

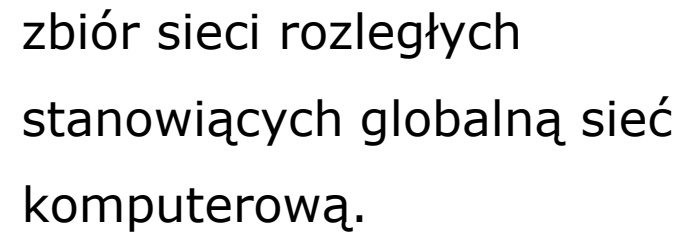


**AKADEMIA GÓRNICZO-HUTNICZA  
IM. STANISŁAWA STASZICA W KRAKOWIE**

# **Internet**

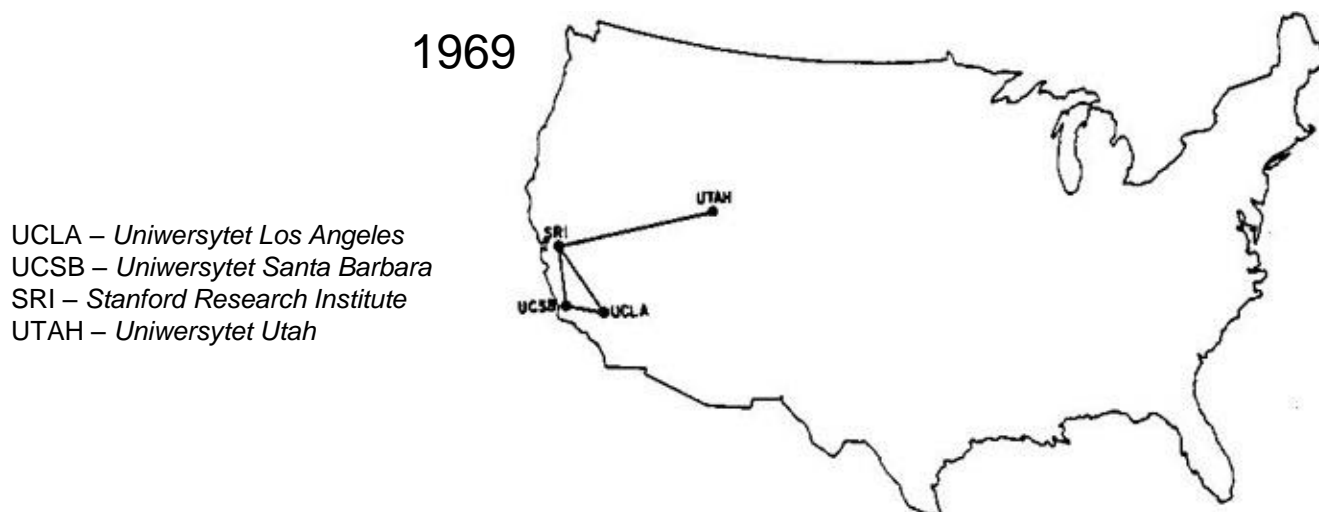
## **Historia i współczesność**

**Wydział Geologii, Geofizyki i Ochrony Środowiska  
Katedra Geologii Ogólnej i Geoturystyki  
Kraków, 2024**

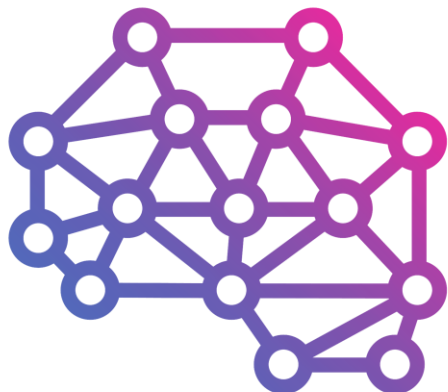


# ARPANET

**29 września 1969 roku**, w Uniwersytecie Kalifornijskim w Los Angeles, a wkrótce potem w trzech następnych uniwersytetach zainstalowano w ramach eksperymentu finansowanego przez **ARPA\*** pierwsze węzły sieci **ARPANET**.



**ARPA** (*Advanced Research Project Agency*) – agencja Departamentu Obrony USA, zajmująca się koordynowaniem badań naukowych na potrzeby wojska



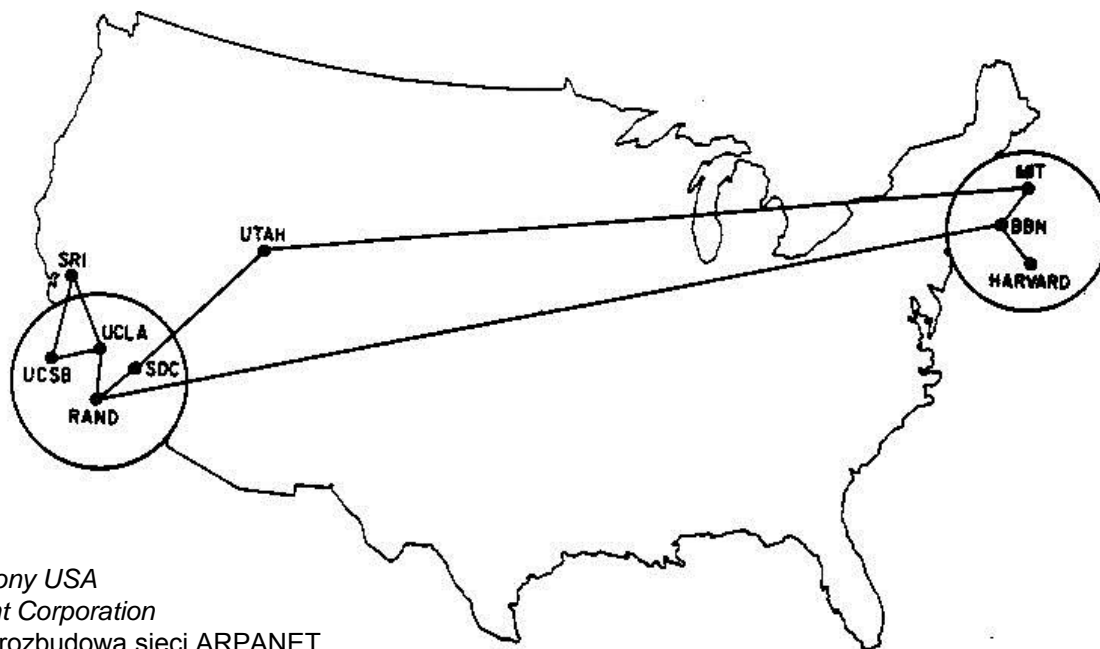
Eksperyment miał zbadać możliwość zbudowania sieci komputerowej bez wyróżnionego punktu centralnego, która mogłaby funkcjonować nawet pomimo uszkodzenia pewnej jej części.

Postanowiono więc wypróbować zaproponowaną kilka lat wcześniej przez **RAND Corporation** (kolejną instytucję związaną z badaniami wojskowymi) koncepcję sieci rozproszonej.

# ARPANET

W ciągu następnych lat sieć była rozbudowywana, w pracach nad nią brała udział coraz większa liczba naukowców z różnych ośrodków.

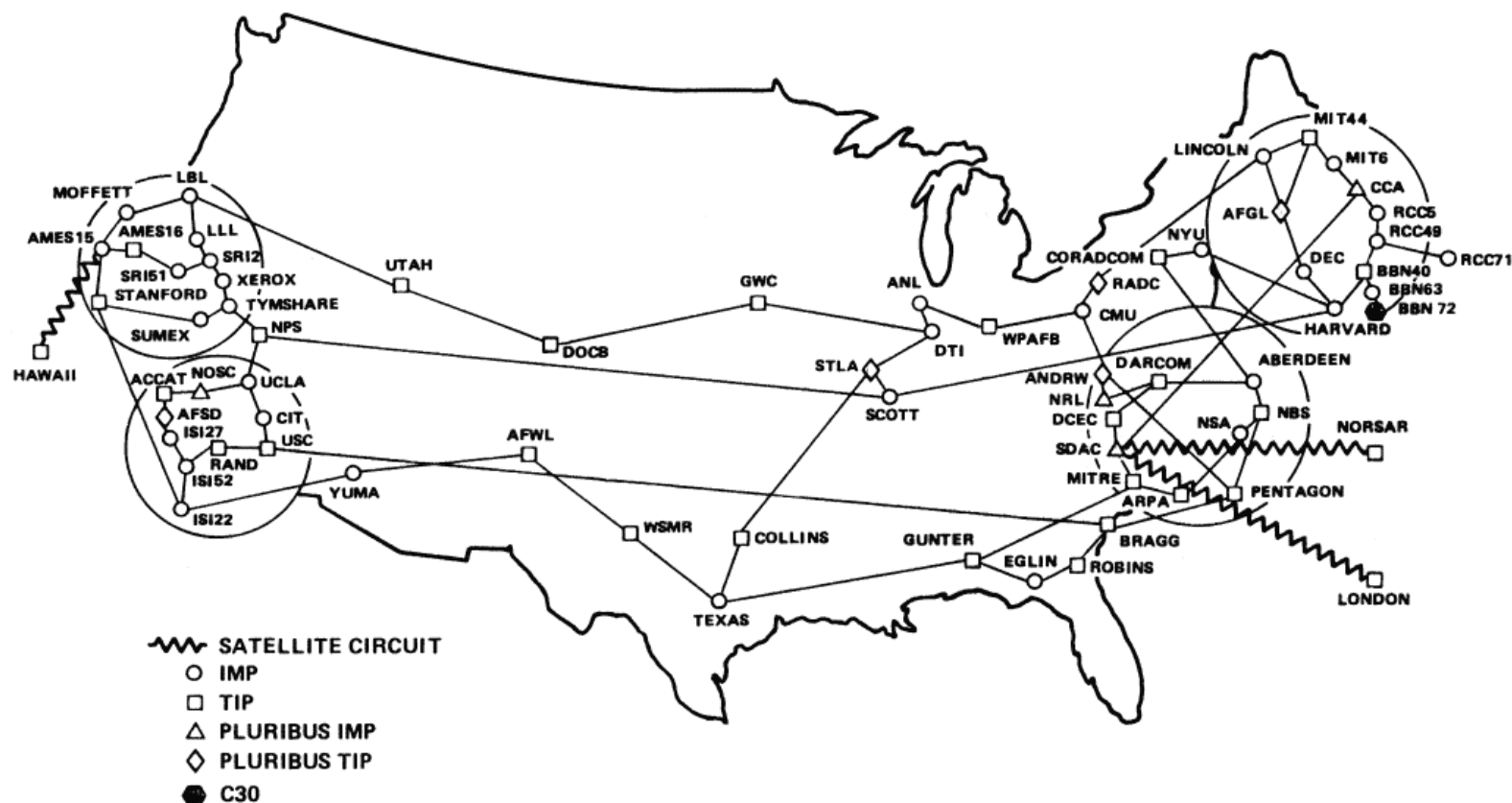
1977



RAND – Agencja Dep. Obrony USA  
SDC - System Development Corporation  
BBM – firma zajmująca się rozbudową sieci ARPANET  
HARVARD - Uniwersytet Harvarda

# ARPANET

ARPANET GEOGRAPHIC MAP, OCTOBER 1980

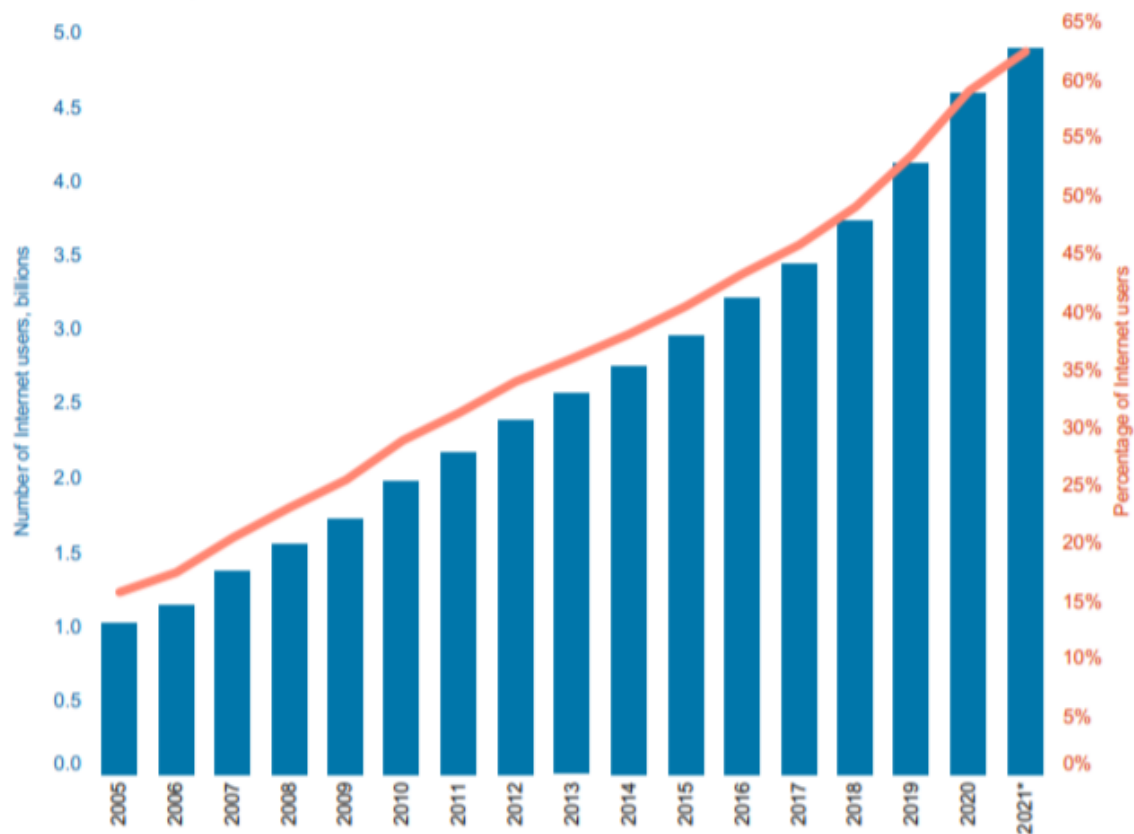


(NOTE: THIS MAP DOES NOT SHOW ARPA'S EXPERIMENTAL SATELLITE CONNECTIONS)  
 NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES



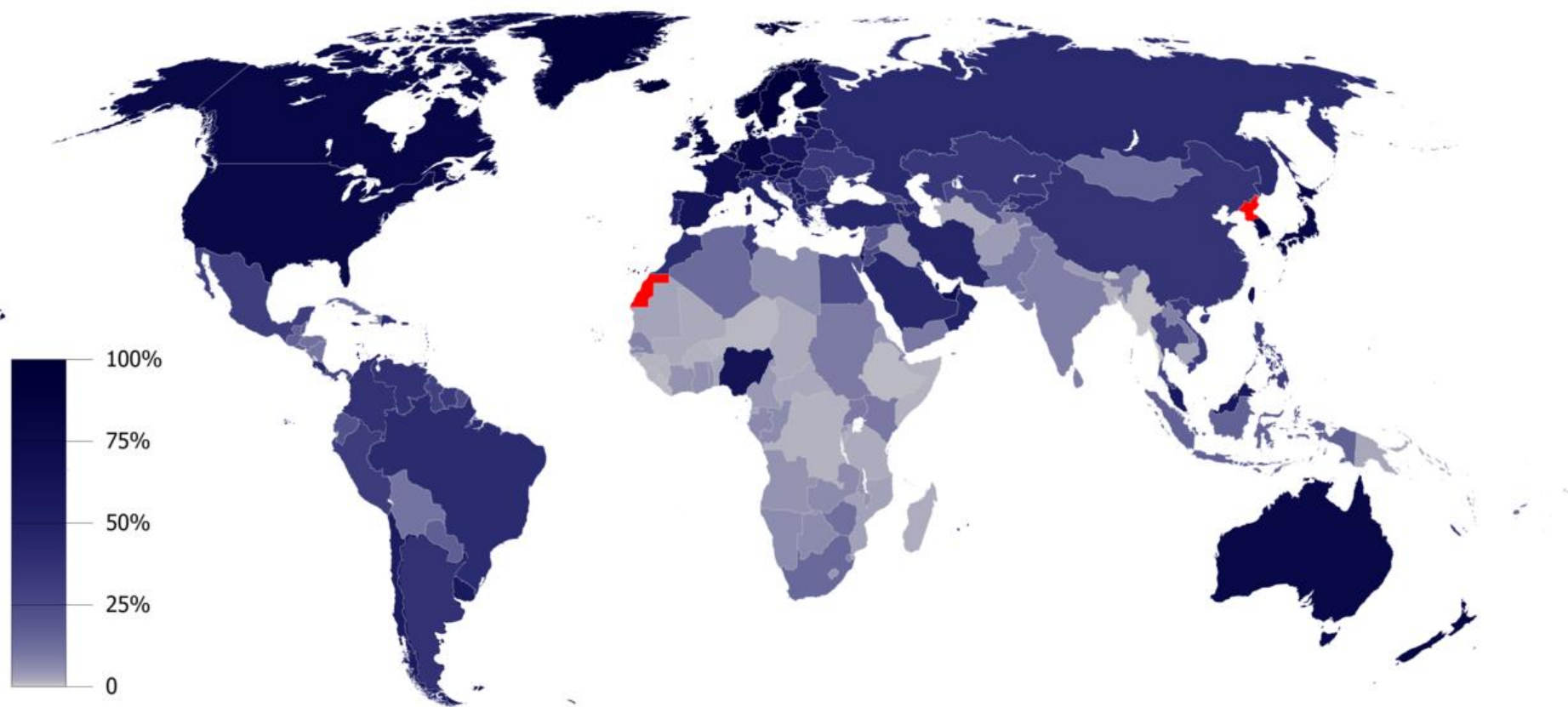
# Współczesność

Individuals using the Internet



Source: ITU  
\* ITU estimate

Międzynarodowy Związek Telekomunikacyjny (ITU), ONZ



Rozpowszechnienie Internetu (2017)



JAN  
2023

## ESSENTIAL DIGITAL HEADLINES

OVERVIEW OF THE ADOPTION AND USE OF CONNECTED DEVICES AND SERVICES



TOTAL  
POPULATION



we  
are.  
social

**8.01**  
BILLION

URBANISATION

**57.2%**

UNIQUE MOBILE  
PHONE USERS



Meltwater

**5.44**  
BILLION

vs. POPULATION

**68.0%**

INTERNET  
USERS



KEPIOS

**5.16**  
BILLION

vs. POPULATION

**64.4%**

ACTIVE SOCIAL  
MEDIA USERS



**4.76**  
BILLION

vs. POPULATION

**59.4%**

**SOURCES:** UNITED NATIONS; GOVERNMENT BODIES; GSMA INTELLIGENCE; ITU; WORLD BANK; EUROSTAT; CNNIC; APJII; IAMAI & KANTAR; CIA WORLD FACTBOOK; COMPANY ADVERTISING RESOURCES AND EARNINGS REPORTS; OCDH; BETA RESEARCH CENTER; KEPIOS ANALYSIS. **ADVISORY:** SOCIAL MEDIA USERS MAY **NOT** REPRESENT UNIQUE INDIVIDUALS. **COMPARABILITY:** SIGNIFICANT REVISIONS TO SOURCE DATA, INCLUDING COMPREHENSIVE REVISIONS TO POPULATION DATA. FIGURES ARE **NOT COMPARABLE** WITH PREVIOUS REPORTS. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE **NOTES ON DATA** FOR FULL DETAILS.

we  
are.  
social

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2023

## DIGITAL GROWTH

CHANGE IN THE USE OF CONNECTED DEVICES AND SERVICES OVER TIME



TOTAL  
POPULATION



  
Meltwater

**+0.8%**

YEAR-ON-YEAR CHANGE  
**+67 MILLION**

UNIQUE MOBILE  
PHONE USERS



  
KEPIOS

**+3.2%**

YEAR-ON-YEAR CHANGE  
**+168 MILLION**

INTERNET  
USERS



  
we  
are  
social

**+1.9%**

YEAR-ON-YEAR CHANGE  
**+98 MILLION**

ACTIVE SOCIAL  
MEDIA USERS



**+3.0%**

YEAR-ON-YEAR CHANGE  
**+137 MILLION**

**SOURCES:** UNITED NATIONS; GOVERNMENT BODIES; GSMA INTELLIGENCE; ITU; WORLD BANK; EUROSTAT; CNNIC; APIJI; IAMAI & KANTAR; CIA WORLD FACTBOOK; COMPANY ADVERTISING RESOURCES AND EARNINGS REPORTS; OCDH; BETA RESEARCH CENTER; KEPIOS ANALYSIS. **ADVISORY:** SOCIAL MEDIA USERS MAY **NOT** REPRESENT UNIQUE INDIVIDUALS. **COMPARABILITY:** SIGNIFICANT REVISIONS TO SOURCE DATA, INCLUDING COMPREHENSIVE REVISIONS TO POPULATION DATA. FIGURES ARE **NOT COMPARABLE** WITH PREVIOUS REPORTS. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE [NOTES ON DATA](#) FOR FULL DETAILS.

  
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## DEVICE OWNERSHIP

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO OWN EACH KIND OF DEVICE



ANY KIND OF  
MOBILE PHONE



GWI.

**96.2%**

YEAR-ON-YEAR CHANGE  
**-0.4% (-40 BPS)**

SMART  
PHONE



we  
are  
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**95.9%**

YEAR-ON-YEAR CHANGE  
**-0.3% (-30 BPS)**

FEATURE  
PHONE



GWI.

**7.9%**

YEAR-ON-YEAR CHANGE  
**-10.2% (-90 BPS)**

LAPTOP OR  
DESKTOP COMPUTER



GWI.

**58.0%**

YEAR-ON-YEAR CHANGE  
**-8.1% (-510 BPS)**

TABLET  
DEVICE



**33.7%**

YEAR-ON-YEAR CHANGE  
**-3.2% (-110 BPS)**

GAMES  
CONSOLE



Meltwater

**20.3%**

YEAR-ON-YEAR CHANGE  
**[UNCHANGED]**

SMART WATCH OR  
SMART WRISTBAND



GWI.

**29.9%**

YEAR-ON-YEAR CHANGE  
**+9.1% (+250 BPS)**

TV STREAMING  
DEVICE



KEPIOS

**16.5%**

YEAR-ON-YEAR CHANGE  
**+6.5% (+100 BPS)**

SMART HOME  
DEVICE



GWI.

**16.4%**

YEAR-ON-YEAR CHANGE  
**+16.3% (+230 BPS)**

VIRTUAL REALITY  
DEVICE



**5.6%**

YEAR-ON-YEAR CHANGE  
**+16.7% (+80 BPS)**

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## DAILY TIME SPENT WITH MEDIA

THE AVERAGE AMOUNT OF TIME EACH DAY THAT **INTERNET USERS AGED 16 TO 64** SPEND WITH DIFFERENT KINDS OF MEDIA AND DEVICES



TIME SPENT USING  
THE INTERNET



GWI.

**6H 37M**

YEAR-ON-YEAR CHANGE  
**-4.8% (-20 MINS)**

TIME SPENT WATCHING TELEVISION  
(BROADCAST AND STREAMING)



Meltwater

**3H 23M**

YEAR-ON-YEAR CHANGE  
**+1.5% (+3 MINS)**

TIME SPENT USING  
SOCIAL MEDIA



GWI.

**2H 31M**

YEAR-ON-YEAR CHANGE  
**+2.0% (+3 MINS)**

TIME SPENT READING PRESS MEDIA  
(ONLINE AND PHYSICAL PRINT)



**2H 10M**

YEAR-ON-YEAR CHANGE  
**+7.4% (+9 MINS)**

TIME SPENT LISTENING TO  
MUSIC STREAMING SERVICES



we  
are  
social

**1H 38M**

YEAR-ON-YEAR CHANGE  
**+5.4% (+5 MINS)**

TIME SPENT LISTENING  
TO BROADCAST RADIO



GWI.

**0H 59M**

YEAR-ON-YEAR CHANGE  
**-3.3% (-2 MINS)**

TIME SPENT LISTENING  
TO PODCASTS



KEPIS

**1H 02M**

YEAR-ON-YEAR CHANGE  
**+12.7% (+7 MINS)**

TIME SPENT USING  
A GAMES CONSOLE



**1H 14M**

YEAR-ON-YEAR CHANGE  
**+2.8% (+2 MINS)**

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## OVERVIEW OF INTERNET USE

ESSENTIAL INDICATORS OF INTERNET ADOPTION AND USE



TOTAL  
INTERNET  
USERS



**5.16**  
BILLION



INTERNET USERS AS  
A PERCENTAGE OF  
TOTAL POPULATION



**64.4%**  
YOY: +1.1% (+70 BPS)



YEAR-ON-YEAR CHANGE  
IN THE TOTAL NUMBER  
OF INTERNET USERS



**+1.9%**  
+98 MILLION



PERCENTAGE OF THE  
TOTAL FEMALE POPULATION  
THAT USES THE INTERNET



**61.6%**  
YOY: +1.4% (+87 BPS)



PERCENTAGE OF THE  
TOTAL MALE POPULATION  
THAT USES THE INTERNET



**67.2%**  
YOY: +0.8% (+53 BPS)

AVERAGE DAILY TIME  
SPENT USING THE INTERNET  
BY EACH INTERNET USER



**6H 37M**  
YOY: -4.8% (-20M)



PERCENTAGE OF USERS  
ACCESSING THE INTERNET  
VIA MOBILE DEVICES



**92.3%**  
YOY: +0.2% (+20 BPS)



PERCENTAGE OF USERS  
ACCESSING THE INTERNET  
VIA COMPUTERS AND TABLETS



**65.6%**  
YOY: -7.9% (-560 BPS)



PERCENTAGE OF THE  
TOTAL URBAN POPULATION  
THAT USES THE INTERNET



**78.3%**



PERCENTAGE OF THE  
TOTAL RURAL POPULATION  
THAT USES THE INTERNET



**45.8%**

**SOURCES:** KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; WORLD BANK; GOOGLE'S ADVERTISING RESOURCES; CIA WORLD FACTBOOK; CNNIC; APJII; KANTAR & IAMA; LOCAL GOVERNMENT AUTHORITIES; UNITED NATIONS. TIME SPENT AND MOBILE SHARE DATA FROM GWI (Q3 2022). SEE [GWI.COM](https://www.gwi.com) FOR MORE DETAILS. **NOTES:** GENDER DATA ARE ONLY AVAILABLE FOR "FEMALE" AND "MALE". PERCENTAGE CHANGE FIGURES IN THE BOTTOM ROWS OF DATA SHOW RELATIVE YEAR-ON-YEAR CHANGE. "BPS" FIGURES REPRESENT BASIS POINTS, AND SHOW ABSOLUTE YEAR-ON-YEAR CHANGE. **COMPARABILITY:** SOURCE AND BASE CHANGES. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE [NOTES ON DATA](#) FOR DETAILS.

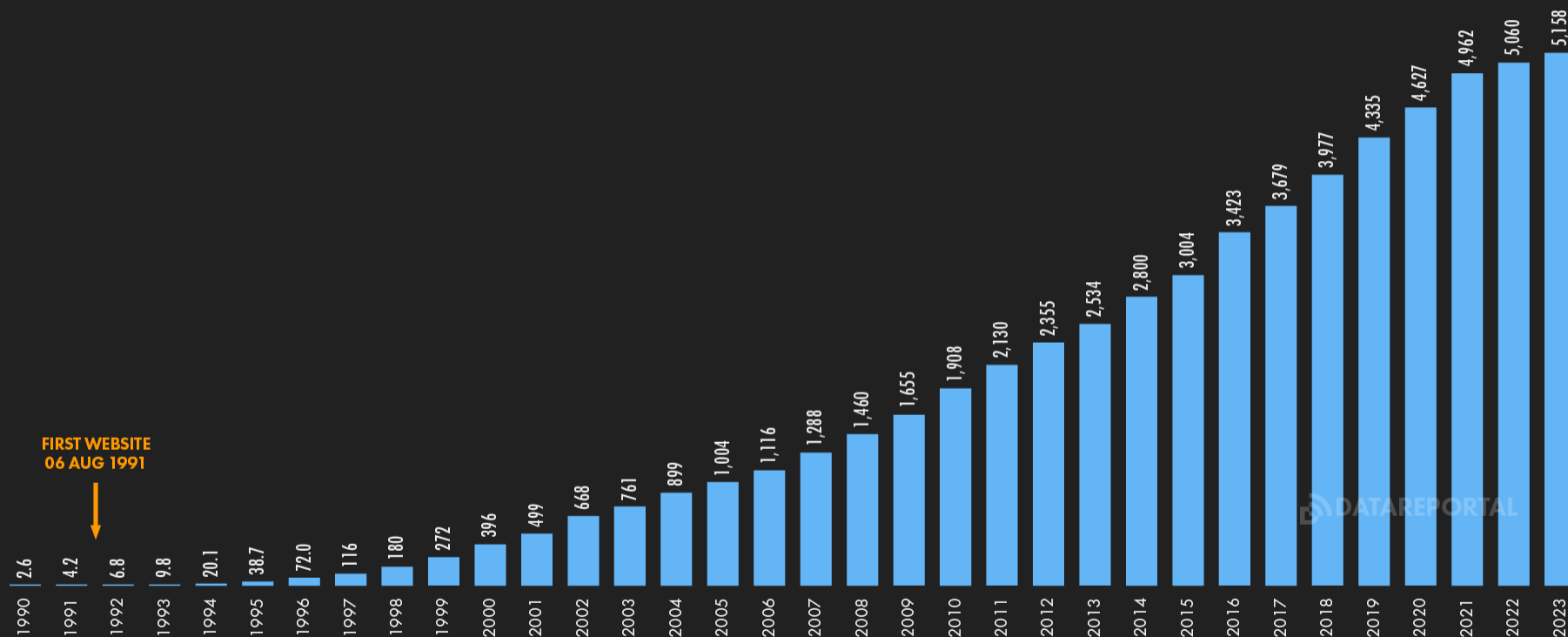
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## INTERNET USERS: TIMELINE

NUMBER OF INTERNET USERS BY YEAR (IN MILLIONS)



GLOBAL OVERVIEW



FIRST WEBSITE  
06 AUG 1991

**SOURCES:** KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; WORLD BANK; GOOGLE'S ADVERTISING RESOURCES; CIA WORLD FACTBOOK; CNNIC; APJII; KANTAR & IAMAI; LOCAL GOVERNMENT AUTHORITIES; UNITED NATIONS. **NOTES:** THE TIME REQUIRED TO COLLECT, PROCESS, AND REPORT INTERNET USER RESEARCH DATA MAY MEAN THAT USER FIGURES AND GROWTH TRENDS FOR RECENT PERIODS UNDER REPRESENT ACTUAL VALUES. SEE [NOTES ON DATA](#) FOR FURTHER DETAILS. **COMPARABILITY:** SOURCE AND BASE CHANGES. FIGURES MAY NOT MATCH OR CORRELATE WITH FIGURES PUBLISHED IN PREVIOUS REPORTS. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE [NOTES ON DATA](#) FOR DETAILS.

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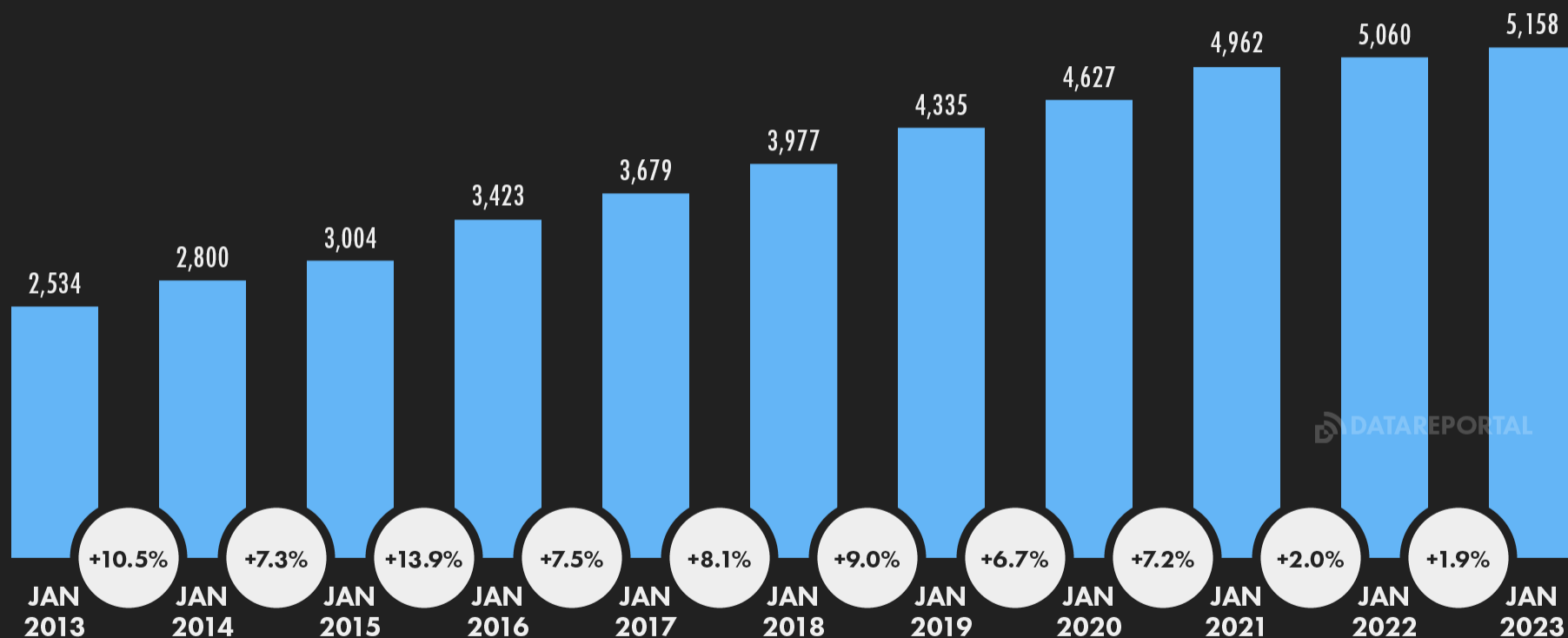
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## INTERNET USERS OVER TIME

NUMBER OF INTERNET USERS (IN MILLIONS) AND YEAR-ON-YEAR CHANGE



GLOBAL OVERVIEW



**SOURCES:** KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; WORLD BANK; GOOGLE'S ADVERTISING RESOURCES; CIA WORLD FACTBOOK; CNNIC; APJII; KANTAR & IAMA; LOCAL GOVERNMENT AUTHORITIES; UNITED NATIONS. **NOTES:** ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. THE TIME REQUIRED TO COLLECT, PROCESS, AND REPORT INTERNET USER RESEARCH DATA MAY MEAN THAT USER FIGURES AND GROWTH TRENDS FOR RECENT PERIODS UNDER-REPRESENT ACTUAL VALUES. SEE [NOTES ON DATA](#) FOR FURTHER DETAILS. **COMPARABILITY:** SOURCE AND BASE CHANGES. FIGURES MAY NOT MATCH OR CORRELATE WITH FIGURES PUBLISHED IN PREVIOUS REPORTS.

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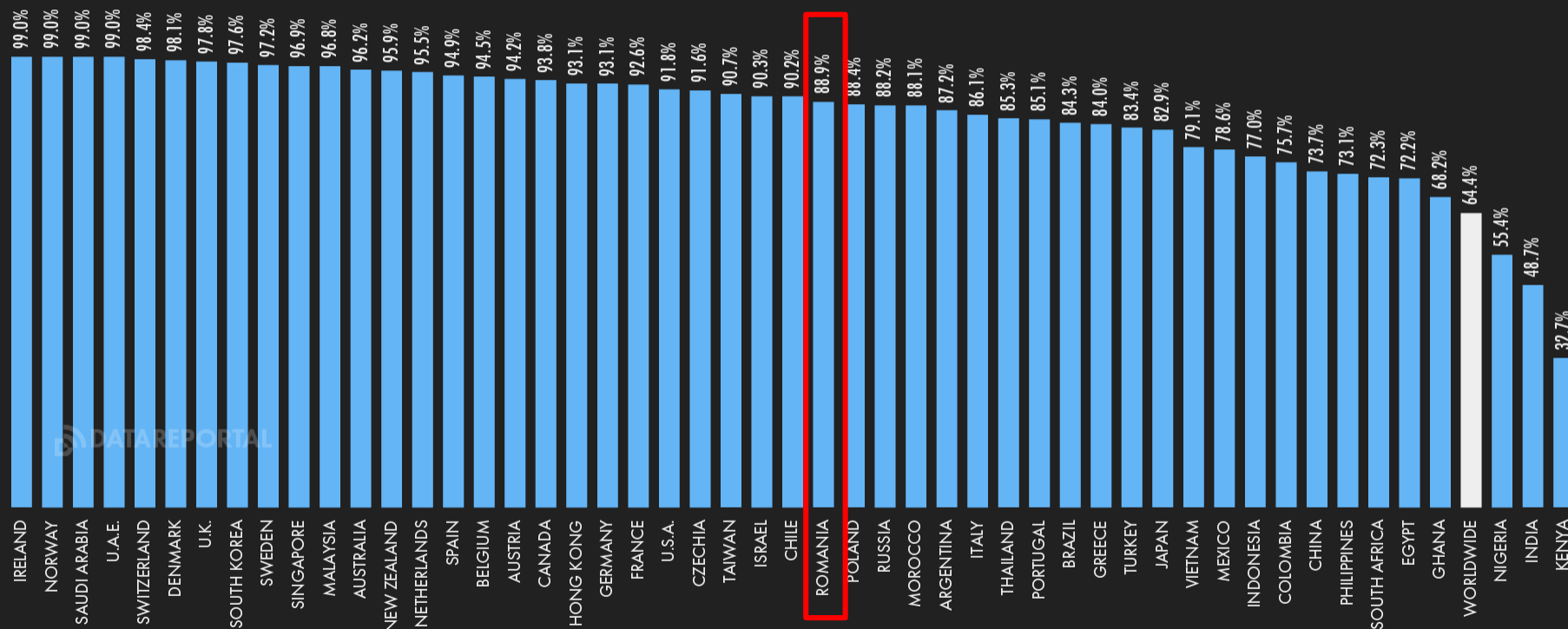
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## INTERNET ADOPTION

INTERNET USERS AS A PERCENTAGE OF TOTAL POPULATION



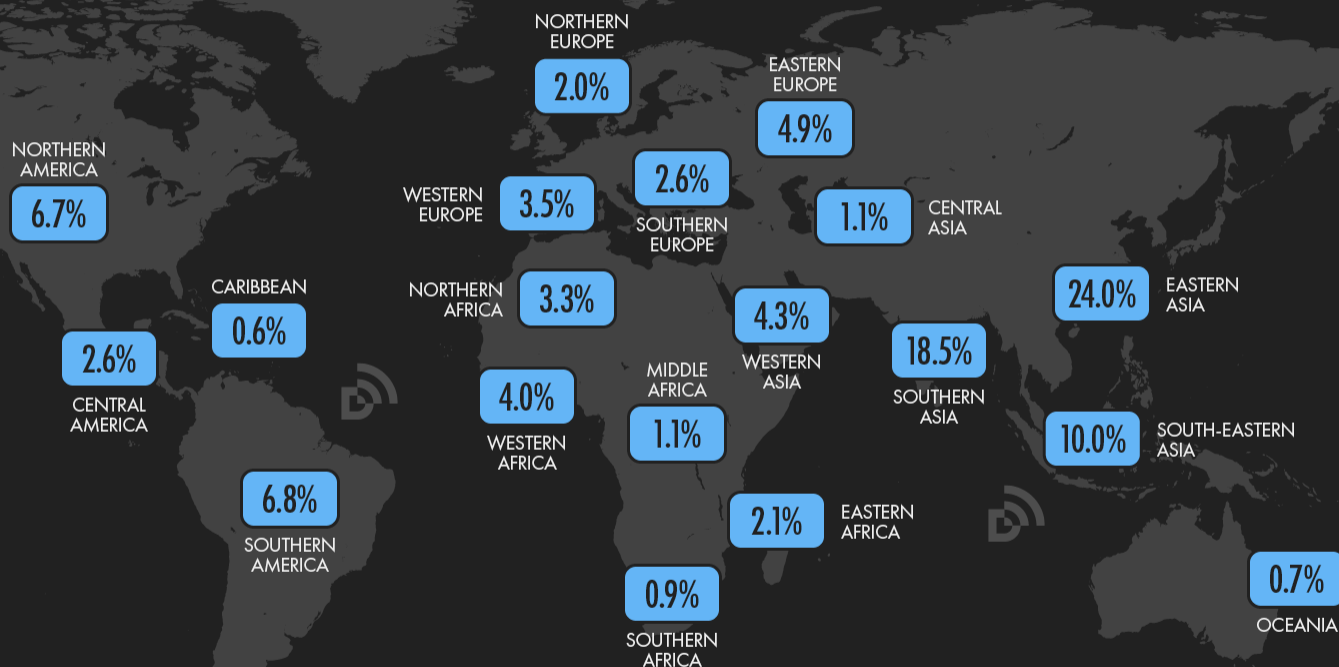
GLOBAL OVERVIEW



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## SHARE OF GLOBAL INTERNET USERS

INTERNET USERS AS A PERCENTAGE OF TOTAL GLOBAL INTERNET USERS



**JAN  
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## UNCONNECTED POPULATIONS

COUNTRIES AND TERRITORIES WITH THE LARGEST UNCONNECTED POPULATIONS AND THE LOWEST LEVELS OF INTERNET ADOPTION



### ABSOLUTE: LARGEST UNCONNECTED POPULATIONS

#	LOCATION	UNCONNECTED POPULATION	% OF POP. OFFLINE
01	INDIA	730,027,000	51.3%
02	CHINA	374,709,000	26.3%
03	PAKISTAN	150,779,000	63.3%
04	BANGLADESH	105,138,000	61.1%
05	ETHIOPIA	104,073,000	83.3%
06	NIGERIA	98,635,000	44.6%
07	DEM. REP. OF THE CONGO	77,568,000	77.1%
08	INDONESIA	63,514,000	23.0%
09	TANZANIA	45,456,000	68.4%
10	KENYA	36,699,000	67.3%

### RELATIVE: LOWEST LEVELS OF INTERNET ADOPTION

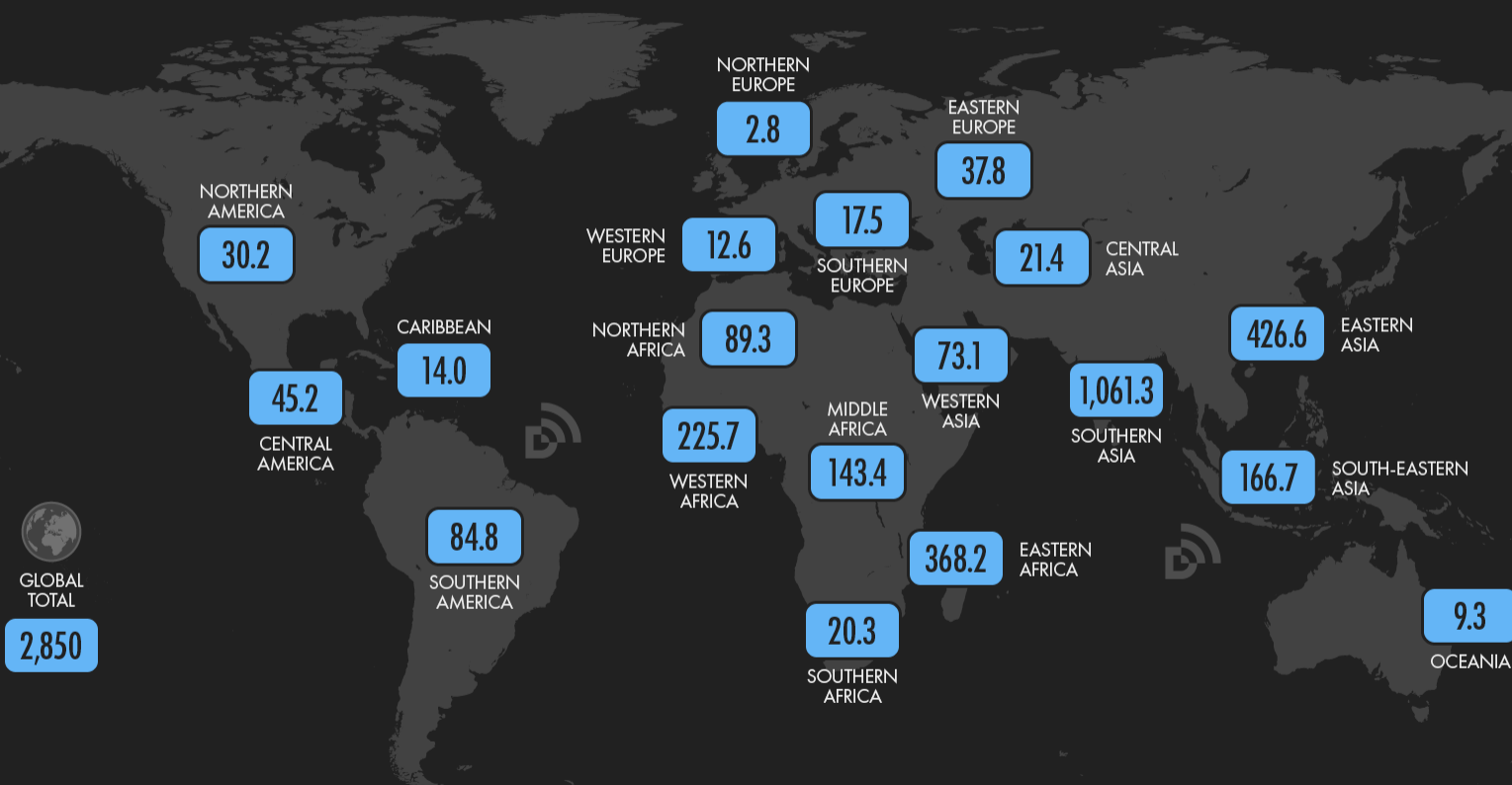
#	LOCATION	% OF POP. OFFLINE	UNCONNECTED POPULATION
01	NORTH KOREA <sup>1</sup>	>99.9%	[BLOCKED]
02	SOUTH SUDAN	93.0%	10,223,000
03	SOMALIA	90.2%	16,108,000
04	BURUNDI	89.8%	11,734,000
05	CENTRAL AFRICAN REPUBLIC	89.4%	5,058,000
06	ETHIOPIA	83.3%	104,073,000
07	CHAD	82.1%	14,776,000
08	AFGHANISTAN	81.6%	34,008,000
09	MADAGASCAR	80.3%	24,061,000
10	MOZAMBIQUE	79.3%	26,504,000

**SOURCES:** KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; WORLD BANK; GOOGLE'S ADVERTISING RESOURCES; CIA WORLD FACTBOOK; CNNIC; APJII; KANTAR & IAMAI; LOCAL GOVERNMENT AUTHORITIES; UNITED NATIONS. **NOTES:** FIGURES IN THE "% OF POP. OFFLINE" COLUMN REPRESENT THE PERCENTAGE OF THE POPULATION THAT DOES NOT YET USE THE INTERNET. ABSOLUTE VALUES HAVE BEEN ROUNDED TO THE NEAREST THOUSAND. (1) THE INTERNET (AT LEAST AS THE REST OF THE WORLD KNOWS IT) REMAINS BLOCKED FOR EVERYDAY CITIZENS IN NORTH KOREA. **COMPARABILITY:** SOURCE AND BASE CHANGES. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE [NOTES ON DATA](#) FOR DETAILS.

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## UNCONNECTED POPULATIONS

NUMBER OF PEOPLE (IN MILLIONS) WHO DO **NOT** USE THE INTERNET



**SOURCES:** KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; WORLD BANK; GOOGLE'S ADVERTISING RESOURCES; CIA WORLD FACTBOOK; CNNIC; APIJI; KANTAR & IAMA; LOCAL GOVERNMENT AUTHORITIES; UNITED NATIONS. **NOTE:** REGIONS BASED ON THE UNITED NATIONS GEOScheme. **COMPARABILITY:** SOURCE AND BASE CHANGES. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE [NOTES ON DATA](#) FOR DETAILS.

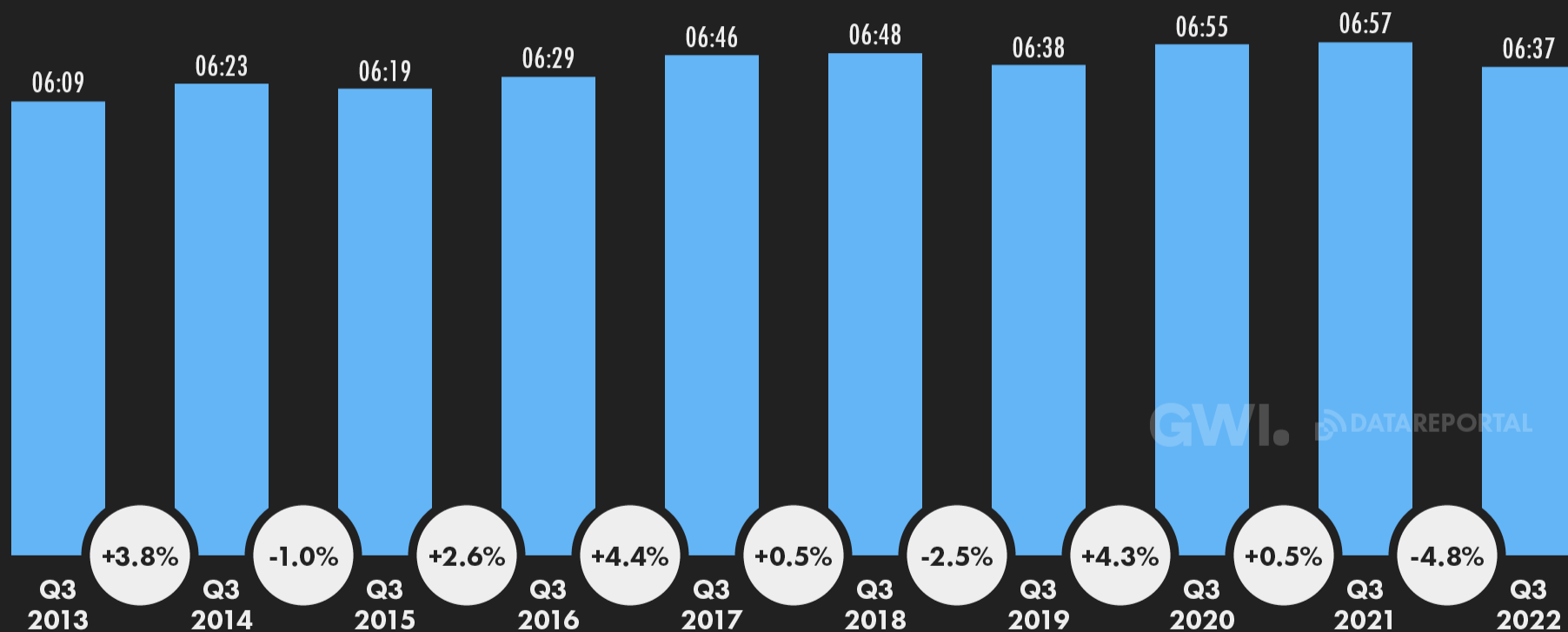
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## DAILY TIME SPENT USING THE INTERNET (YOY)

THE AVERAGE AMOUNT OF TIME (IN HOURS AND MINUTES) THAT INTERNET USERS AGED 16 TO 64 SPEND USING THE INTERNET EACH DAY



GLOBAL OVERVIEW





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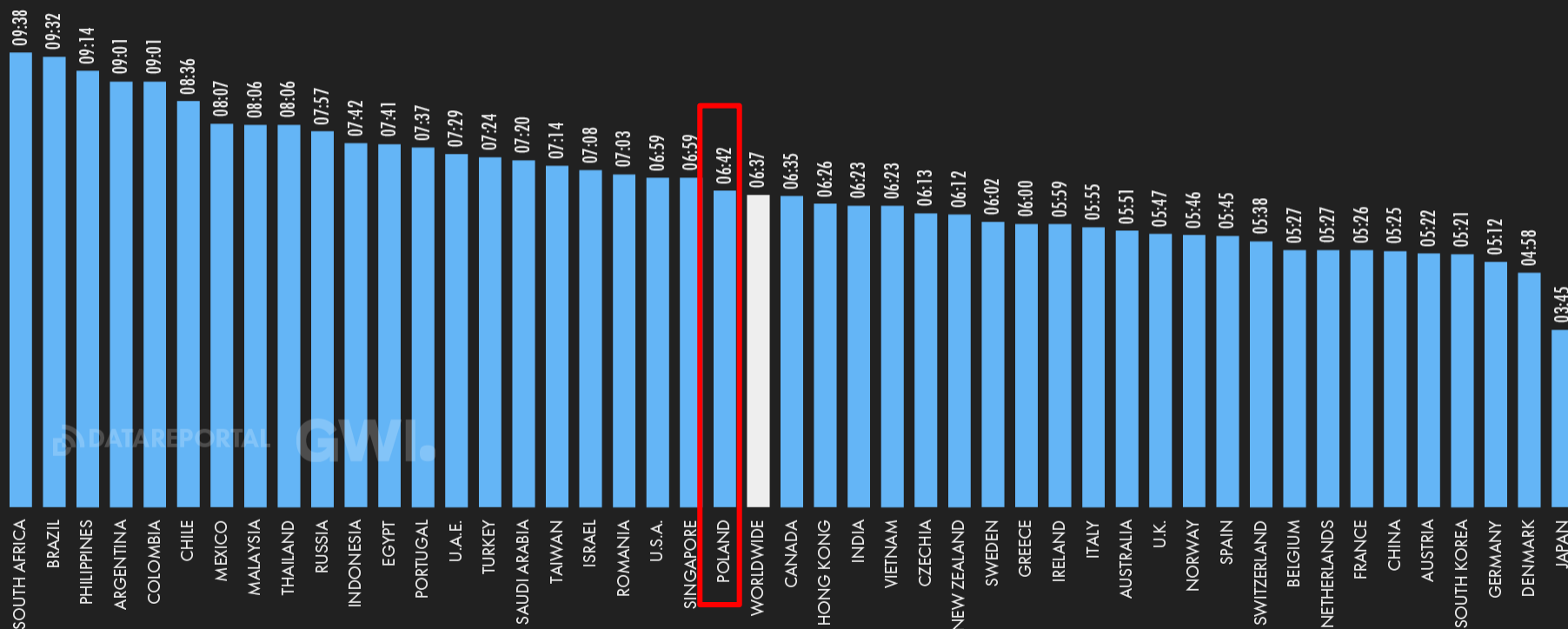
## DAILY TIME SPENT USING THE INTERNET

AVERAGE AMOUNT OF TIME (IN HOURS AND MINUTES) THAT INTERNET USERS AGED 16 TO 64 SPEND USING THE INTERNET EACH DAY ON ANY DEVICE

źródło: raport "Digital 2019"



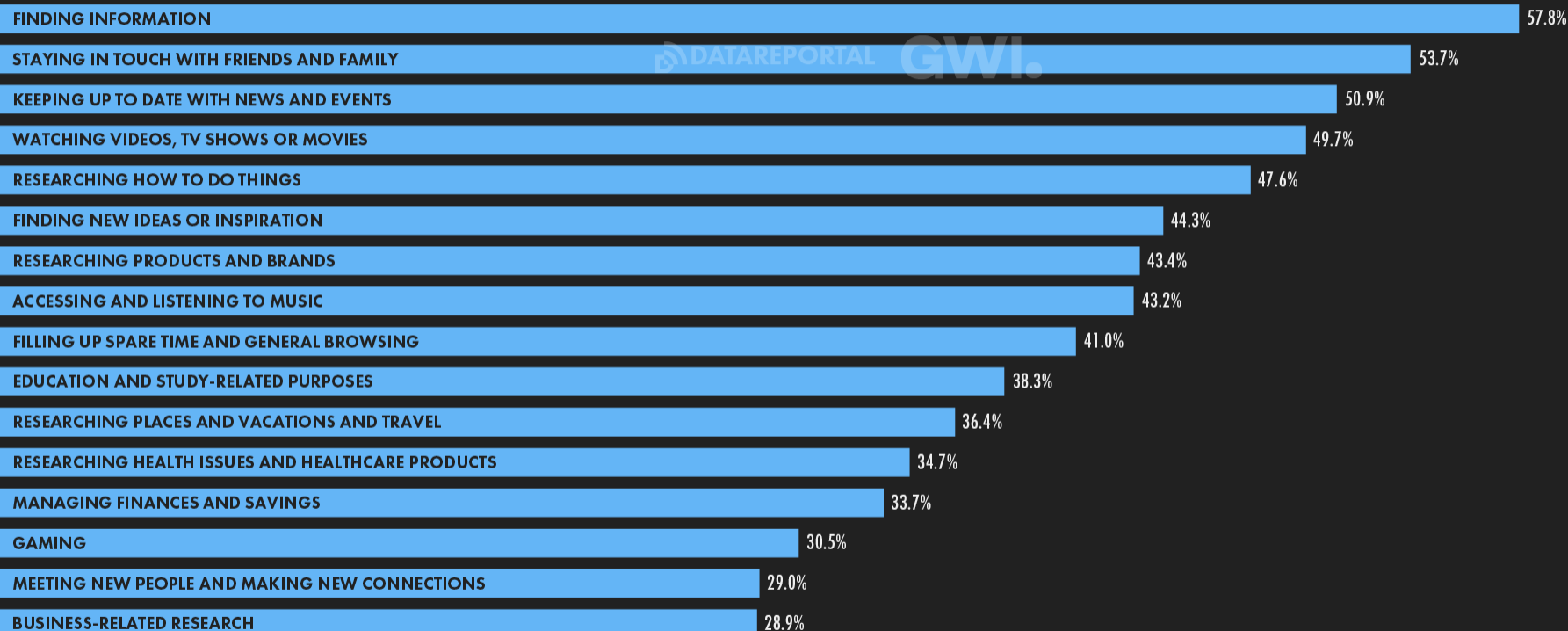
GLOBAL OVERVIEW



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## MAIN REASONS FOR USING THE INTERNET

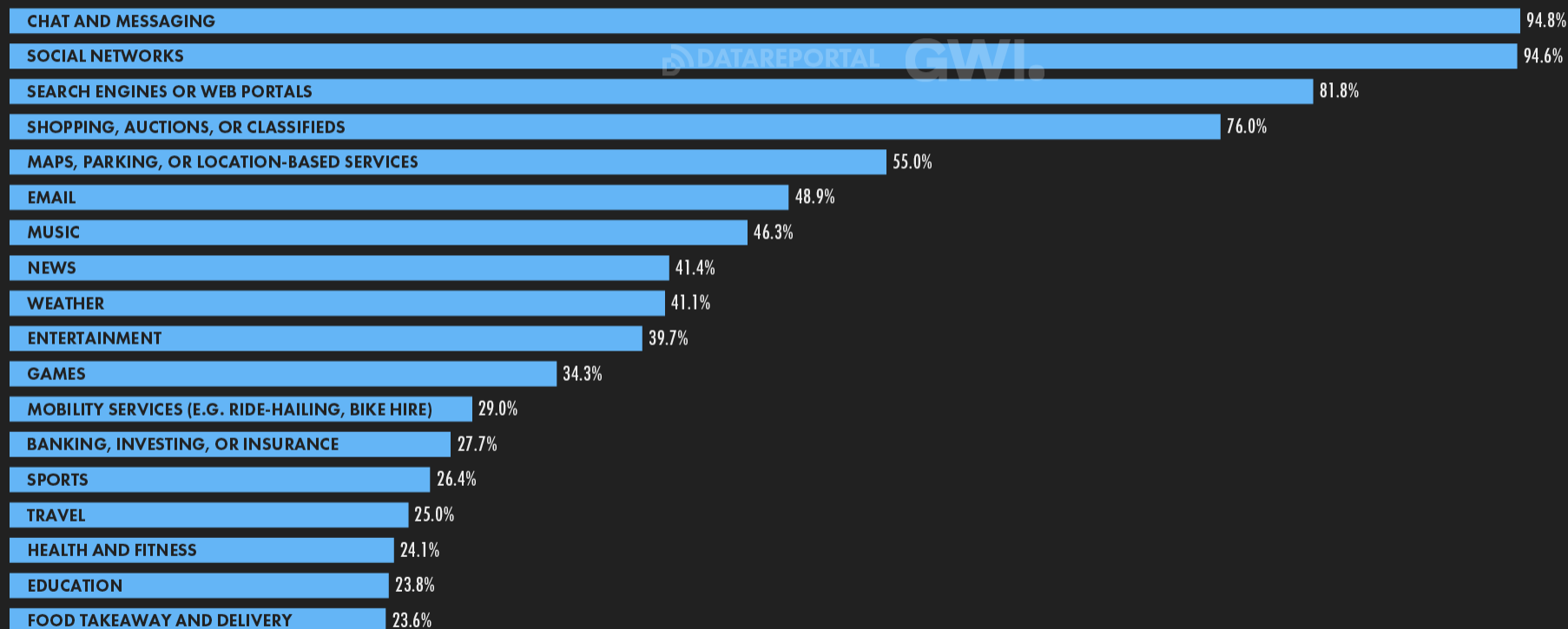
PRIMARY REASONS WHY INTERNET USERS AGED 16 TO 64 USE THE INTERNET



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## TOP TYPES OF WEBSITES VISITED AND APPS USED

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO HAVE VISITED OR USED EACH KIND OF DIGITAL PROPERTY IN THE PAST MONTH



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## OVERVIEW OF CONSUMER GOODS ECOMMERCE

HEADLINES FOR THE ADOPTION AND USE OF CONSUMER GOODS ECOMMERCE (B2C ONLY)



NUMBER OF PEOPLE  
PURCHASING CONSUMER  
GOODS VIA ONLINE  
CHANNELS IN 2022



**4.11**  
BILLION

YEAR-ON-YEAR CHANGE  
**+8.3% (+315 MILLION)**

ESTIMATED TOTAL  
ANNUAL SPEND ON  
ONLINE CONSUMER GOODS  
PURCHASES (USD, 2022)



**\$3.59**  
TRILLION

YEAR-ON-YEAR CHANGE  
**-6.5% (-\$250 BILLION)**

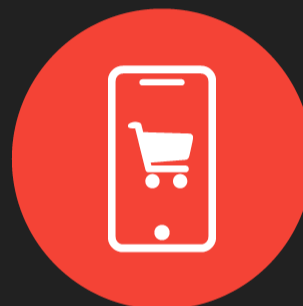
AVERAGE ANNUAL  
REVENUE PER CONSUMER  
GOODS ECOMMERCE  
USER (USD, 2022)



**\$873**

YEAR-ON-YEAR CHANGE  
**-13.7% (-\$138)**

SHARE OF 2022 CONSUMER  
GOODS ECOMMERCE SPEND  
ATTRIBUTABLE TO PURCHASES  
MADE VIA MOBILE PHONES



**59.8%**

YEAR-ON-YEAR CHANGE  
**+1.2% (+71 BPS)**

2022 ONLINE PURCHASES vs.  
TOTAL CONSUMER GOODS  
PURCHASE VALUE ACROSS  
ALL RETAIL CHANNELS



**17.1%**

YEAR-ON-YEAR CHANGE  
**+4.4% (+72 BPS)**

**SOURCE:** STATISTA DIGITAL MARKET OUTLOOK. SEE [STATISTA.COM](https://www.statista.com) FOR MORE DETAILS. **NOTES:** "CONSUMER GOODS" INCLUDE: ELECTRONICS, FASHION, FURNITURE, TOYS, HOBBY, DIY, BEAUTY, CONSUMER HEALTHCARE, PERSONAL CARE, HOUSEHOLD CARE, FOOD, BEVERAGES, AND PHYSICAL MEDIA. FIGURES REPRESENT ESTIMATES FOR FULL-YEAR 2022, AND COMPARISONS WITH EQUIVALENT VALUES FOR THE PREVIOUS CALENDAR YEAR. FINANCIAL VALUES ARE IN U.S. DOLLARS. PERCENTAGE CHANGE VALUES ARE RELATIVE (I.E. AN INCREASE OF 20% FROM A STARTING VALUE OF 50% WOULD EQUAL 60%, NOT 70%). "BPS" VALUES REPRESENT BASIS POINTS, AND INDICATE ABSOLUTE CHANGE. **COMPARABILITY:** BASE AND CATEGORY DEFINITION CHANGES. FIGURES ARE NOT COMPARABLE WITH PREVIOUS REPORTS.

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## ECOMMERCE: CONSUMER GOODS CATEGORIES

ESTIMATED ANNUAL SPEND IN EACH CONSUMER GOODS ECOMMERCE CATEGORY (B2C ONLY, U.S. DOLLARS, FULL-YEAR 2022)



FASHION



statista

**\$871.2  
BILLION**

YEAR-ON-YEAR CHANGE  
**-2.4% (-\$21 BILLION)**

ELECTRONICS



KEPIOS

**\$765.7  
BILLION**

YEAR-ON-YEAR CHANGE  
**-17.1% (-\$158 BILLION)**

TOYS, HOBBY, DIY



statista

**\$601.7  
BILLION**

YEAR-ON-YEAR CHANGE  
**-2.7% (-\$17 BILLION)**

FURNITURE



**\$387.7  
BILLION**

YEAR-ON-YEAR CHANGE  
**-12.3% (-\$54 BILLION)**

PERSONAL & HOUSEHOLD CARE



Meltwater

**\$368.2  
BILLION**

YEAR-ON-YEAR CHANGE  
**-1.7% (-\$6.3 BILLION)**

FOOD



statista

**\$244.0  
BILLION**

YEAR-ON-YEAR CHANGE  
**+6.9% (+\$16 BILLION)**

BEVERAGES



we  
are  
social

**\$207.9  
BILLION**

YEAR-ON-YEAR CHANGE  
**+0.5% (+\$1.1 BILLION)**

PHYSICAL MEDIA



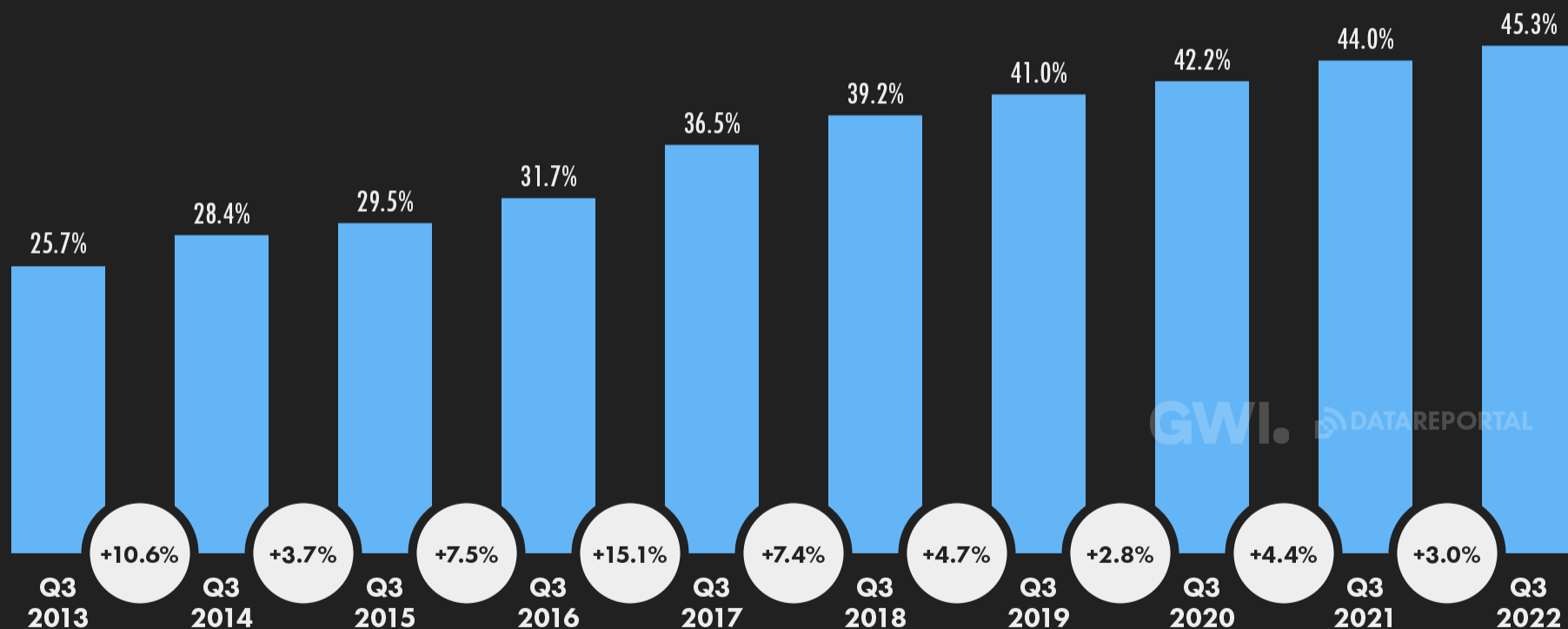
**\$143.8  
BILLION**

YEAR-ON-YEAR CHANGE  
**-7.2% (-\$11 BILLION)**

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## STREAMING'S SHARE OF TOTAL TV TIME (YOY)

TIME SPENT WATCHING STREAMING TV SERVICES AS A PERCENTAGE OF THE TOTAL DAILY TIME INTERNET USERS AGED 16 TO 64 SPEND WATCHING TV





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## STREAMING TV CONTENT VIA THE INTERNET

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO WATCH TV CONTENT VIA STREAMING SERVICES (E.G. NETFLIX) EACH MONTH



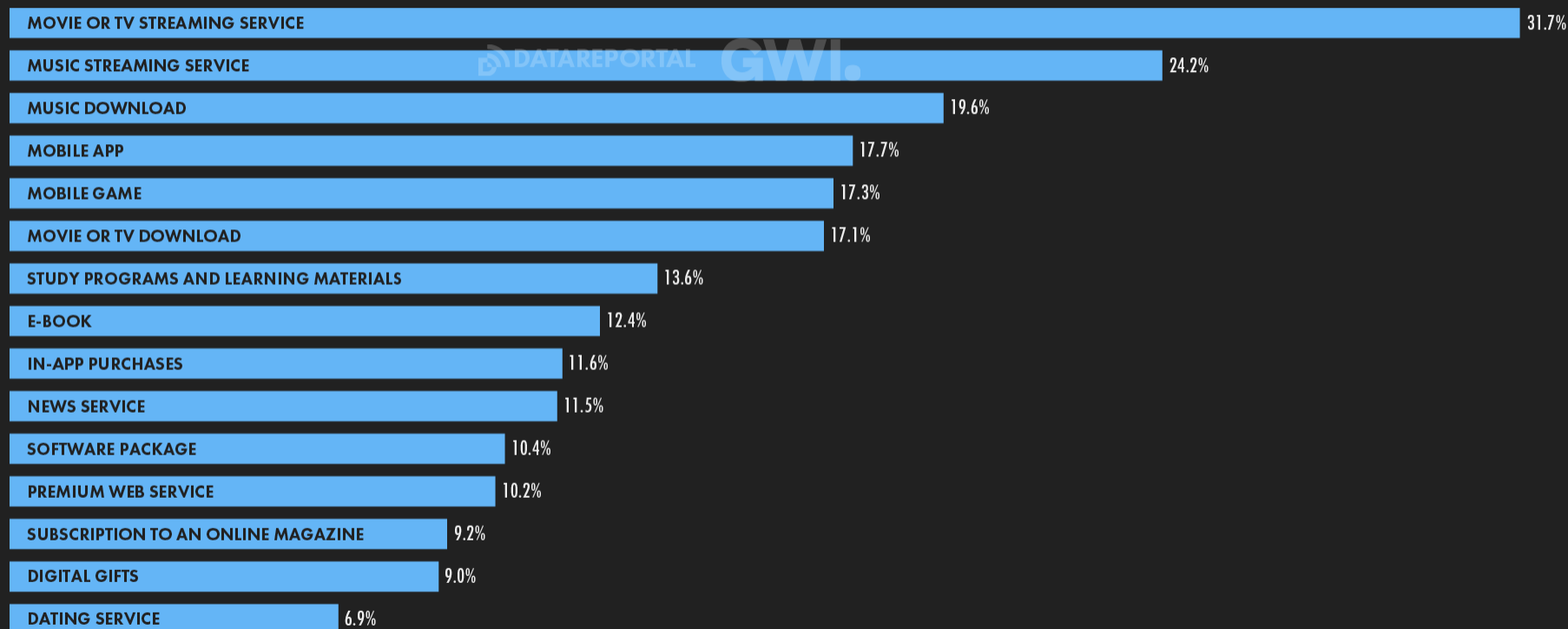
JAN  
2023

## DIGITAL CONTENT PURCHASES

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO PAY FOR EACH TYPE OF DIGITAL CONTENT EACH MONTH



GLOBAL OVERVIEW

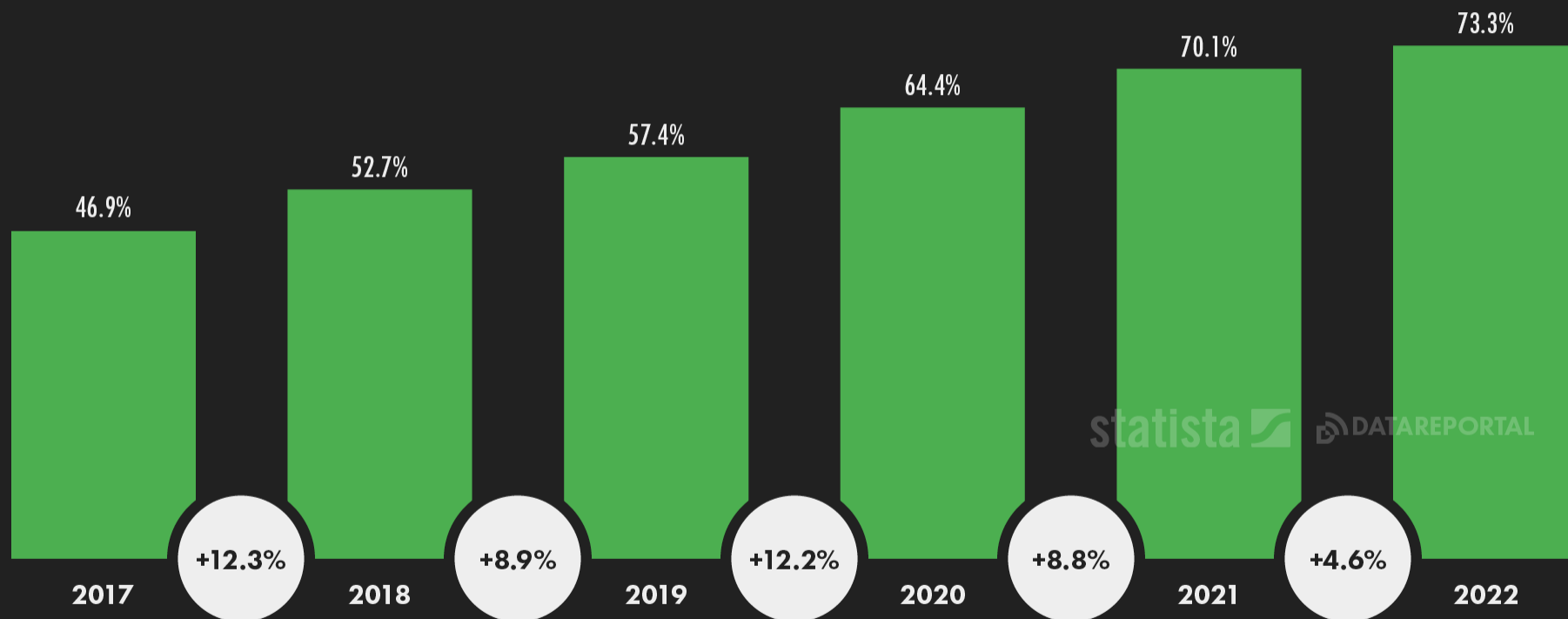


# Wzrost popularności reklamy cyfrowej

JAN  
2023

## DIGITAL'S SHARE OF TOTAL ADVERTISING SPEND

DIGITAL ADVERTISING REVENUES COMPARED WITH TOTAL ADVERTISING REVENUES ACROSS ALL MEDIA AND CHANNELS



# Wzrost wydatków na reklamę cyfrową

JAN  
2023

## DIGITAL ADVERTISING SPEND

DIGITAL ADVERTISING REVENUES OVER TIME (IN BILLIONS OF U.S. DOLLARS)



GLOBAL OVERVIEW



# Wzrost wydatków na reklamę cyfrową

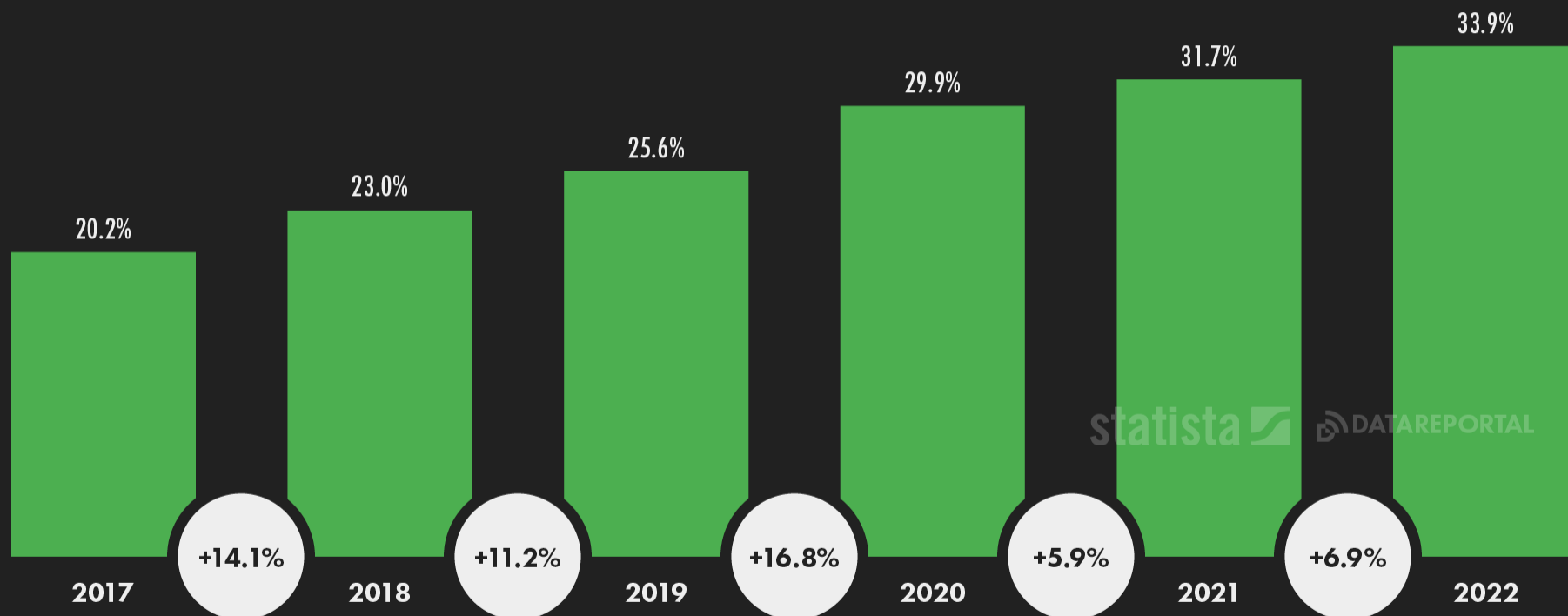
JAN  
2023

## SHARE OF DIGITAL ADVERTISING: SOCIAL MEDIA

SOCIAL MEDIA ADVERTISING REVENUE AS A PERCENTAGE OF TOTAL DIGITAL ADVERTISING REVENUES



GLOBAL OVERVIEW



# Wzrost wydatków na reklamę cyfrową

JAN  
2023

## SOCIAL MEDIA ADVERTISING OVERVIEW

SPEND ON SOCIAL MEDIA ADVERTISING (IN U.S. DOLLARS) AND ITS SHARE OF THE DIGITAL ADVERTISING MARKET



ANNUAL SPEND  
ON SOCIAL MEDIA  
ADVERTISING (USD)



**\$226.0**  
BILLION

statista

YEAR-ON-YEAR CHANGE  
IN SOCIAL MEDIA  
ADVERTISING SPEND



**+23.2%**  
+\$43 BILLION

Meltwater

SOCIAL MEDIA'S SHARE  
OF TOTAL DIGITAL  
ADVERTISING SPEND



**33.9%**

we  
are  
social

YEAR-ON-YEAR CHANGE IN  
SOCIAL MEDIA'S SHARE OF TOTAL  
DIGITAL ADVERTISING SPEND



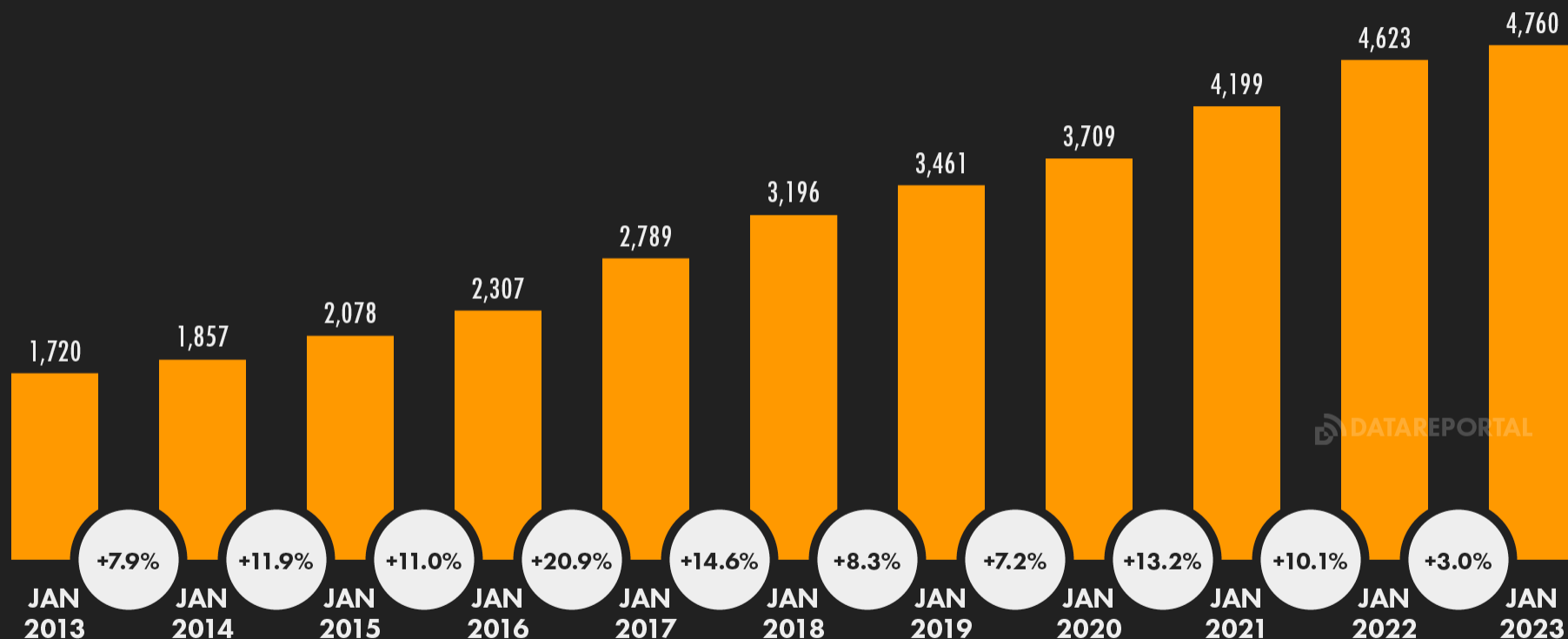
**+6.9%**  
+220 BPS

# Wzrost użytkowników socialmediów

JAN  
2023

## SOCIAL MEDIA USERS OVER TIME (YOY)

NUMBER OF SOCIAL MEDIA USERS (IN MILLIONS) AND YEAR-ON-YEAR CHANGE (NOTE: USERS MAY NOT REPRESENT UNIQUE INDIVIDUALS)

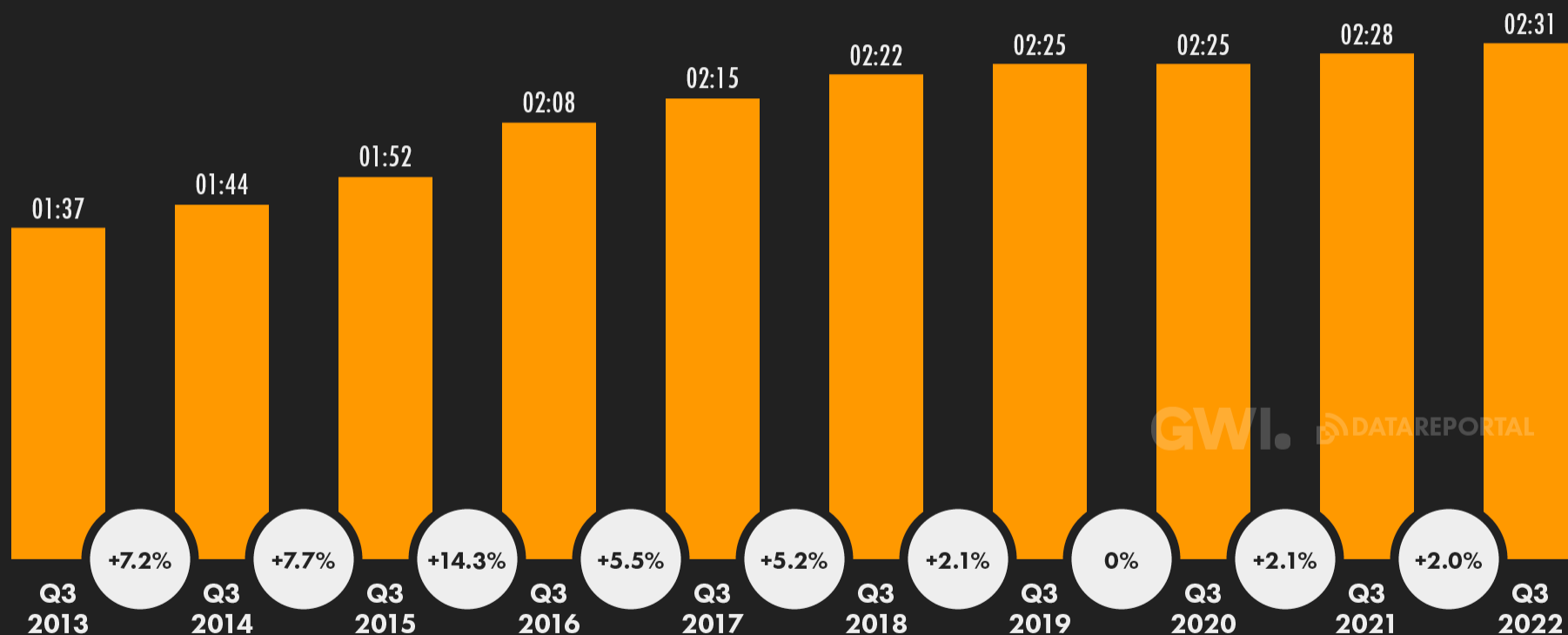


# Czas spędzany w socjalmediach

JAN  
2023

## DAILY TIME SPENT USING SOCIAL MEDIA (YOY)

AVERAGE AMOUNT OF TIME (IN HOURS AND MINUTES) THAT INTERNET USERS AGED 16 TO 64 SPEND USING SOCIAL MEDIA EACH DAY





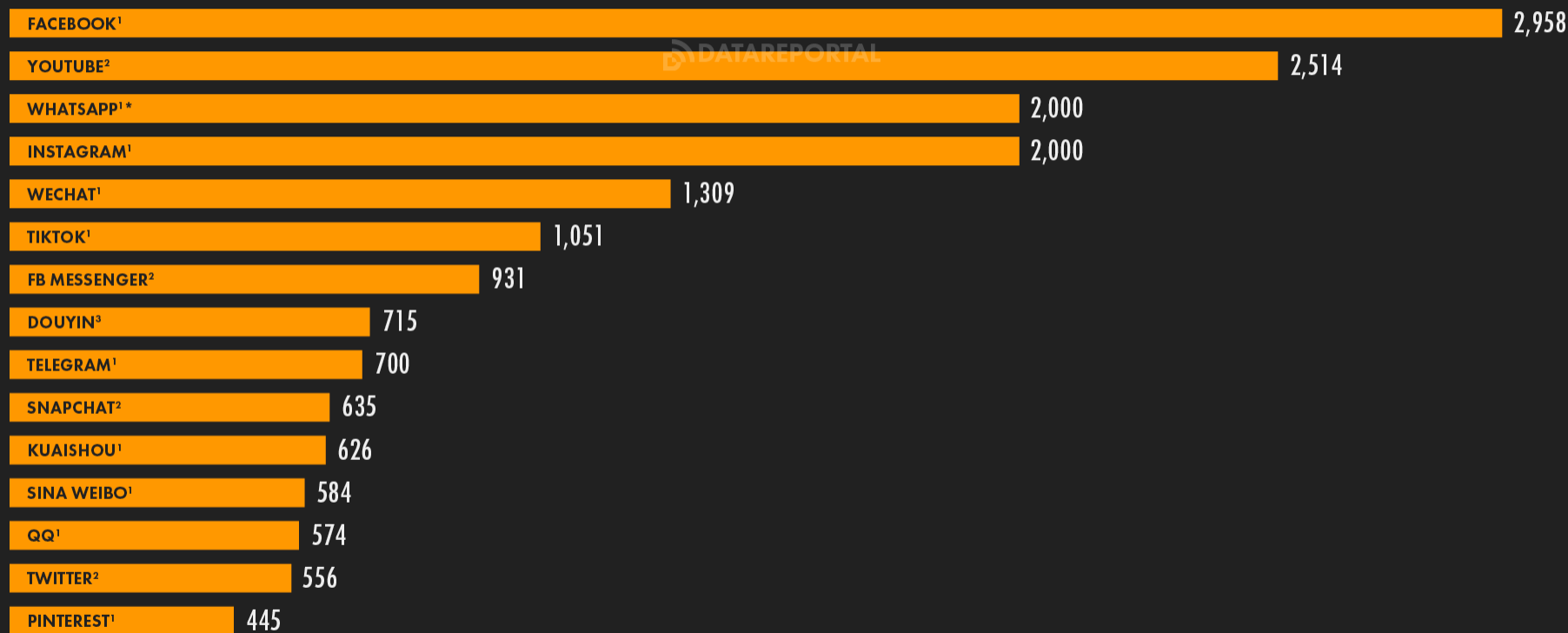
JAN  
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## THE WORLD'S MOST USED SOCIAL PLATFORMS

RANKING OF SOCIAL MEDIA PLATFORMS BY GLOBAL ACTIVE USER FIGURES (IN MILLIONS)



GLOBAL OVERVIEW



**JAN  
2023**

## APP RANKING: MONTHLY ACTIVE USERS

MOBILE APPS AND GAMES RANKED BY AVERAGE MONTHLY ACTIVE USERS BETWEEN **JANUARY AND DECEMBER 2022**



#	MOBILE APP	COMPANY
01	YOUTUBE	GOOGLE
02	GOOGLE	GOOGLE
03	GOOGLE CHROME	GOOGLE
04	FACEBOOK	META
05	WHATSAPP	META
06	GOOGLE MAPS	GOOGLE
07	GMAIL	GOOGLE
08	INSTAGRAM	META
09	FACEBOOK MESSENGER	META
10	GOOGLE DRIVE	GOOGLE



#	MOBILE GAME	COMPANY
01	ROBLOX	ROBLOX
02	CANDY CRUSH SAGA	ACTIVISION BLIZZARD
03	FREE FIRE	SEA
04	SUBWAY SURFERS	SYBO
05	MINECRAFT POCKET EDITION	MICROSOFT
06	LUDO KING	GAMETION
07	PUBG MOBILE	TENCENT
08	CLASH ROYALE	TENCENT
09	POKÉMON GO	NIANTIC
10	MOBILE LEGENDS: BANG BANG	BYTEDANCE



**JAN  
2023**

## TIME SPENT USING SOCIAL MEDIA APPS

AVERAGE TIME PER MONTH THAT USERS SPEND USING EACH PLATFORM'S ANDROID APP, RANKED BY CUMULATIVE TIME ACROSS ALL ANDROID USERS



01: YOUTUBE



**23H 09M**

YEAR-ON-YEAR CHANGE  
**-2.3% (-32 MINS)**

02: FACEBOOK



**19H 43M**

YEAR-ON-YEAR CHANGE  
**+0.7% (+8 MINS)**

03: WHATSAPP



**17H 20M**

YEAR-ON-YEAR CHANGE  
**-6.7% (-1H 15M)**

04: INSTAGRAM



**12H 00M**

YEAR-ON-YEAR CHANGE  
**+6.9% (+46 MINS)**

05: TIKTOK



**23H 28M**

YEAR-ON-YEAR CHANGE  
**+19.7% (+3H 51M)**

06: FACEBOOK MESSENGER



**3H 07M**

YEAR-ON-YEAR CHANGE  
**+5.5% (+10 MINS)**

07: TELEGRAM



**3H 57M**

YEAR-ON-YEAR CHANGE  
**+33.2% (+59 MINS)**

08: TWITTER



**5H 28M**

YEAR-ON-YEAR CHANGE  
**+6.7% (+21 MINS)**

09: LINE



**10H 59M**

YEAR-ON-YEAR CHANGE  
**-5.5% (-39 MINS)**

10: SNAPCHAT



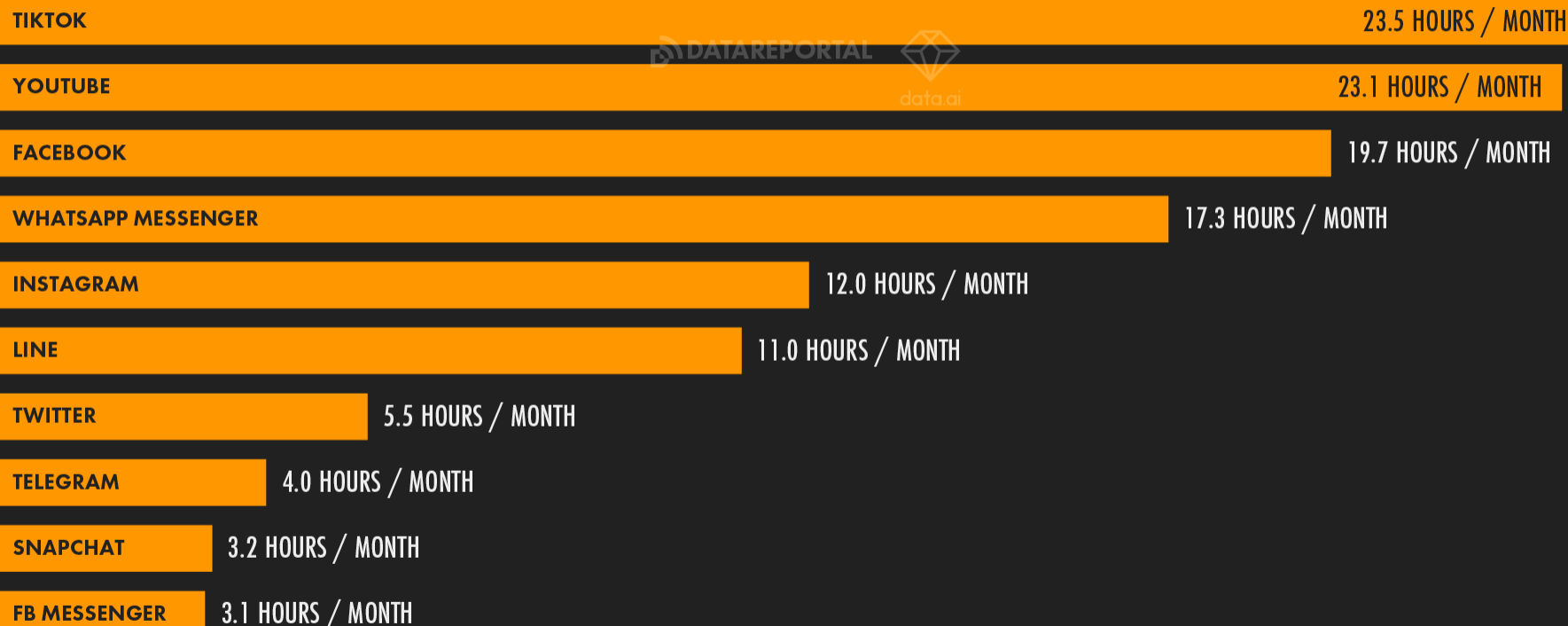
**3H 10M**

YEAR-ON-YEAR CHANGE  
**+7.0% (+12 MINS)**

**JAN  
2023**

## TIME SPENT USING SOCIAL APPS

AVERAGE TIME PER MONTH THAT GLOBAL USERS SPENT USING EACH PLATFORM'S ANDROID APP THROUGHOUT 2022



JAN  
2023

## SHARE OF MOBILE WEB TRAFFIC BY MOBILE OS

PERCENTAGE OF **WEB PAGE REQUESTS** ORIGINATING FROM MOBILE HANDSETS RUNNING EACH MOBILE OPERATING SYSTEM IN **NOVEMBER 2022**



SHARE OF MOBILE WEB  
TRAFFIC ORIGINATING  
FROM ANDROID DEVICES



  
Meltwater

**71.96%**

YEAR-ON-YEAR CHANGE

**+1.7% (+122 BPS)**

SHARE OF MOBILE WEB  
TRAFFIC ORIGINATING  
FROM APPLE IOS DEVICES



  
we  
are  
social

**27.48%**

YEAR-ON-YEAR CHANGE

**-3.7% (-106 BPS)**

SHARE OF MOBILE WEB  
TRAFFIC ORIGINATING FROM  
SAMSUNG OS DEVICES



**0.34%**

YEAR-ON-YEAR CHANGE

**-10.5% (-4 BPS)**

SHARE OF MOBILE WEB  
TRAFFIC ORIGINATING  
FROM KAI OS DEVICES



**0.07%**

YEAR-ON-YEAR CHANGE

**-50.0% (-7 BPS)**

SHARE OF MOBILE WEB  
TRAFFIC ORIGINATING  
FROM OTHER OS DEVICES



**0.15%**

YEAR-ON-YEAR CHANGE

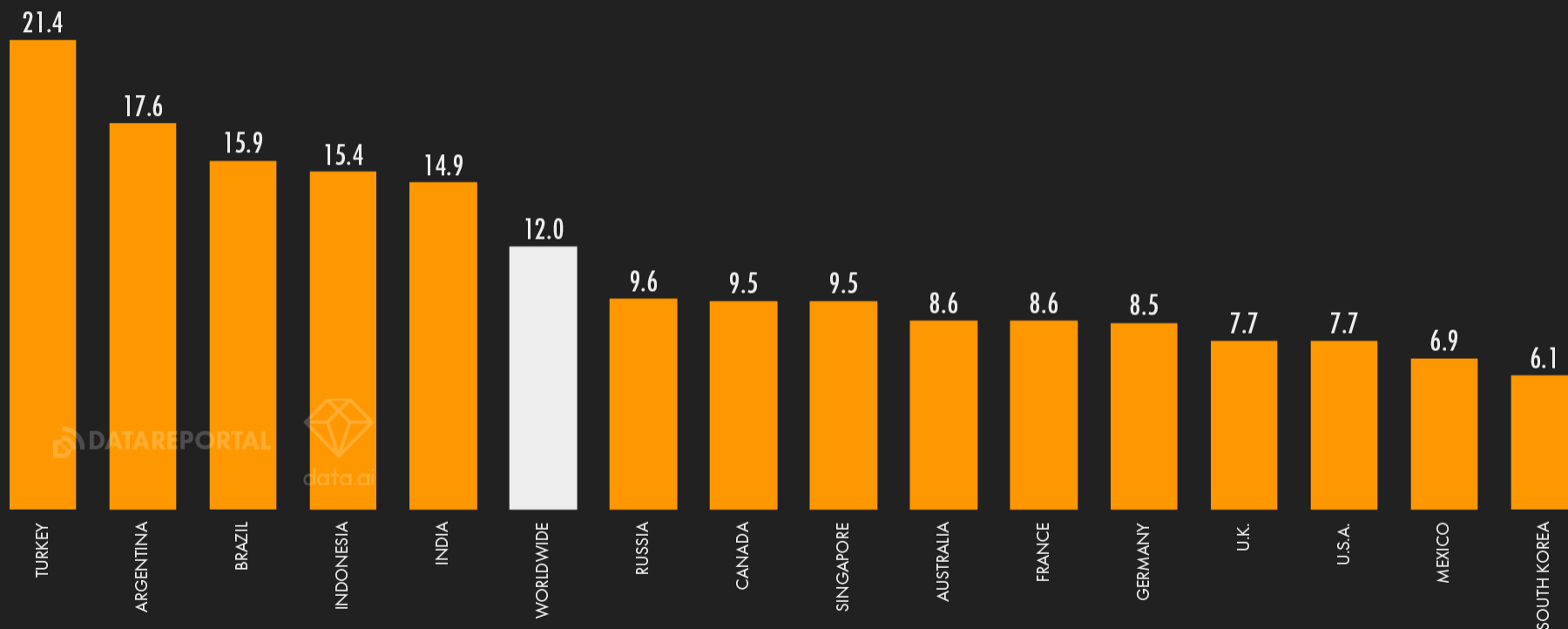
**-25.0% (-5 BPS)**

**SOURCE:** STATCOUNTER. **NOTES:** FIGURES REPRESENT THE NUMBER OF WEB PAGES SERVED TO BROWSERS ON MOBILE PHONES RUNNING EACH OPERATING SYSTEM COMPARED WITH THE TOTAL NUMBER OF WEB PAGES SERVED TO MOBILE BROWSERS IN NOVEMBER 2022. FIGURES FOR SAMSUNG OS REFER ONLY TO THOSE DEVICES RUNNING OPERATING SYSTEMS DEVELOPED BY SAMSUNG (E.G. BADA AND TIZEN), AND DO NOT INCLUDE SAMSUNG DEVICES RUNNING ANDROID. PERCENTAGE CHANGE VALUES REPRESENT RELATIVE CHANGE (I.E. AN INCREASE OF 20% FROM A STARTING VALUE OF 50% WOULD EQUAL 60%, NOT 70%). "BPS" VALUES REPRESENT BASIS POINTS, AND INDICATE THE ABSOLUTE CHANGE. FIGURES MAY NOT SUM TO 100% DUE TO ROUNDING.

JAN  
2023

## INSTAGRAM: TIME SPENT USING MOBILE APP

AVERAGE NUMBER OF HOURS PER MONTH THAT EACH INSTAGRAM USER SPENDS USING THE INSTAGRAM APP ON **ANDROID** PHONES



**JAN  
2023**

## TOP WEBSITES: SEMRUSH RANKING

SEMRUSH'S RANKING OF THE MOST VISITED WEBSITES, BASED ON WEBSITE TRAFFIC BETWEEN 01 SEPTEMBER AND 30 NOVEMBER 2022



#	WEBSITE	TOTAL VISITS (MONTHLY AVE.)	UNIQUE VISITORS (MONTHLY AVE.)	AVERAGE TIME PER VISIT	AVERAGE PAGES PER VISIT
01	GOOGLE.COM	88.4 B	8.13 B	21M 51S	3.6
02	YOUTUBE.COM	74.8 B	5.85 B	36M 04S	6.1
03	FACEBOOK.COM	10.7 B	2.48 B	22M 43S	3.0
04	PORNHUB.COM	10.2 B	2.14 B	10M 35S	6.9
05	XVIDEOS.COM	8.77 B	1.79 B	12M 10S	7.3
06	TWITTER.COM	8.18 B	2.10 B	21M 55S	1.8
07	WIKIPEDIA.ORG	6.67 B	1.97 B	11M 09S	2.1
08	REDDIT.COM	4.82 B	1.25 B	17M 53S	3.0
09	INSTAGRAM.COM	4.46 B	1.57 B	17M 27S	2.2
10	XNXX.COM	3.74 B	991 M	10M 55S	7.0

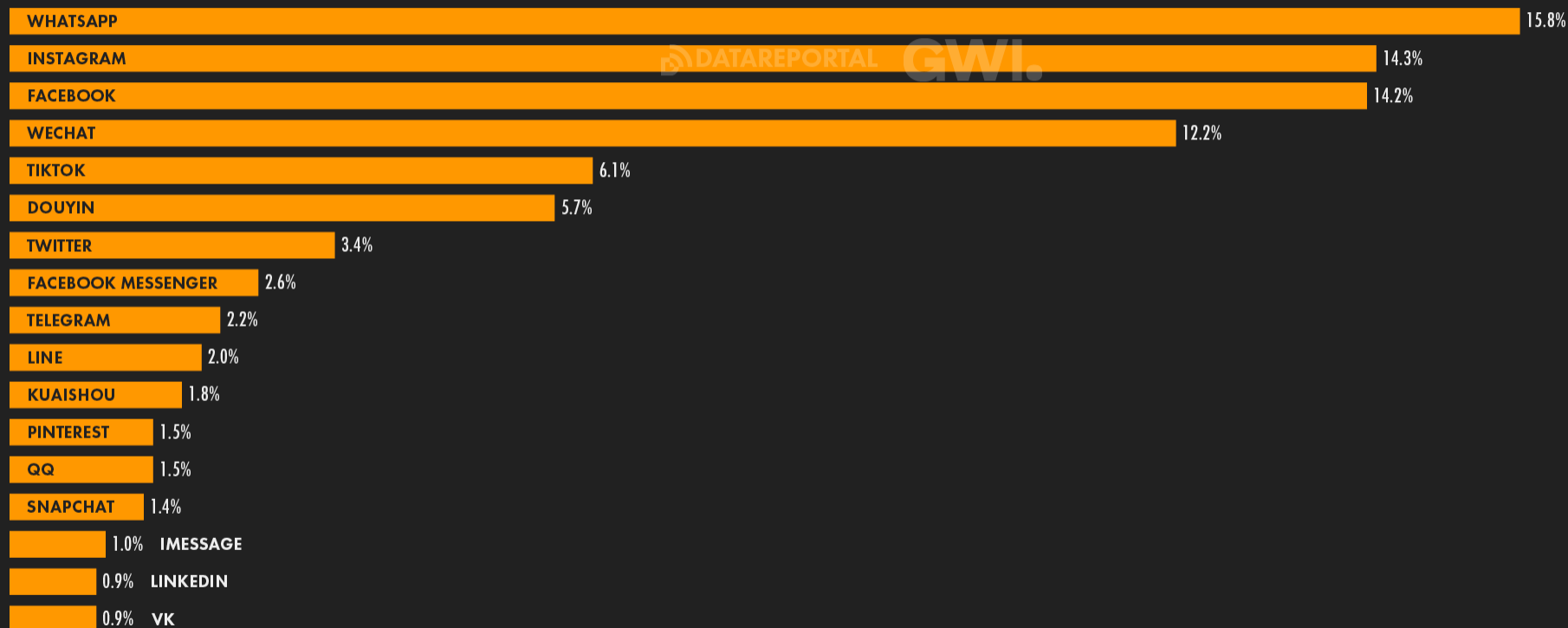
#	WEBSITE	TOTAL VISITS (MONTHLY AVE.)	UNIQUE VISITORS (MONTHLY AVE.)	AVERAGE TIME PER VISIT	AVERAGE PAGES PER VISIT
11	YAHOO.COM	3.34 B	614 M	17M 36S	3.2
12	SPANKBANG.COM	3.02 B	743 M	13M 25S	7.7
13	AMAZON.COM	2.70 B	898 M	13M 01S	5.8
14	FANDOM.COM	2.65 B	803 M	13M 16S	3.1
15	XHAMSTER.COM	2.62 B	756 M	14M 06S	6.1
16	YANDEX.RU	2.59 B	314 M	17M 22S	2.6
17	WEATHER.COM	2.54 B	1.14 B	7M 56S	1.5
18	TIKTOK.COM	2.18 B	995 M	9M 37S	2.0
19	YAHOO.CO.JP	1.95 B	208 M	21M 53S	5.4
20	LIVEDOOR.JP	1.70 B	107 M	19M 10S	5.0

**SOURCE:** SEMRUSH. FIGURES REPRESENT TRAFFIC VALUES FOR THE PERIOD BETWEEN 01 SEPTEMBER AND 30 NOVEMBER 2022. **NOTE:** VALUES IN THE "UNIQUE VISITORS" COLUMN REPRESENT THE NUMBER OF DISTINCT 'IDENTITIES' ACCESSING EACH SITE, BUT MAY NOT REPRESENT UNIQUE INDIVIDUALS, AS SOME PEOPLE MAY USE MULTIPLE DEVICES OR BROWSERS. FIGURES ENDING IN "B" REPRESENT BILLIONS; FIGURES ENDING IN "M" REPRESENT MILLIONS. TIME SHOWN IN MINUTES AND SECONDS. **ADVISORY:** SOME WEBSITES FEATURED IN THIS RANKING MAY CONTAIN ADULT CONTENT. PLEASE USE CAUTION WHEN VISITING UNKNOWN DOMAINS. **COMPARABILITY:** SOURCE METHODOLOGY CHANGES. VALUES ARE NOT COMPARABLE WITH PREVIOUS REPORTS.

JAN  
2023

## FAVOURITE SOCIAL MEDIA PLATFORMS

PERCENTAGE OF ACTIVE SOCIAL MEDIA USERS AGED 16 TO 64 WHO SAY THAT EACH OPTION IS THEIR "FAVOURITE" SOCIAL MEDIA PLATFORM





JAN  
2023

## FAVOURITE SOCIAL MEDIA PLATFORMS

PERCENTAGE OF ACTIVE SOCIAL MEDIA USERS WHO SAY THAT EACH OPTION IS THEIR "FAVOURITE" SOCIAL MEDIA PLATFORM



GLOBAL OVERVIEW

### FAVOURITE SOCIAL MEDIA PLATFORMS AMONGST FEMALE INTERNET USERS

SOCIAL PLATFORM	AGE 16-24	AGE 25-34	AGE 35-44	AGE 45-54	AGE 55-64
WHATSAPP	12.3%	13.3%	15.4%	16.4%	20.3%
INSTAGRAM	23.1%	17.6%	13.2%	10.6%	7.6%
FACEBOOK	6.9%	13.5%	14.7%	16.9%	18.9%
WECHAT	8.0%	13.4%	15.0%	13.1%	11.7%
TIKTOK	12.0%	7.5%	5.5%	4.6%	3.2%
DOUYIN	4.7%	6.8%	7.6%	6.3%	3.6%
TWITTER	5.0%	2.6%	2.1%	2.1%	1.9%
FB MESSENGER	2.1%	2.5%	2.7%	2.9%	3.3%
TELEGRAM	2.0%	1.6%	1.6%	1.9%	1.8%
LINE	1.0%	1.4%	2.2%	3.4%	4.6%

### FAVOURITE SOCIAL MEDIA PLATFORMS AMONGST MALE INTERNET USERS

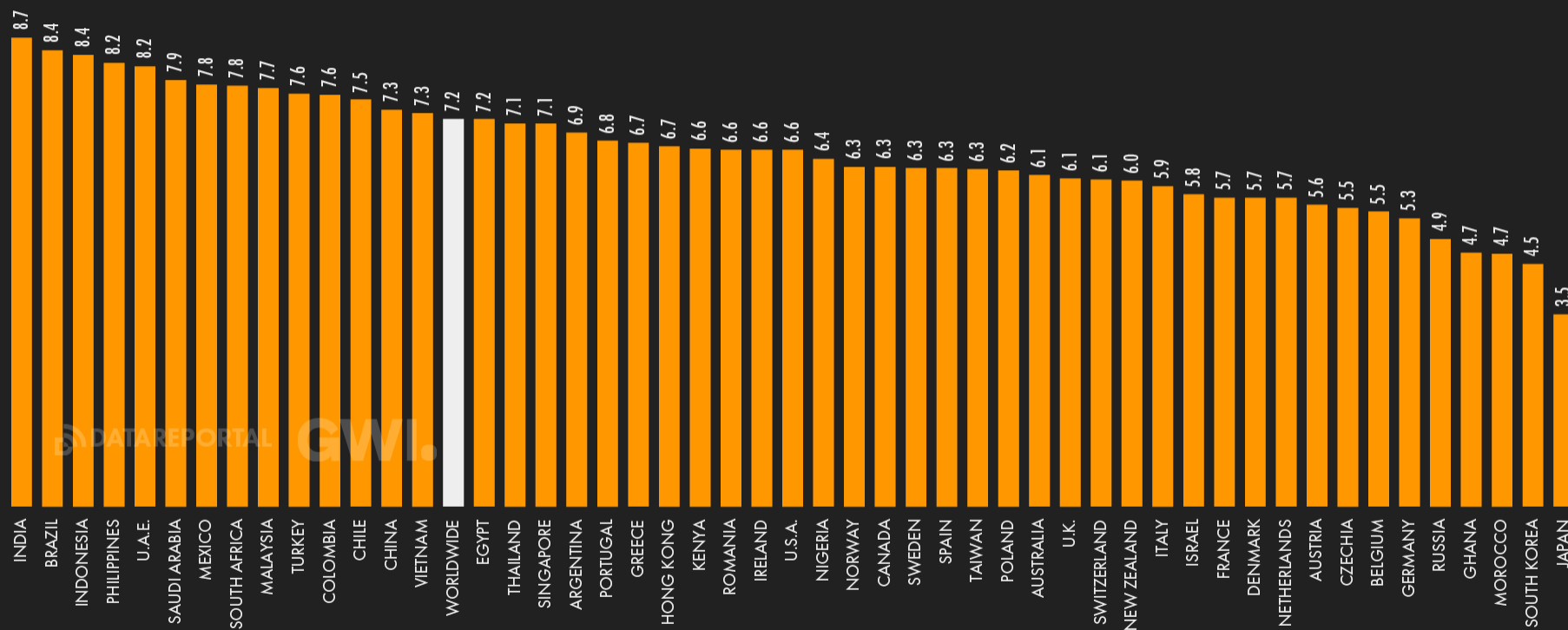
SOCIAL PLATFORM	AGE 16-24	AGE 25-34	AGE 35-44	AGE 45-54	AGE 55-64
WHATSAPP	15.5%	15.4%	17.1%	18.5%	19.5%
INSTAGRAM	21.3%	14.6%	9.4%	7.0%	4.9%
FACEBOOK	10.5%	15.7%	17.1%	16.8%	18.4%
WECHAT	8.4%	12.1%	13.8%	14.1%	15.0%
TIKTOK	7.7%	5.1%	4.4%	4.1%	2.2%
DOUYIN	4.1%	6.0%	6.7%	5.3%	4.7%
TWITTER	4.2%	3.9%	3.8%	3.8%	3.5%
FB MESSENGER	2.1%	2.8%	2.8%	2.6%	2.7%
TELEGRAM	3.0%	2.8%	2.3%	2.4%	2.3%
LINE	0.8%	1.3%	1.9%	2.9%	3.7%

**SOURCE:** GWI (Q3 2022). SEE [GWI.COM](https://www.gwi.com) FOR FULL DETAILS. **NOTES:** ONLY INCLUDES INTERNET USERS WHO HAVE USED AT LEAST ONE SOCIAL MEDIA PLATFORM IN THE PAST MONTH. SURVEY RESPONDENTS COULD CHOOSE FROM OTHER OPTIONS NOT SHOWN ON THIS CHART, SO VALUES MAY NOT SUM TO 100%. YOUTUBE IS NOT AVAILABLE AS AN ANSWER FOR THIS QUESTION IN GWI'S SURVEY. WE REPORT GWI'S VALUES FOR TIKTOK IN CHINA SEPARATELY AS DOUYIN, AS PER BYTEDANCE'S CORPORATE REPORTING. **COMPARABILITY:** VALUES NOW REPRESENT SHARE OF ACTIVE SOCIAL MEDIA USERS ONLY, RATHER THAN SHARE OF ALL INTERNET USERS. VERSIONS OF THIS CHART THAT FEATURED IN OUR PREVIOUS REPORTS DID NOT INCLUDE DATA FOR CHINA, SO VALUES ARE NOT COMPARABLE.

JAN  
2023

## AVERAGE NUMBER OF SOCIAL PLATFORMS USED

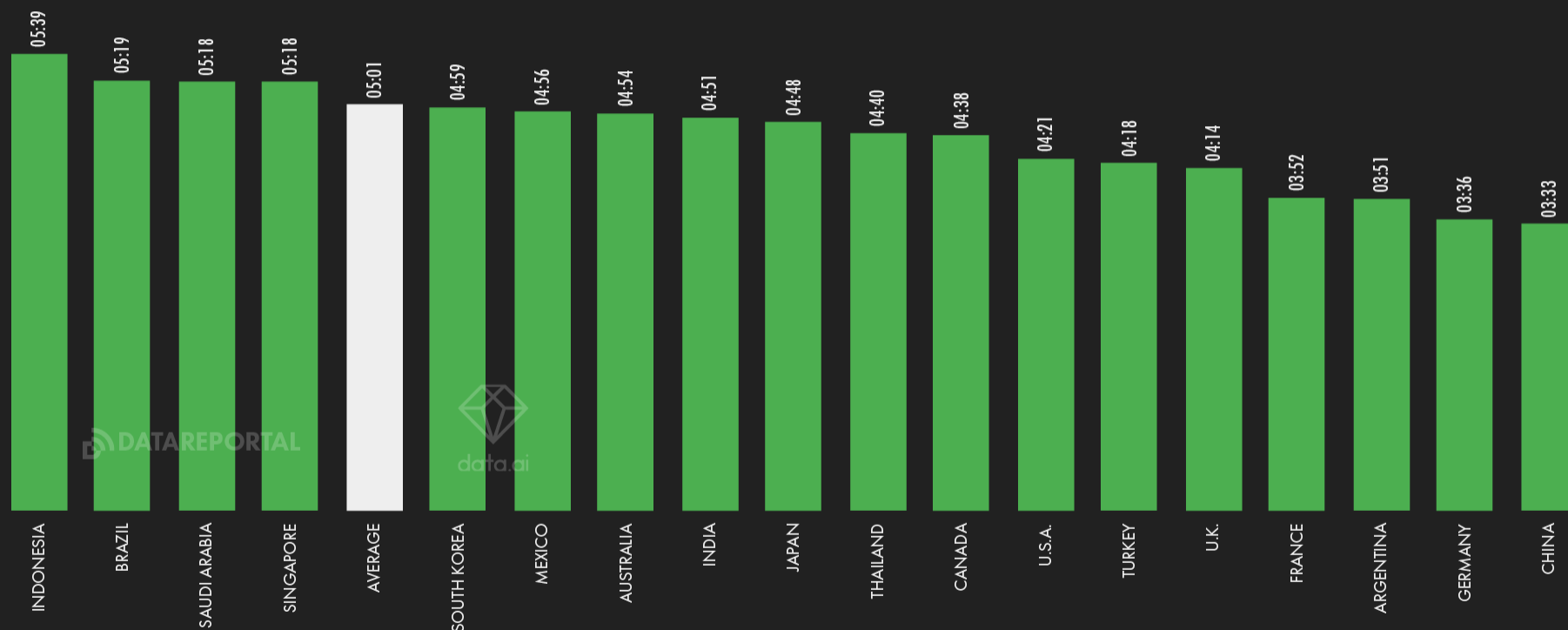
AVERAGE NUMBER OF SOCIAL MEDIA PLATFORMS THAT INTERNET USERS AGED 16 TO 64 USE ACTIVELY EACH MONTH



JAN  
2023

## DAILY TIME SPENT USING MOBILE PHONES

AVERAGE DAILY TIME SPENT USING MOBILE PHONES (ALL ACTIVITIES, IN HOURS AND MINUTES)



JAN  
2023

## SHARE OF MOBILE TIME BY APP CATEGORY

TIME SPENT USING APPS IN EACH APP CATEGORY AS A PERCENTAGE OF TOTAL TIME SPENT USING **ANDROID PHONES** OVERALL



TOTAL TIME SPENT USING  
SMARTPHONES EACH DAY



**5H 01M**

**YOY: +2.4% (+7 MINS)**



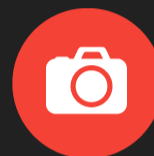
SHARE OF SMARTPHONE TIME:  
SOCIAL & COMMUNICATION APPS



**42.4%**



SHARE OF SMARTPHONE TIME:  
PHOTO & VIDEO APPS



**25.1%**



SHARE OF SMARTPHONE TIME:  
MOBILE WEB BROWSERS



**8.1%**

SHARE OF SMARTPHONE TIME:  
MOBILE GAMES (ALL GENRES)



**8.0%**



SHARE OF SMARTPHONE TIME:  
ENTERTAINMENT APPS



**3.1%**



SHARE OF SMARTPHONE TIME:  
SHOPPING APPS



**2.7%**



SHARE OF SMARTPHONE TIME:  
ALL OTHER APPS



**10.6%**

JAN  
2023

## DEVICES USED TO ACCESS THE INTERNET

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO USE EACH KIND OF DEVICE TO ACCESS THE INTERNET



MOBILE  
PHONE (ANY)



GWI.

**92.3%**

YEAR-ON-YEAR CHANGE  
**+0.2% (+20 BPS)**

LAPTOP OR  
DESKTOP (ANY)



Meltwater

**65.6%**

YEAR-ON-YEAR CHANGE  
**-7.9% (-560 BPS)**

SMART  
PHONE



GWI.

**91.0%**

YEAR-ON-YEAR CHANGE  
**+0.3% (+30 BPS)**

FEATURE  
PHONE



KEPIOS

**5.2%**

YEAR-ON-YEAR CHANGE  
**+4.0% (+20 BPS)**

TABLET  
DEVICE



**27.3%**

YEAR-ON-YEAR CHANGE  
**-3.2% (-90 BPS)**

PERSONAL LAPTOP  
OR DESKTOP



we  
are  
social

**59.1%**

YEAR-ON-YEAR CHANGE  
**-8.4% (-540 BPS)**

WORK LAPTOP  
OR DESKTOP



GWI.

**28.6%**

YEAR-ON-YEAR CHANGE  
**-2.7% (-80 BPS)**

CONNECTED  
TELEVISION



D

**31.9%**

YEAR-ON-YEAR CHANGE  
**+4.9% (+150 BPS)**

SMART HOME  
DEVICE



GWI.

**15.4%**

YEAR-ON-YEAR CHANGE  
**+11.6% (+160 BPS)**

GAMES  
CONSOLE



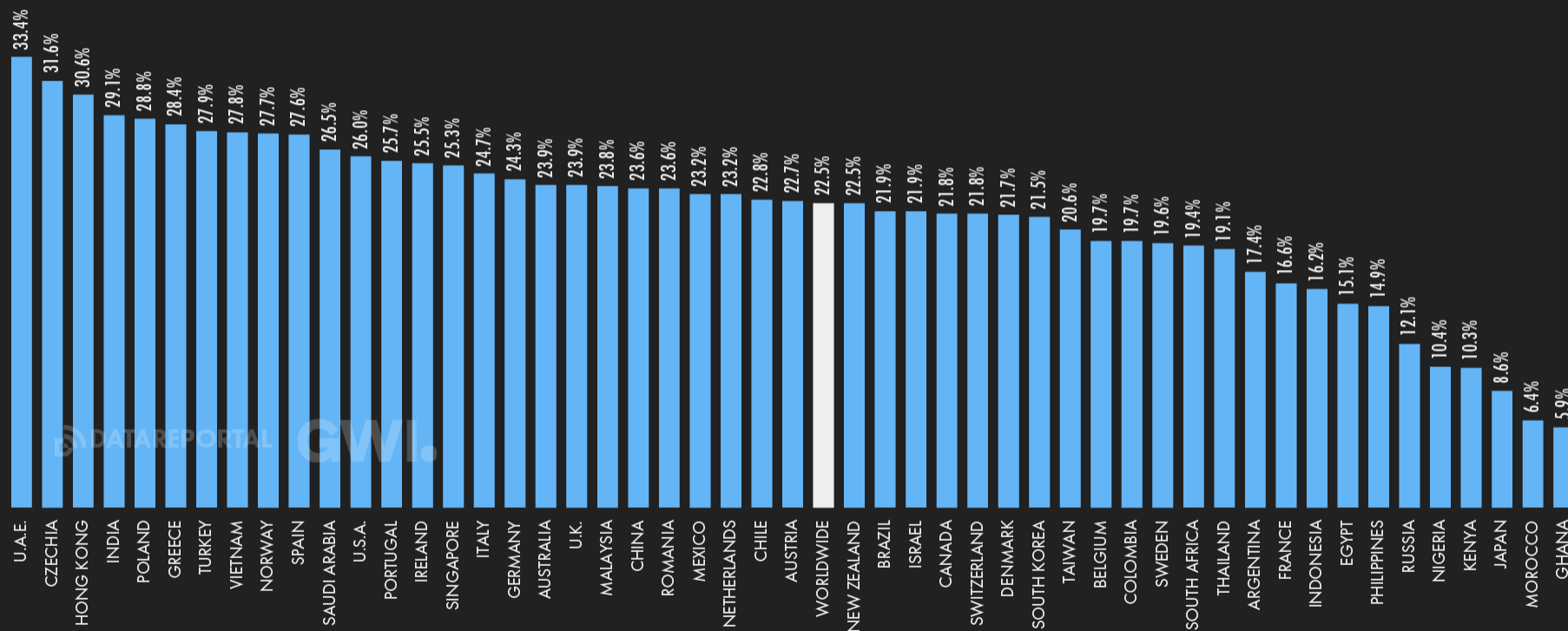
**12.7%**

YEAR-ON-YEAR CHANGE  
**+0.8% (+10 BPS)**

JAN  
2023

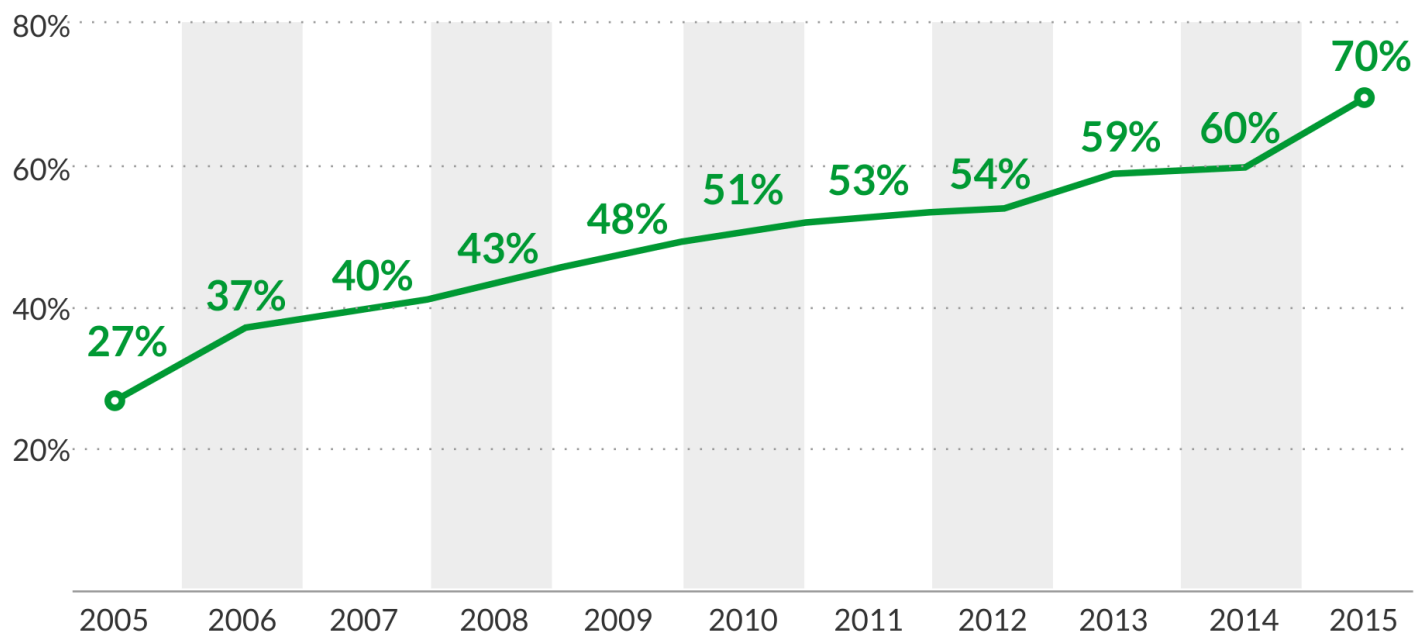
## OWNERSHIP OF SMARTWATCHES

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO OWN A SMARTWATCH (E.G. APPLE WATCH)

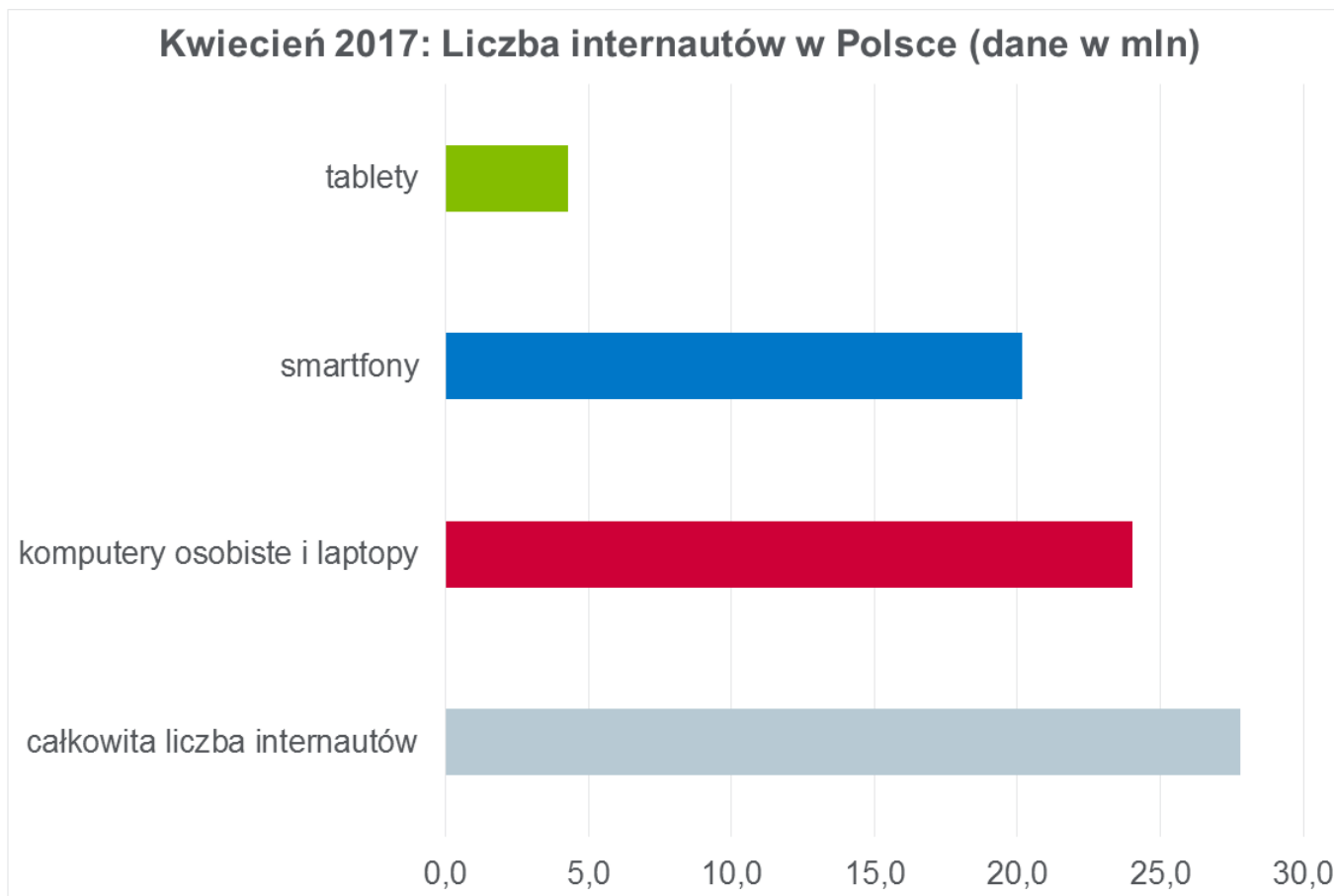


## Liczba internautów w Polsce (2005-2015)

penetracja internetu - procent populacji w wieku 7+ korzystający z sieci



## W Polsce





# Wykorzystano

Pasja informatyki, 2016. Sieci komputerowe odc. 1 - Podstawy sieci. URL: <https://youtu.be/WxH9YNAfAao>  
WE ARE SOCIAL, 2019. DIGITAL, SOCIAL MEDIA, MOBILE ET E-COMMERCE EN 2019,  
<HTTPS://WEARESOCIAL.COM/BLOG/2019/01/GLOBAL-DIGITAL-REPORT-2019/>