



Contribution of Google within the overall Turkish economy

Economic activity created by Google products
and services in Turkey

Google

Istanbul, June 2019



OC&C
Strategy consultants

uncommon sense

Google

Review of Contribution within the overall Turkish Economy

Purpose of the Study

This report, prepared by OC&C Strategy Consultants for Google, will offer an estimate of Google's economic contribution to the broader Turkish economy for value generated and savings achieved by businesses, made available by four key Google product groups: Android & Google Play, Google Ad Products, Google Maps & Google My Business and Google Cloud Products. The study is enriched with case studies and verbatims from businesses who have experienced various benefits thanks to Google products, services and initiatives

Our Approach

- Four product groups have been defined to measure the economic contribution of Google products. We have run economic models to measure the contribution of these products on GDP
- Multiple groups of input sources have been used for the study:
 - Business and Consumer Surveys, which were run by GfK in Turkey
 - Public data sources such as TURKSTAT, Euromonitor, OECD, International Monetary Fund (IMF), Gartner, Internet Advertising Bureau (IAB), Zenith, Eurostat and Statista
 - Desk research and analysis of previous similar work to develop some conservative assumptions (localized for Turkey)
 - Sector interviews conducted with the stakeholders
- We have calculated the economic contribution in terms of employment created by Android, Google Play and Google Ad Products ecosystems. We have also measured the female share of employment in particular
- We have prepared case studies to understand the contribution of these four product groups by interviewing 26 companies from 8 different sectors



About OC&C Strategy Consultants

More than 30 years of unpicking the most complex business challenges with simple, “uncommon” sense.

We're an international consulting firm, but we've never seen size as an end in itself. Our expertise is focused on a few core areas of specialties, allowing us to deliver results that get noticed.

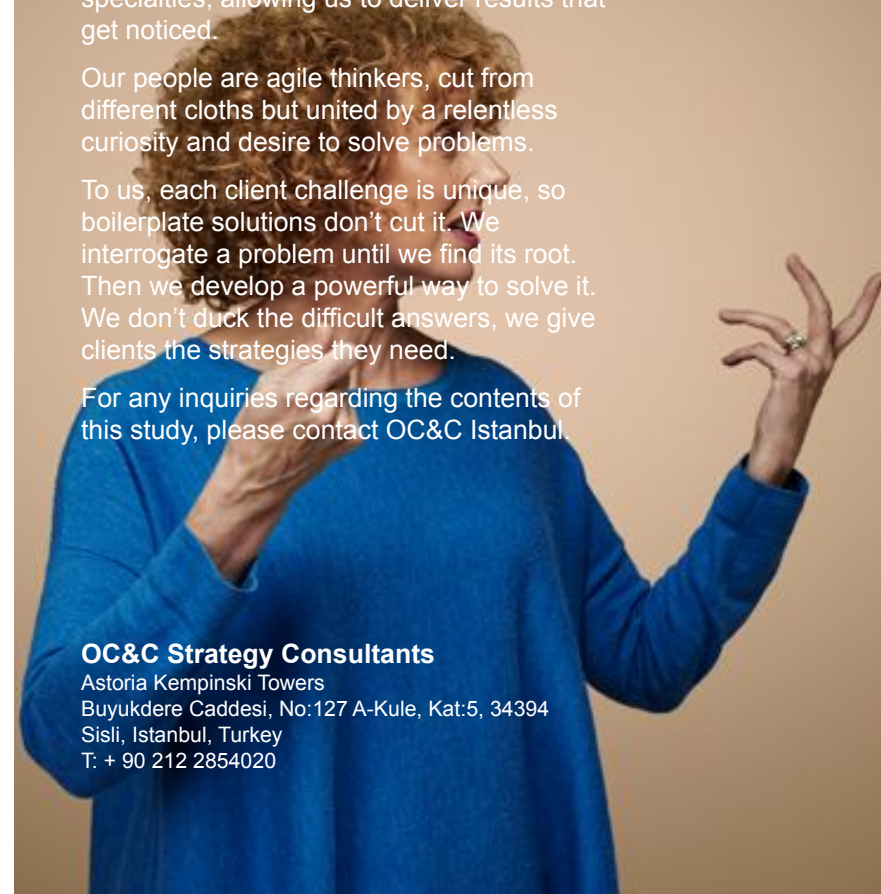
Our people are agile thinkers, cut from different cloths but united by a relentless curiosity and desire to solve problems.

To us, each client challenge is unique, so boilerplate solutions don't cut it. We interrogate a problem until we find its root. Then we develop a powerful way to solve it. We don't duck the difficult answers, we give clients the strategies they need.

For any inquiries regarding the contents of this study, please contact OC&C Istanbul.

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Economic Contribution of Google



Section I

Google provides its stakeholders with alternative solutions across a range of different areas through its products, services and initiatives

Google in a Nutshell

Google Ad Products – Search, Shopping, YouTube, etc.

- Google's advertising technologies enable advertisers to reach the right types of people while displaying relevant and interesting products and services to consumers

Google Maps and Google My Business

- Google My Business and Google Maps enable businesses to tag their locations and promote themselves. On top of this, they also help consumers and businesses who use transportation reach the right destination in the most convenient, and cost effective way

Google Cloud Platform and G Suite

- Google Cloud Platform (GCP) provides both the latest technologies and scalability to businesses of all sizes without major software and hardware investments
- Office apps and storage functions of G Suite offer consumers and businesses a more productive and cost-efficient way of storing data, working and sharing

Android and Google Play

- Android is an operating system which aims to provide equal opportunities of information access for all current and potential users
- Thanks to Google Play, Android users are able to access millions of applications in different categories






Other Google Apps and Initiatives

- Google provides convenience and efficiency improvements to various businesses – from retail giants to startups, and all types of consumers – from tech-savvy youth to retirees, with its other products, services and initiatives such as Grow with Google, Launchpad, Google Chrome, etc.



Google's alternative solutions for business create benefits that can be clustered under five groups

Google's Benefits to Businesses

 Growth & Development	 Fair Competition	 Internationalization	 Entrepreneurship	 Digital Transformation
<ul style="list-style-type: none">• Creation of new business lines• Creation of new revenue sources• Improving productivity and enabling focus on more value added activities• Supporting existing business growth with efficient and effective advertising• Providing access to new customer segments• Providing convenience and easy access for consumers	<ul style="list-style-type: none">• Providing equal opportunities for stakeholders of all sizes• Granting free app and cloud infrastructure to startups• Providing free training in key digitalization areas• Providing comparison and analytics tools to measure own performance and compare with others	<ul style="list-style-type: none">• Providing insights when entering new markets• Offering access to more than 2 billion Android users with Google Play• Providing access to billions for content providers through YouTube	<ul style="list-style-type: none">• Removing market entry barriers (especially in terms of hardware and software investment)• Providing continuous support to Turkish Entrepreneurship Foundation• Arranging various events and training programs on entrepreneurship and programming/ coding	<ul style="list-style-type: none">• Enabling measurability and actionability of the business activities and outputs• Enabling all customer groups to become target audiences for digital businesses• Providing better understanding of offline customer journey with online experience• Offering low-cost, effective and scalable infrastructure and storage solutions (thanks to various Cloud products)

Google's Benefits to Stakeholders, Verbatims from Interviews

Growth & Development



"Thanks to Google certifications we can serve all sectors and companies of all sizes and give them advices regarding those products. Google authorized us to sell its products on its behalf and this generated a new revenue stream for our business. Thanks to Google, some new occupations have also been born for using Google technologies– such as data analytics specialists, programmatic and transformation optimization specialists. We encourage our personnel to get training on such areas and also hire new personnel with this specialist know-how"

Atakan Demirci, OMD Digital Director



Fair Competition



"Penti values Google's offering fair opportunities for all enterprises regardless of their size. While Google provides the chance to try out the newest models and products for larger companies like Penti, it gives free products and training to smaller companies"

Fehime Garan, Penti Senior E-Commerce Manager



Internationalization



"At the end of 2017 we translated one of our favourite TV series from 2013 ("Ask Laftan Anlamaz") to Urdu on YouTube. Then, we followed a targeted marketing campaign and attracted many international viewers. Thanks to this, we were able to enter the Pakistani market and generate export revenues"

Dr. Mahmut Kursun, Ciner CIO and Ciner General Manager of Digital Media



Entrepreneurship



"Google technologies removed the barrier of having to make large investments when we were first starting the business. Instead of \$200k worth of hardware costs, we benefited from Google's pay per use system and allocated this budget to more value added parts of the business at that stage such as sales, marketing and product development. Google products enabled us to save \$2 million in our first three years in technology investments and also accelerated our rate of product development and improvement"

Veysel Sinan Geylani, Virtual i Founder



Digital Transformation



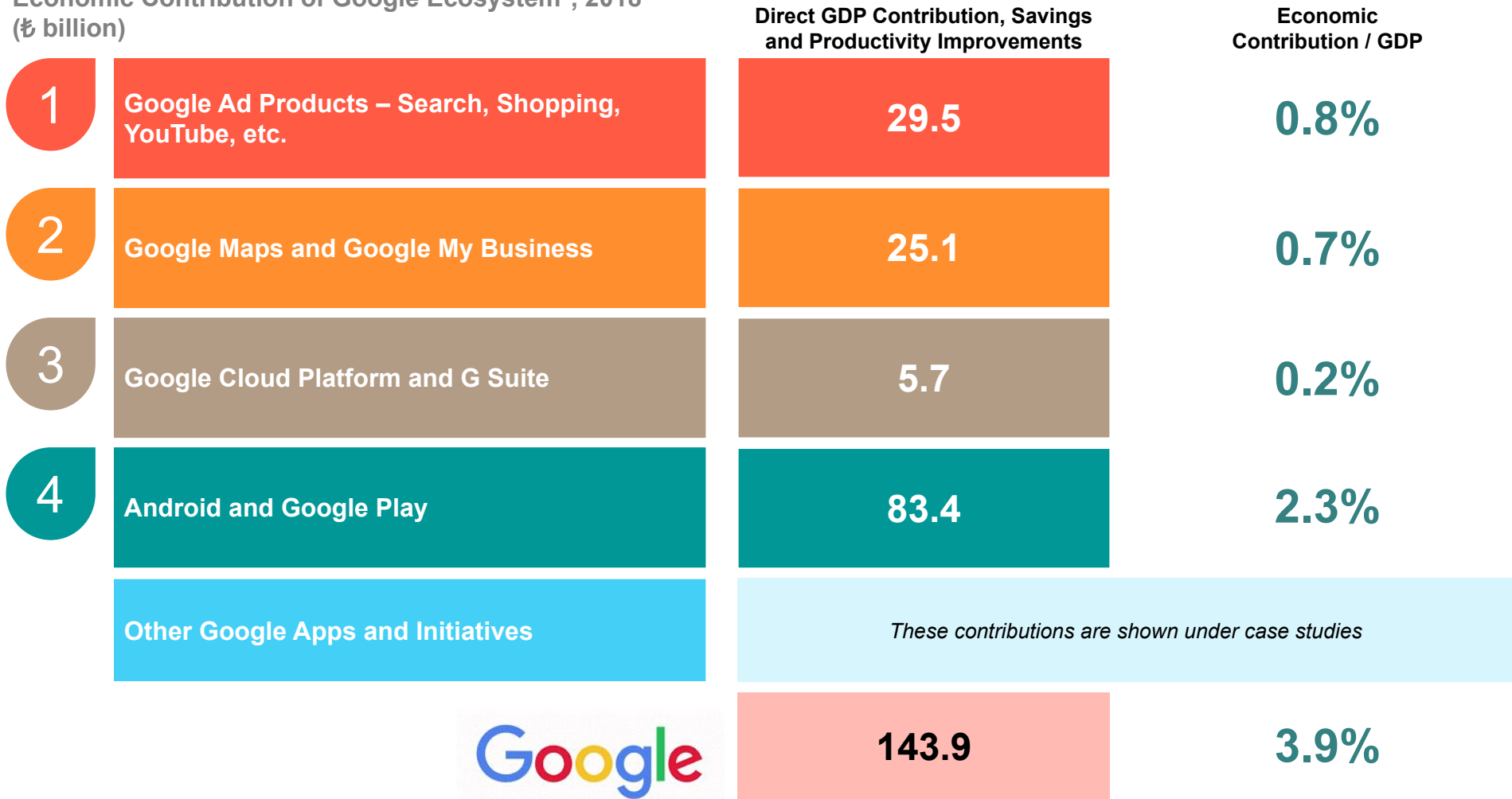
"We provide our customers with access to restaurant addresses and contact details with My Business. Using this, we have showed our customers that they can benefit from not only the standard home delivery but also our "Take Away" campaigns which requires customers to order online and collect the pizza from the store"

Aslan Saranga, Founder and CEO of Domino's Turkey



Google creates an ecosystem which generates ₪143.9 billion worth of economic activity

Economic Contribution of Google Ecosystem¹, 2018
(₪ billion)



1. Excluding consumer benefits and surplus
Source: IMF (GDP), OC&C analysis



The economic contribution of the Google Ecosystem in Turkey is expected to more than double within the next 5 years

Economic Contribution of Google Ecosystem¹, 2018-23F (₺ billion)

	2018 ₺ 143.9 billion	2023F ₺ 333.8 billion	Key Growth Drivers
1 Google Ad Products – Search, Shopping, YouTube, etc.	29.5	62.7	<ul style="list-style-type: none"> Continuation of superior ROAS² from digital advertising, hence increasing digital budget of businesses Continued involvement of first-time advertisers in the market due to ability to do efficient advertising even with very low budgets
2 Google Maps and Google My Business	25.1	59.5	<ul style="list-style-type: none"> Improvement of smartphone penetration, hence increasing use of these apps by businesses Ever evolving technologies and features of these apps, which improves savings and productivity improvements
3 Google Cloud Platform and G Suite	5.7	18.2	<ul style="list-style-type: none"> Increase of cloud penetration at all enterprise sizes Use of cloud in more areas for existing users, which fosters further savings and productivity improvements
4 Android and Google Play	83.4	193.3	<ul style="list-style-type: none"> Increasing number of successful tech startups Increasing number of developers and programmers thanks to open source and various free online training options Increasing maturity of businesses in digital transformation

1. Excluding consumer benefits and surplus

2. Return on Advertising Spend

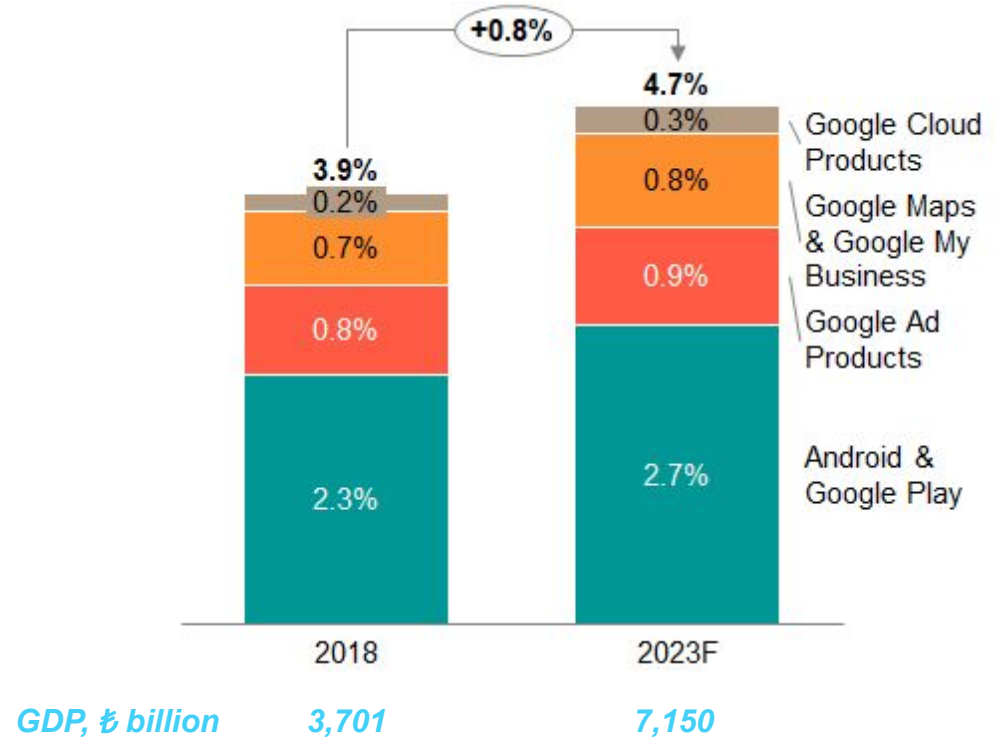
Source: OC&C analysis





The economic contribution of the Google ecosystem is expected to reach 4.7% of GDP by 2023

Economic Contribution of Google Ecosystem over GDP, 2018-23F (%)



The economic contribution created by Google Ad Products and Android & Google Play is equal to creating employment for c.1.4m people

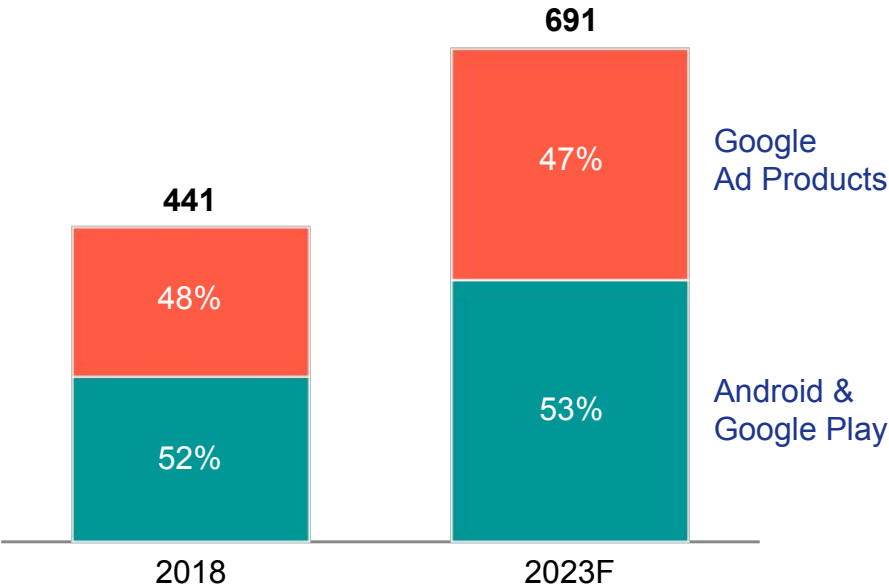
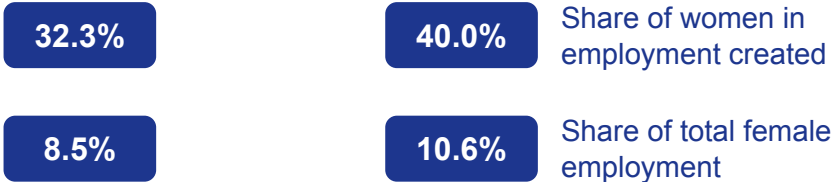
Total Employment Created by Google Ad Products and Android & Google Play Ecosystems, 2018-23F ('000 people)



Source: OC&C analysis, Turkstat

8.5% of all female employment is created by Google Ad Products and Android & Google Play Ecosystems

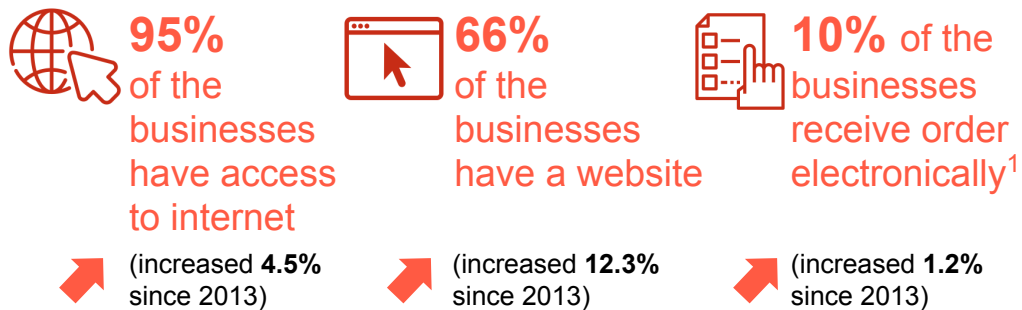
Female Employment Created by Google Ad Products and Android & Google Play Ecosystems, 2018-23F ('000 people)



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Employment of digitally skilled individuals increases in Turkey along with the number of tech-related businesses

Tech startups and employees with tech skills in Turkey, 2018



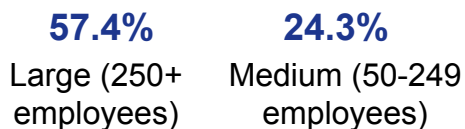
There are **c.900** tech startups in Turkey

Number of tech startups per million urban population



11.6% of the businesses employ ICT/IT specialists
(increased **1.1%** since 2014)

Businesses employing ICT/IT specialists by size



1. Businesses that receive orders for products/services via website or EDI-Type Messages (2017 data – latest available)
Source: Turkstat, Crunchbase, OC&C analysis



Digital Workshop has been providing free and certified, face-to-face and online trainings since 2017

Online



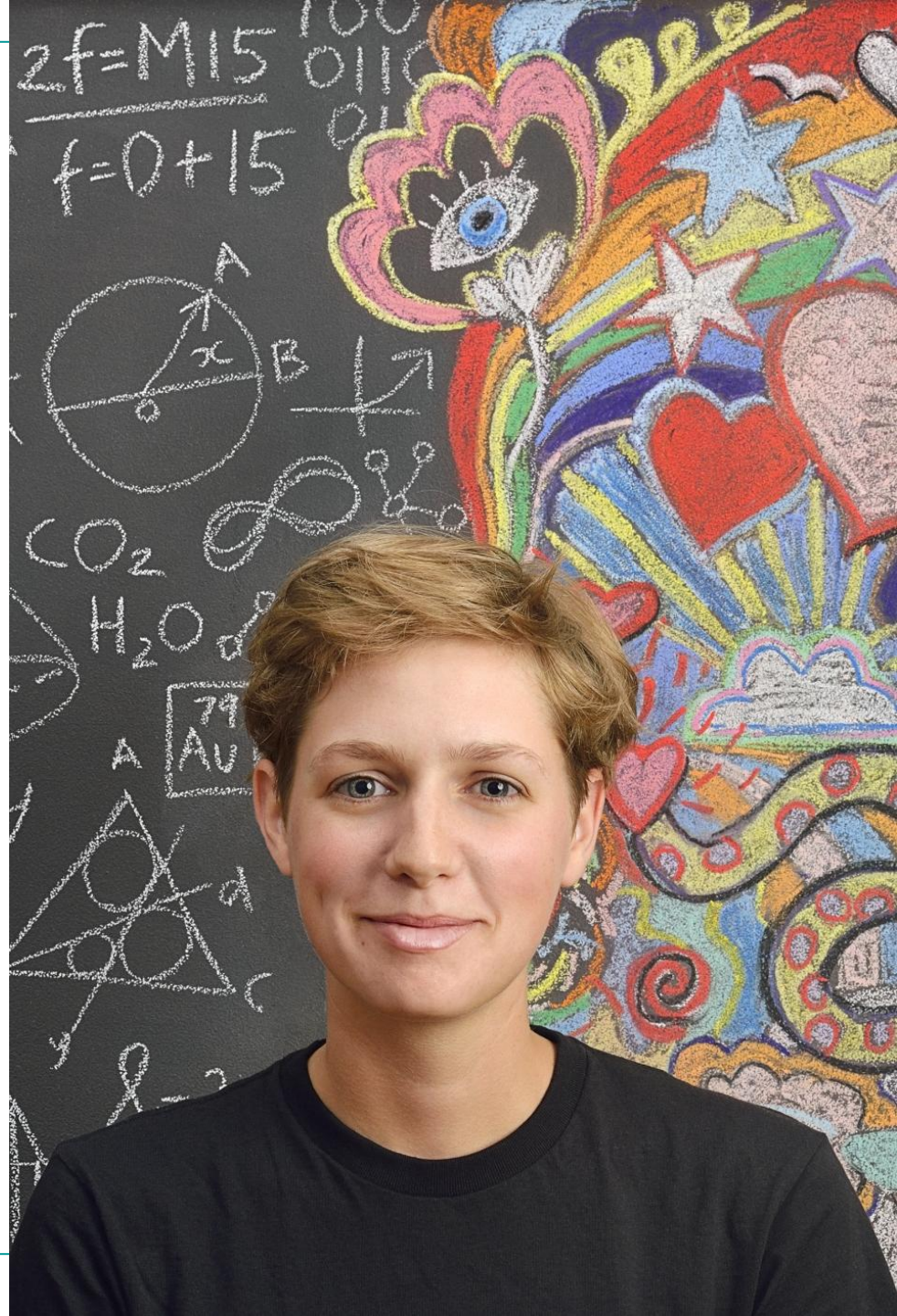
Certified video courses on digital marketing, personal development, machine learning, and big data analysis provided to everyone – with no age, occupation or education prerequisites

Face to Face



“Tech entrepreneurship”, “Basic digital literacy”, and “Digital marketing” training across different cities of Turkey in collaboration with Ministry of Family, Labor and Social Services and Turkish Employment Agency (ISKUR)












Digital Workshop supported more than **40,000** Turkish citizens to improve their businesses and / or careers in the digital environment through providing world renowned certified online or face to face training to more than **150,000** consumers



Google ecosystem¹ creates an economic value as large as many countries' GDPs

The ecosystem around Google's services creates economic benefits equal to 3.9% of Turkish GDP. If this benefit was a national economy, it would be the 102nd largest in the world

Country GDP, 2018 (billion \$, Current prices)

	Country ranking	GDP
	1 USA	20,494
	2 China	13,407
	19 Turkey	766
	30 UAE	426
	40 Philippines	331
	86 Serbia	51
	87 Azerbaijan	45
	101 Estonia	30
	102 Nepal	29
	109 Cambodia	25
	121 Albania	16

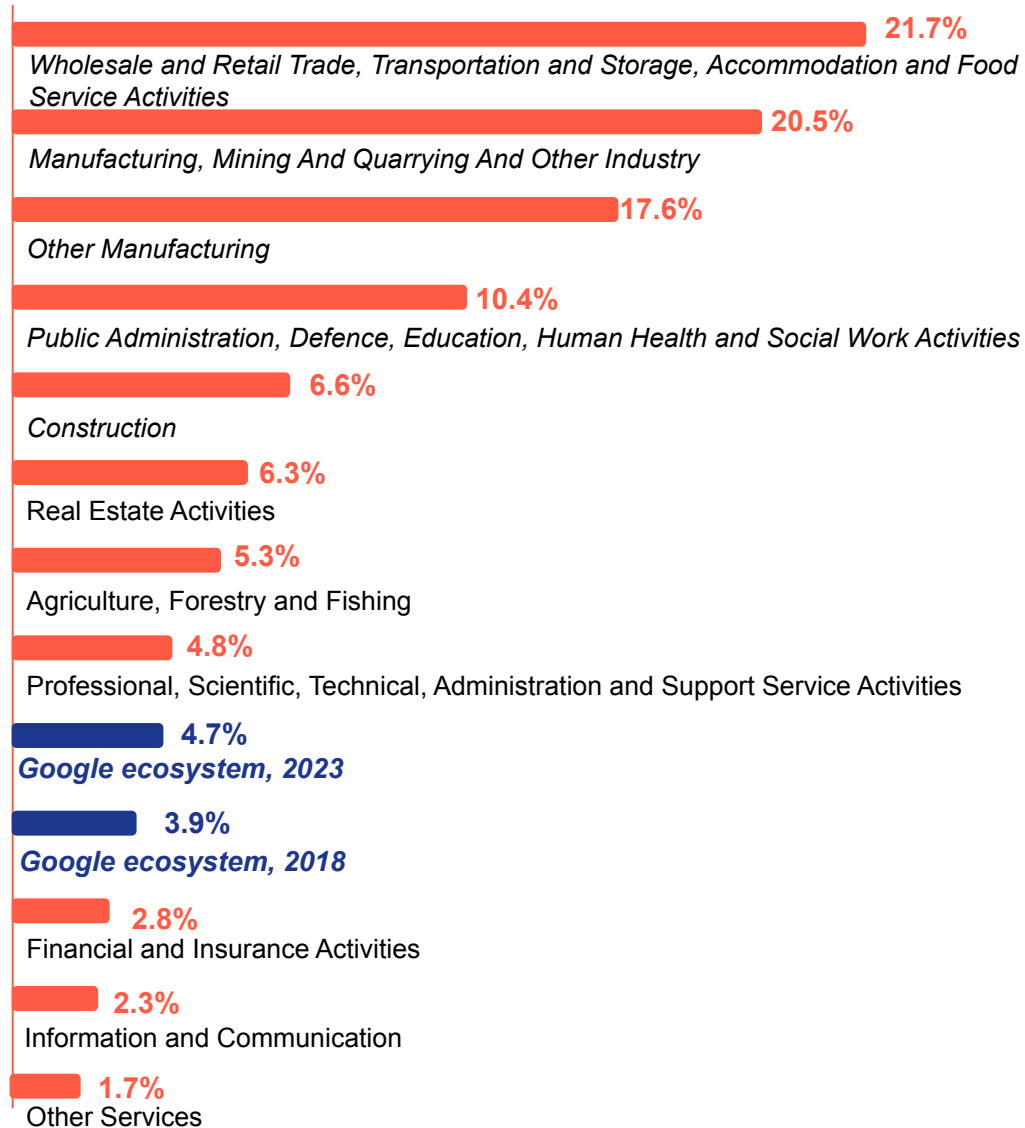
\$48.8 billion Turkish Google Ecosystem¹, 2023F

\$29.8 billion Turkish Google Ecosystem¹, 2018



1. Includes only Android & Google Play, Google Ad Products, Google Maps & Google My Business, Google Cloud. Excluding consumer benefits and surplus
Source: IMF, OC&C analysis

GDP Share of Main Economic Activities, 2018 (%)



The Google ecosystem¹ has become as large as some of Turkey's main economic activities


The economic contribution of the Google ecosystem has contributed more than Finance & Insurance and Information and Communication activities to Turkish GDP



1. Includes only Android & Google Play, Google Ad Products, Google Maps & Google My Business, Google Cloud. Excluding consumer benefits and surplus
Source: Turkstat, OC&C analysis



Google Ad Products' Key Benefits for Businesses

<p>Growth & Development</p> 	<ul style="list-style-type: none"> • Supports growth by creating new revenue sources • Enables businesses to improve digital presence and better use resources with efficient and effective advertising solutions
<p>Fair Competition</p> 	<ul style="list-style-type: none"> • Creates equal opportunities for small players by enabling them to improve their digital know-how through free training they couldn't afford otherwise • This helps businesses compete with larger players within their budget thanks to improved advertising efficiency
<p>Internationalization</p> 	<ul style="list-style-type: none"> • Supports internationalization by providing insights and co-building marketing strategy in new markets • Enables Turkish businesses to reach "right" customers in markets they are not currently present
<p>Entrepreneurship</p> 	<ul style="list-style-type: none"> • Grants many startups free advertising packages and supports them through the early stages of entrepreneurship
<p>Digital Transformation</p> 	<ul style="list-style-type: none"> • Enables businesses monitor their marketing spends, number of customers reached and measure return with its reporting tools

Verbatims from Interviews

"We use Google advertising products regularly every month. Sometimes, a user who we reached by spending only €0.01 can consume our showtv.com.tr content for more than 22 minutes and we can achieve very high rates of return"

Dr. Mahmut Kursun, Ciner CIO and Ciner General Manager of Digital Media

"Google treats companies of all sizes equally and presents opportunities that could fit their needs. While they have opportunities such as Digital Garage for smaller companies to build knowledge, they also give opportunities such as trials of new products to larger companies like us"

Ebru Darip, Koctas Chief Marketing and Digital Channels Officer

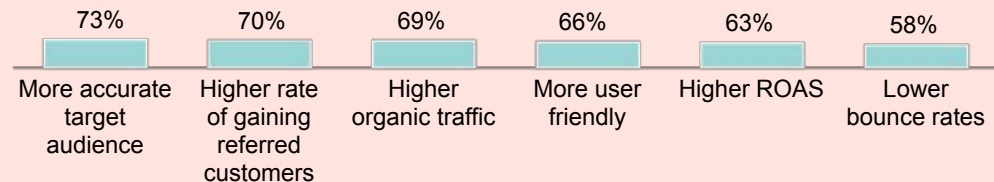
"When we are evaluating new markets to enter, we benefit from Google's products the continuous advice and support of Google's teams to help us prioritize our efforts. Together with Google's teams, we can define potential markets and marketing strategies for these markets effortlessly"

Fehime Garan, Penti Senior E-Commerce Manager

"We started advertising our products through digital channels after taking part in Google's Digital Garage training program. This helped us to avoid physical store costs and start our business faster and more efficiently"

Mumune Koyu, Balwax Co-Founder

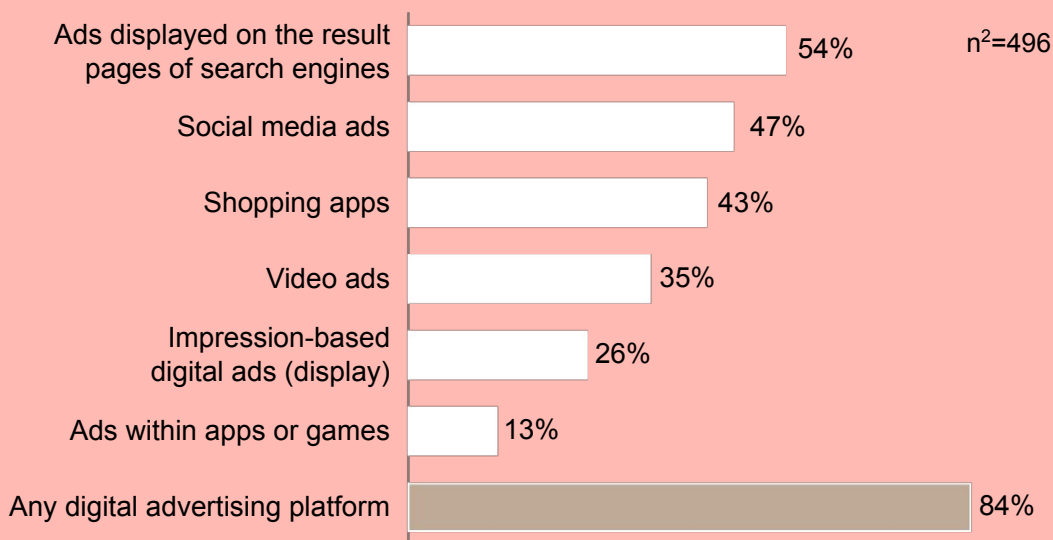
How Google digital ads are differentiated¹ (businesses that answered above average), n=258, %



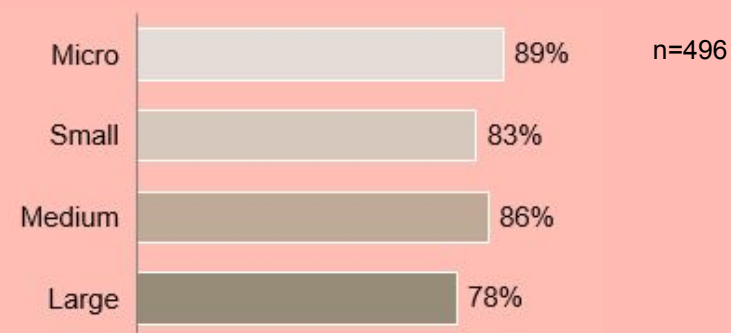
1. Q23a: In which ways do you believe Google digital ads platform differentiate from other digital ads platforms?
Source: GfK Business Survey, Company Interviews

While digital advertising penetration reaches up to 84% in survey participants, the highest penetration levels are observed in the micro businesses segment

Businesses using digital advertising apps¹



Digital advertising penetration by business size (Share among all digital advertising users)



GfK business survey conducted in Turkey in 38 cities, with participation by 496 businesses. Survey reached companies through online platforms. According to Turkstat, internet penetration of companies is above 95%, hence the sample size is expected to be representative of Turkey

1. D5: Which of the following tech products do you use for your enterprise?

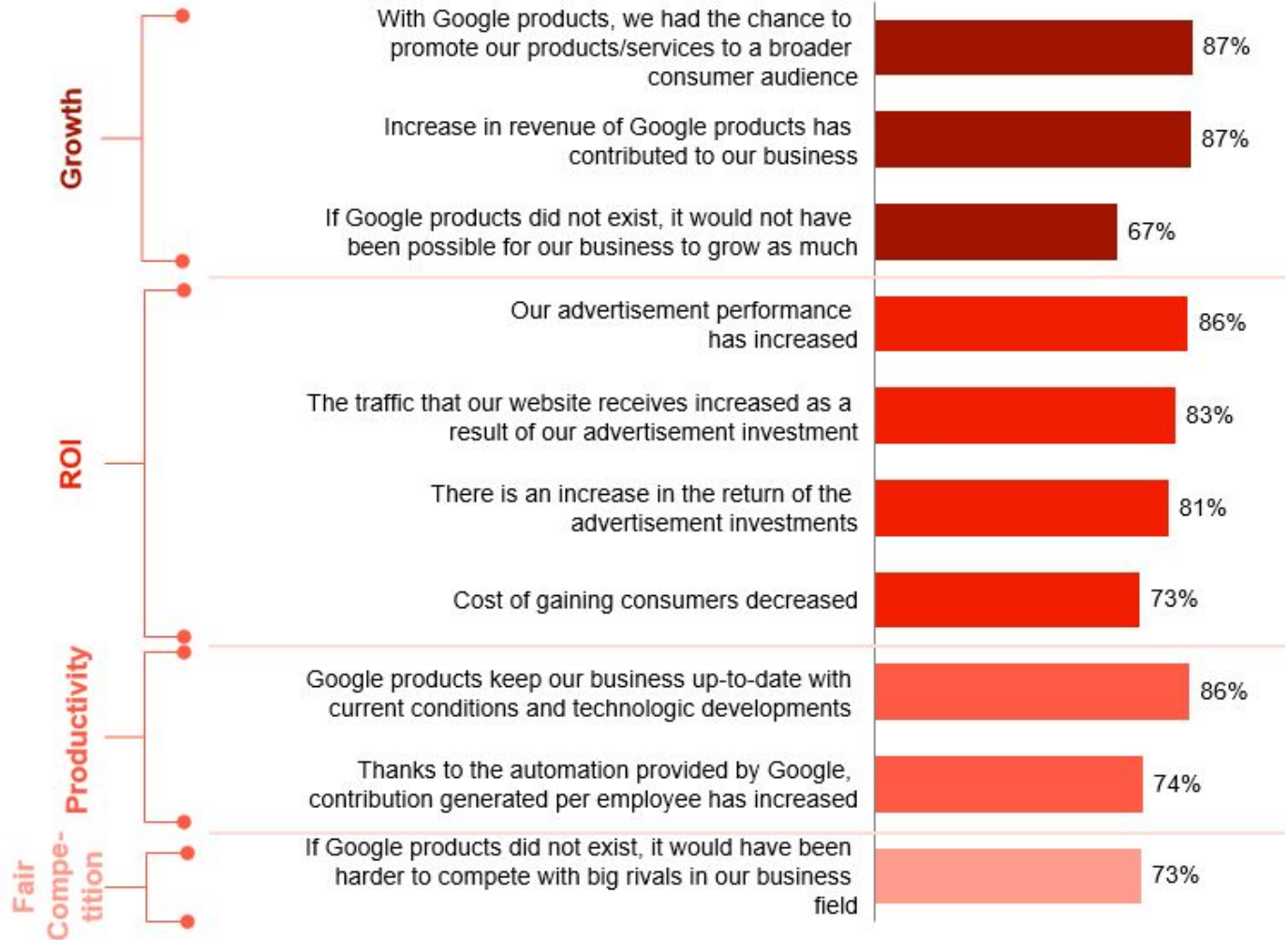
2. Sample Size

Source: GfK Business Survey, OC&C analysis

The biggest advantages experienced by Google advertising¹ users are centred around 4 main categories

- 1 Faster growth and revenue increase
- 2 Higher ROI
- 3 Increase in productivity
- 4 Fair competition

Share of companies using Google products and responded “Agree” on the related question², (%)



1. Shopping products are excluded, they are included in different questions
 2. Q13b: Please indicate to what extent you agree with the below statements. (Companies using Google advertising products)
 3. Sample size

Source: GfK Business Survey, OC&C analysis

Google's ad products contributed ₺30 billion to the Turkish economy and creates jobs for 614k people

Google Ad Products Ecosystem's Economic Contribution

Video

- Video ads are ads shown before and during YouTube videos
- Advertisers are only charged if their ad is shown to the previously targeted audience

Display

- Display ads are shown to consumers in 4 formats: Text, Gmail, Banner and Apps
- Once advertisers choose formats and target audiences, publishing mediums are selected

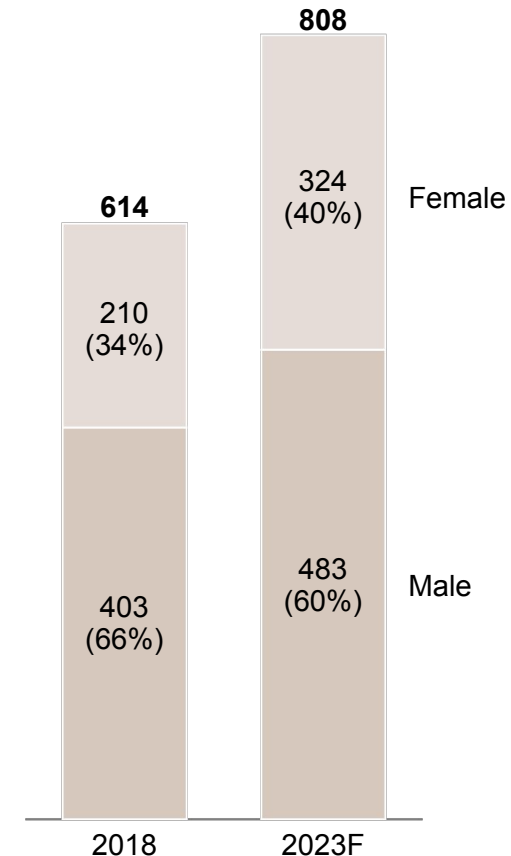
Search and Shopping

- Search ads are clearly marked ads shown separately to free results in response to user queries
- Shopping is another type of search advertising that leads to improved conversion rates for advertisers

Contribution of Google Ad Products Ecosystem¹, 2018-23F (₺ billion)



Employment Created by Google Ad Products Ecosystem, 2018-23F ('000 people)



1. Excluding consumer benefits and surplus
Source: Turkstat, IAB, PwC, Zenith, Sector interviews, OC&C analysis



Google Maps & Google My Business' Key Benefits for Businesses

Growth & Development



- Enables businesses to interact with their customers from digital channels and provide them a seamless omnichannel experience
- Increases productivity with time savings
- Creates access to new customers and introduces new revenue streams (Google My Business especially)

Entrepreneurship



- Enables micro and small enterprises to establish trust and provide convenience to potential customers without huge investments in their brands thanks to various functions of Google My Business (such as customer reviews)
- Hence, supports fair competition between small and large players

Digital Transformation



- Increases operational performance by enabling businesses to use digitally supported distribution and logistics technologies
- Supports omnichannel customer experience and enables businesses to track online-to-offline customer journey
- Creates time and fuel savings

Verbatims from Interviews

"We can manage our location based campaigns effectively with Google My Business which we use for each of our physical locations"

Ebru Darip, Koctas Chief Marketing and Digital Channels Officer

Small businesses can promote themselves online and reach new customers thanks to Google My Business. In GfK's Business Survey businesses which use the product stated that **41%** of their new customers come from the Google My Business product

"We provide our customers with access to restaurant addresses and contact details with My Business. Using this, we have showed our customers that they can benefit from not only the standard home delivery but also our "Take Away" campaigns which requires customers to order online and collect the pizza from the store"

Aslan Saranga, Founder and CEO of Domino's Turkey

Google contributes **₺16.2 billion** to the economy, excluding the savings, through business use of its Maps and My Business products

- My Business and Maps products help consumers find the physical stores conveniently and provides added credibility (for the businesses)
- These factors are vital especially for small and micro businesses and affects number of visitors –and total sales- positively
- The revenue of small and micro businesses has increased by **₺13.9b** and **₺13.5b** respectively due to the Google My Business product between 2017 and 2018
- The total revenue increase of **₺27.4b** with My Business equals to **6.3%** of the total revenue increase of **₺434b** by micro and small businesses in Turkey
- This revenue increase directly and indirectly (with the income and special consumption taxes) contributes **0.4%** of GDP, which makes **₺16.2b** in 2018

₺16.2 billion
(0.4% of GDP)

On top of the direct contribution of ₺16.2 billion, Google Maps provides businesses and consumers time and fuel savings

Savings of Businesses with Google Maps

Time savings

- With Google Maps, businesses reduce their time on roads by receiving instant information about traffic and discovering the best routes
- Respondent businesses stated that they save **1.8 hours per week on average**

₺7.6
billion
(0.2% in GDP)

Fuel savings

- Google Maps reduces the time spent in traffic congestion by identifying the shortest route. This means savings in fuel consumption for its users. These fuel savings reduce overall business costs, and increase profitability
- Businesses saved a total of **4.9 billion kilometers driving distance a year** with Google Maps

₺1.4
billion
(0.04% in GDP)

Savings of Consumers with Google Maps

- **c.34 million Google Maps** users save time while using the product for different purposes including driving, walking, public transport and shopping
- The value of time saved with Maps for consumers in Istanbul, Ankara and Izmir is **₺4.1 billion while driving, ₺10.5 billion while using public transport, ₺4.7 billion while walking and ₺1.0 billion while shopping**

₺20.2
billion¹

- Each driver that uses Google Maps saved **2,601 km on average a year**
- In one year, Google Maps users save **₺717 on average per user** which equals to **₺1.8 billion in total across Istanbul, Ankara and Izmir**

₺1.8
billion¹

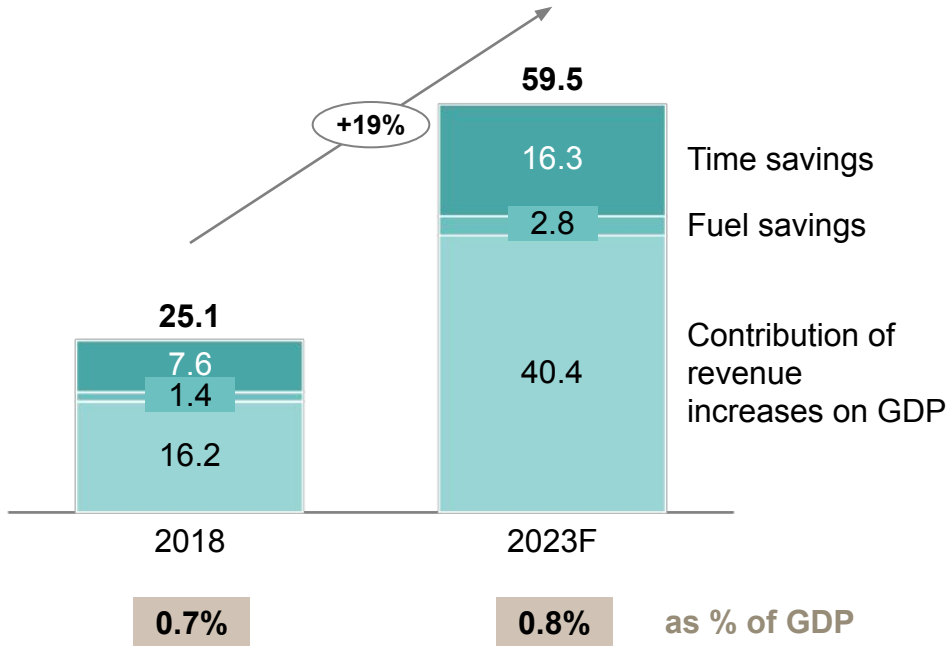
Not included in the economic contribution calculations

1. The value of total savings of consumers in Istanbul, Ankara and Izmir
Source: GfK Business Survey, Turkstat, OC&C analysis



Google contributed ₺25.1 billion to the Turkish economy in 2018 with its Maps and My Business products

Economic Contribution of Google Maps and Google My Business Ecosystem¹, 2018-23F (₺ billion)



The economic contribution of ₺25.1 billion in 2018 is expected to reach **₺59.5 billion** (0.8% of GDP) through increasing product usage rates and business revenues

1. Excluding consumer benefits and surplus
Source: GfK Business Survey, Turkstat, Euromonitor, OC&C analysis



Google Cloud Products' Key Benefits for Businesses

Growth & Development



- Increases productivity and improves innovation by redirecting the focus of IT and analytics personnel onto more value added activities rather than device maintenance and repair
- Fosters growth due to improved innovation
- Makes growth easier and faster since scaling with cloud does not require any investment

Internationalization



- Enables businesses to conveniently and efficiently share real time data and information between customers, suppliers and branches in the international market
- Supports full compliance with the regulatory requirements of different countries so that small players who wouldn't have the means to establish such compliant systems are able to enter various markets

Digital Transformation



- Offers low cost yet high tech infrastructure and office applications for businesses, which accelerates digitalization
- Provides productivity increases not only to IT personnel but also other business units, such as marketing, sales, executive management, etc. which could improve their daily business with better data flows and analytics

Source: Company interviews

Verbatims from Interviews

“Google technologies removed the barrier of having to make large investments when we were first starting the business. Instead of \$200k worth of hardware costs, we benefited from Google’s pay per use system and allocated this budget to more value added parts of the business at that stage such as sales, marketing and product development. Google products enabled us to save \$2 million in our first three years in technology investments and also accelerated our rate of product development and improvement”

Veysel Sinan Geylani, Virtual i Founder

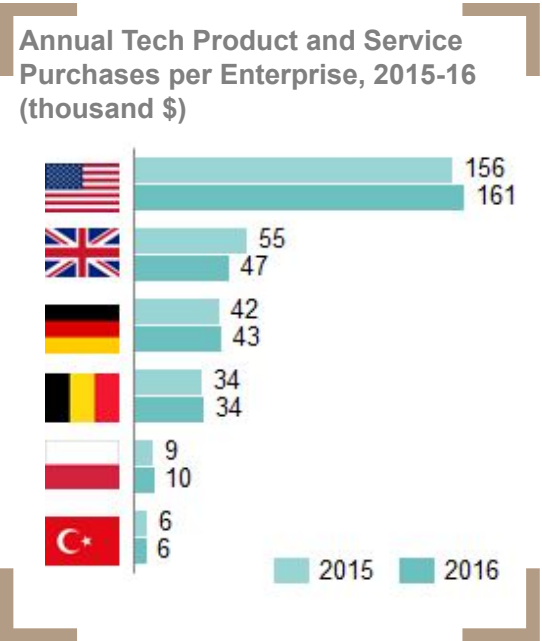
“GDPR compliance was our largest barrier to internationalization. By adopting the Google Cloud Platform, we instantly became compliant and now we are able to operate across Europe”

Veysel Sinan Geylani, Virtual i Founder

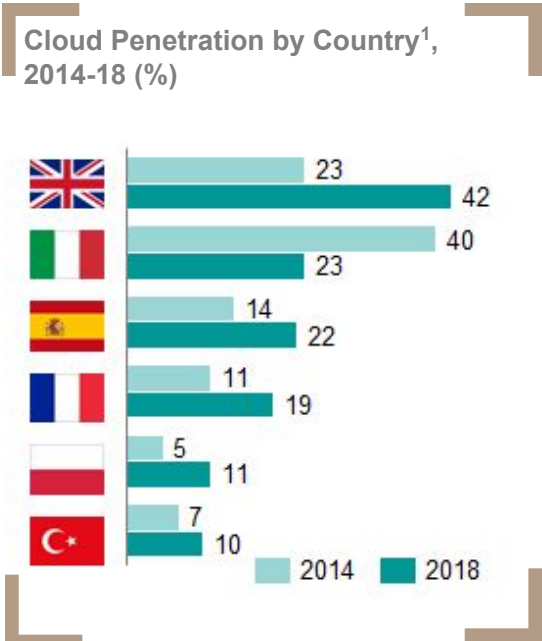
“Thanks to Google products, we are able to access real-time data and act accordingly to make optimize our sales efforts in the fast-changing retail market. We are able to save at least 2 man days a month just using Cloud in our marketing department”

Ebru Darip, Koctas Chief Marketing and Digital Channels Officer

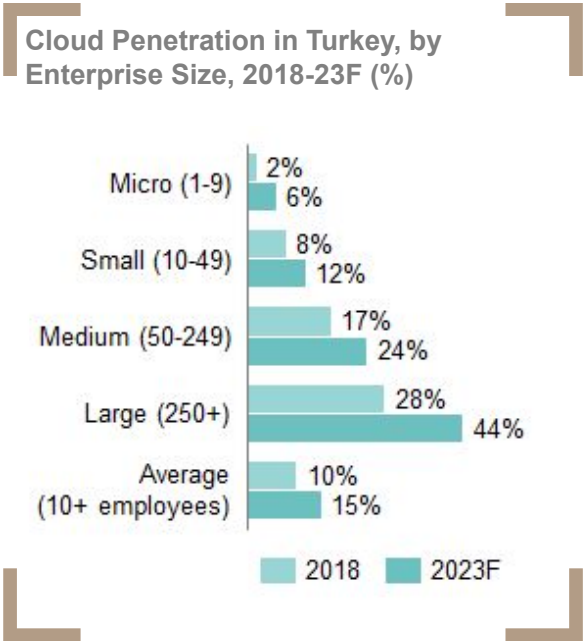
Although cloud usage is nascent in Turkey, penetration is expected to increase by 50% and reach from 10% to 15% by 2023



Tech spend per enterprise remains stable or decreases in benchmark countries, as well as Turkey



This could be partially explained by increasing cloud penetration – which provides substantially lower costs of ownership/usage than on premises solutions



Cloud penetration is expected to increase rapidly in next 5 years if a similar trajectory is followed with global benchmarks

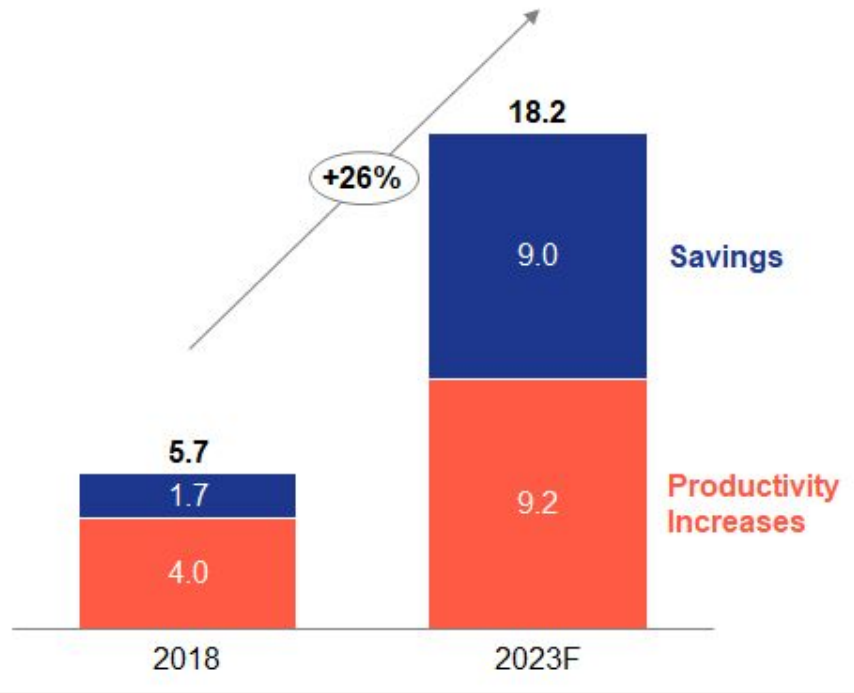
1. Within enterprises with 10+ employees
Source: Gartner, Turkstat, Eurostat, OC&C analysis.



Google cloud products contributed ₺ 5.7 billion to the Turkish economy due to the savings & productivity improvements generated by its ecosystem

Economic Contribution of Google Cloud Products Ecosystem¹, 2018-23F (₺ billion)

0.15% 0.25% as % of GDP



Monetary Savings

Turkish businesses saved **₺ 1.7 billion** worth of device and software investments in 2018

With improved penetration and usage, the worth of monetary savings is expected to reach

₺ 9.0 billion by 2023






Productivity Increases²

Businesses using Google cloud products experienced **39% productivity increase** in their IT personnel according to GfK Business Survey in 2019

This productivity increase would translate into a value of **₺ 4 billion** for Turkish businesses

1. Excluding consumer benefits and surplus
2. Excluding additional benefits due to productivity increase such as rapid application development and reduction of fraud.
Source: Gartner, Turkstat, Eurostat, GfK Business Survey, OC&C analysis

Android's Key Benefits for Businesses

<p>Growth & Development</p> 	<ul style="list-style-type: none"> Increases digitally accessible customer base by enabling smartphone ownership for masses Introduces new technologies and enables innovation for businesses, which in return brings growth and access to new customers
<p>Fair Competition</p> 	<ul style="list-style-type: none"> Decreases entry barriers with its open source nature Supports developers with various training and knowledge sharing events
<p>Internationalization</p> 	<ul style="list-style-type: none"> Provides access to more than 2 billion users for app developers Supports businesses at all sizes by giving them access to Google's networks for internationalization efforts
<p>Entrepreneurship</p> 	<ul style="list-style-type: none"> Provides equal development and fair competition opportunities for startups through a series of training events and workshops Offers (mostly free) product and service packages to entrepreneurs which become supportive in initial ramp up periods
<p>Digital Transformation</p> 	<ul style="list-style-type: none"> Accelerates digital transformation of businesses and public institutions Improves efficiency and customer satisfaction by providing frictionless cross-channel experience, and facilitates businesses reaching customers from different channels

Verbatims from Interviews

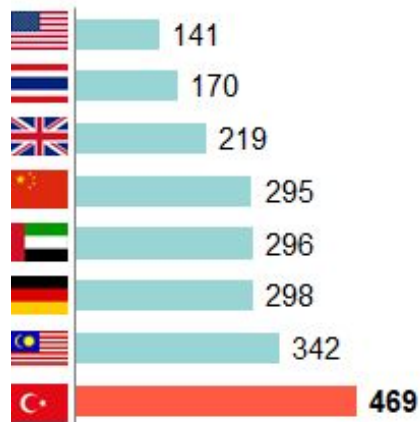
"...Google introduced us to its business partners which enabled us to export our smartphones to 31 countries and we plan to reach 45 countries by the end of this year (2017)."
 Muzaffer Golcu. General Mobile General Manager

"...Google supports companies like us on a regular basis if they see that we are able to meet Google's user experience requirements but also share in the social responsibility aspect of doing business..."
 Kadir Can Kirkoyun, Scode's Founder

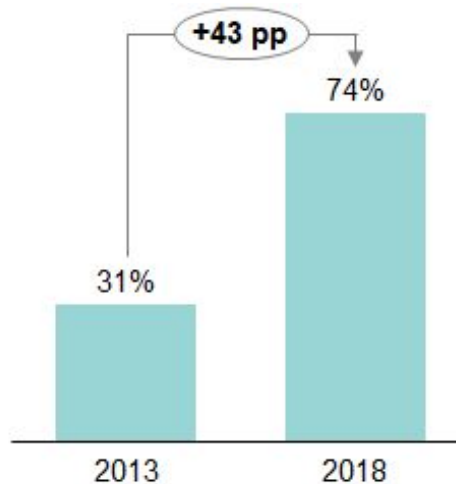
"Digital transformation has always been our priority, and Android facilitated our efforts by driving the increase of mobile penetration"
 Ozge Caglar, Garanti Teknoloji Business Unit Manager

Although average smartphone prices in Turkey are high, Android's wide price-range makes it possible for almost everyone to afford a smartphone

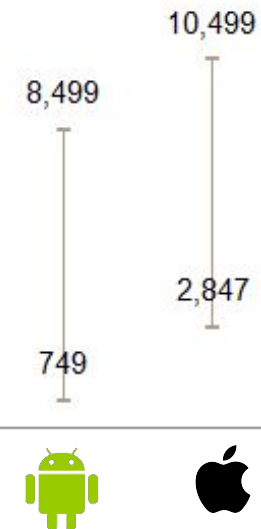
Average smartphone price by country, 2018 (\$)



Smartphone Penetration 2013-18 (%)



Smartphone Price Ranges, 2019 (₺)



Smartphone prices in Turkey are **high**, however Android supports an **increase in smartphone penetration** by providing a wide range of prices for smartphone alternatives

Thanks to Android, there are **smartphone alternatives for all income levels**. This enabled smartphone penetration to **increase by 43pp** (from 31% to 74% in last 5 years)

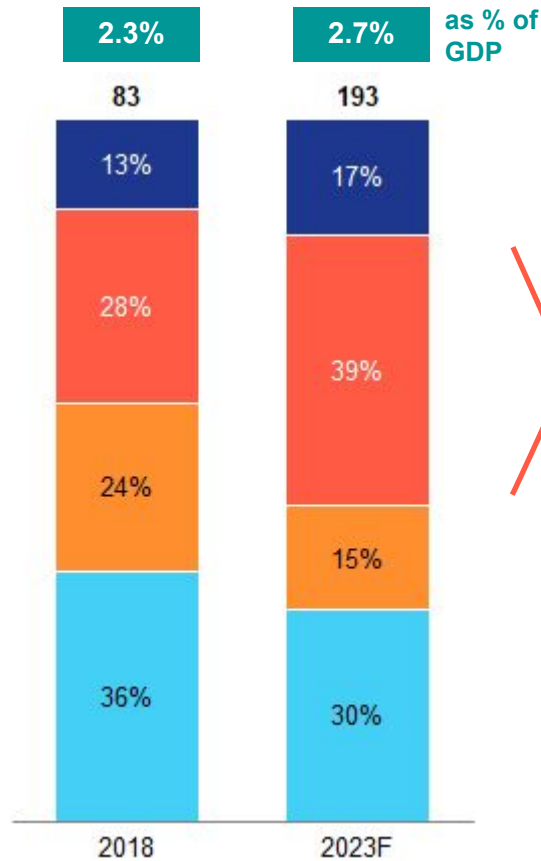
The entry price of an Android phone is almost 1/4th of its closest competitor – Android plays a crucial role in democratizing the smartphone, and therefore Internet access

Google's Android & Google Play ecosystem contributes €83 billion to the Turkish economy, which is equal to the employment of 750k people

Key Stakeholders in Android & Google Play Ecosystem and their Economic Contribution

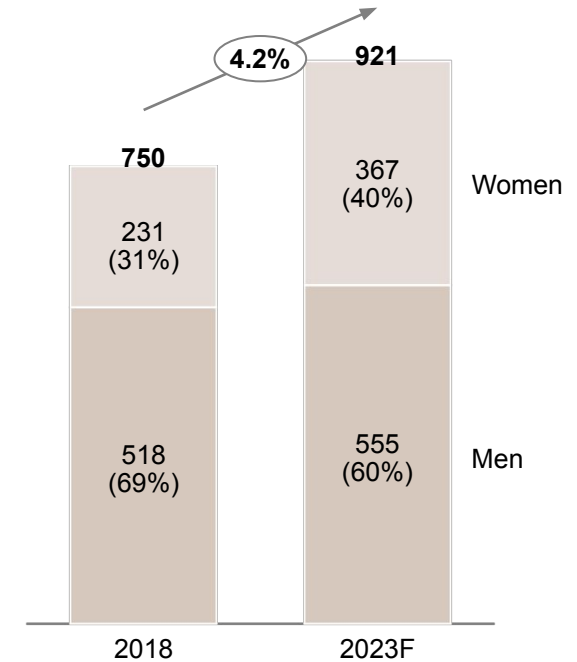
Busi- nesses & Public Insti- tutions	<ul style="list-style-type: none"> Accelerate digital transformation and increase efficiency Enable international expansion
Startups and Developers	<ul style="list-style-type: none"> Support development with training, know-how, technical & solution support Enable international expansion by addressing new and fast growing global app market Support finding business and strategic partners
OEM and Device Retailers	<ul style="list-style-type: none"> Drive need for more functional devices Enable international expansion Create new revenue streams via complementary products, i.e. wearables and accessories
Telecom Operators	<ul style="list-style-type: none"> Increase smartphone penetration and addressable customer base Enrich value proposition with device offers Focus on content and create new revenue streams

Contribution of Android & Google Play Ecosystem¹, 2018-23F (€ billion)



Employment Created by Android & Google Play Ecosystem, 2018-23F ('000 people)

Android Ecosystem has created an economic contribution equal to employment of **750 thousand** people, **31%** which are **women**



1. Excluding consumer benefits and surplus

Source: OC&C analysis, Turkstat, Analyst reports, Desk research, Statista, Eurostat, Sector interviews



「Thank you!」



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