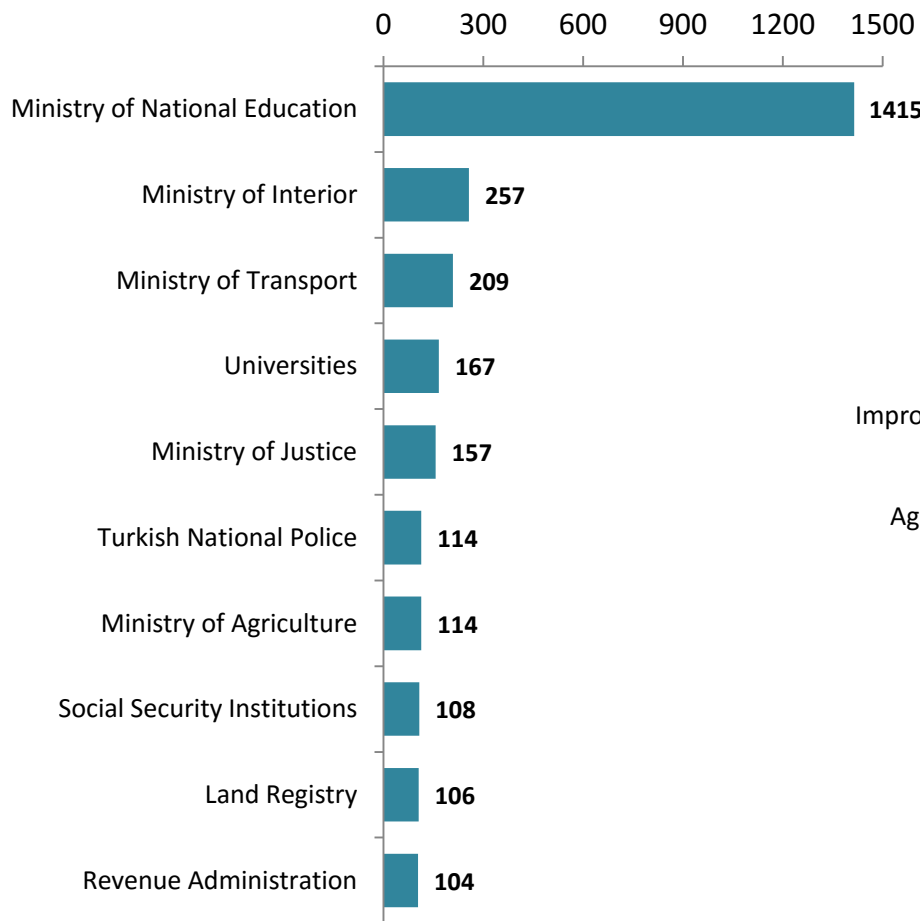


## Breakdown of Government Investment in ICT (2014)

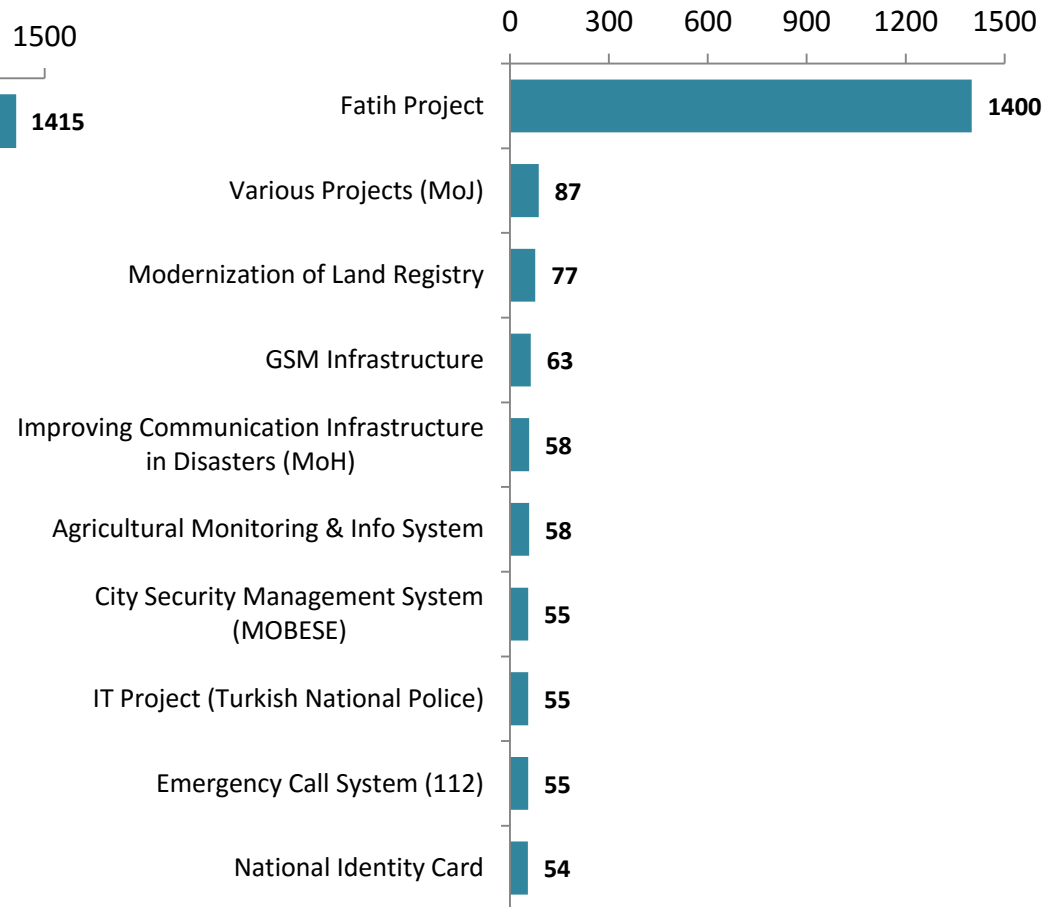


# Government has launched ICT projects to transform Turkey into an information society through e-government...

## Top 10 Public Institutions Investing ICT (Million TL, 2014)



## Top 10 Public Project in ICT (Million TL, 2014)



**THANK YOU**

