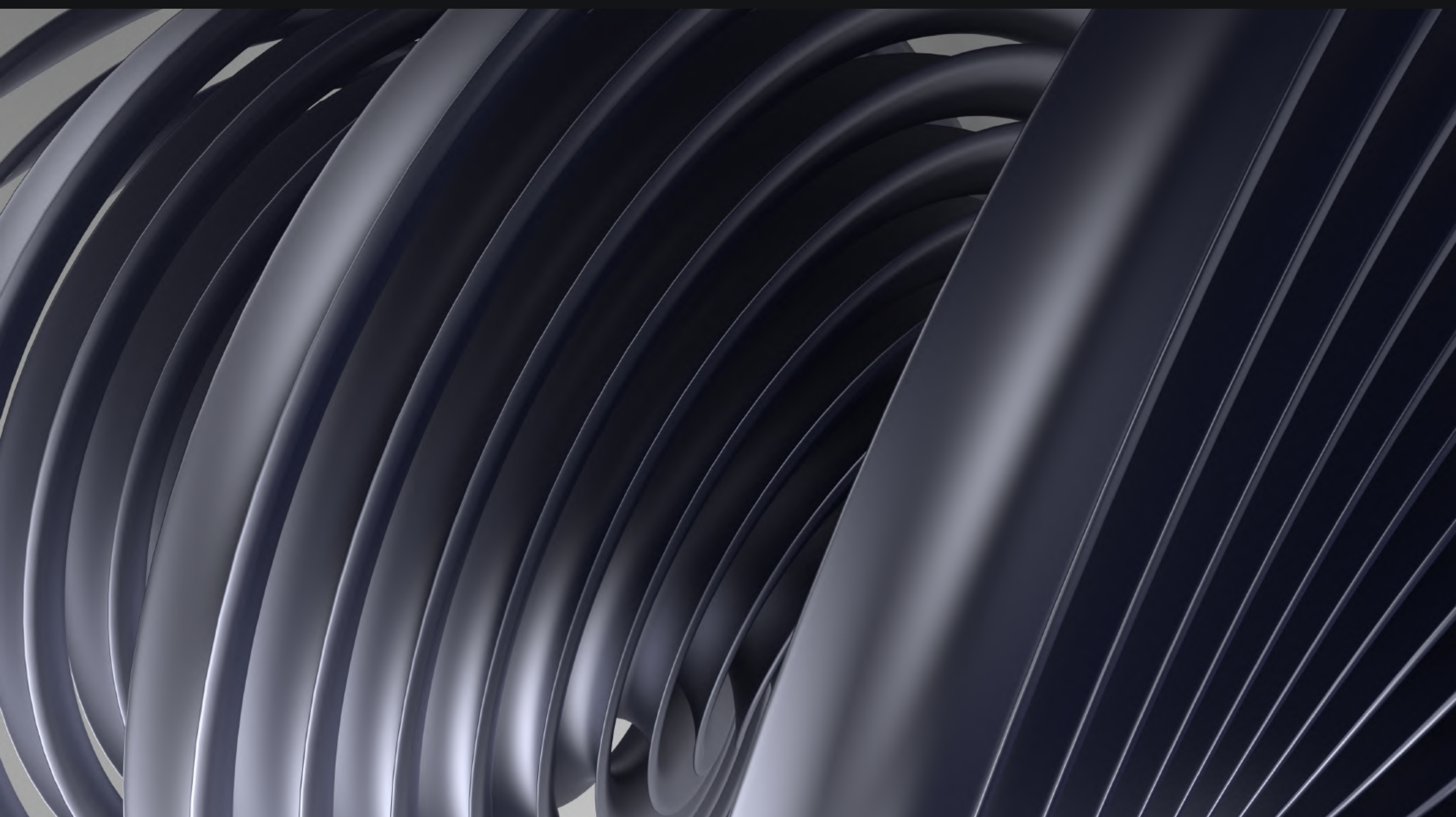
Mobile App Development Market: Past, Present, & Future

(Switzerland & UK)

Everything you need to know about the state of the mobile app industry in 2023, both worldwide and in Switzerland and the UK: industry overview and outlook, technologies and languages, tech startup climate, and trends.



INTRODUCTION

The steadily rising number of smartphone users worldwide means one thing: the mobile application market is showing double-digit growth on par with it. So does the mobile app development industry.

While global trends are more or less universal, the industry's state still varies depending on the local market. Development costs, the startup climate, and smartphone user preference in the United Kingdom, for example, may differ from Switzerland.

If you are preparing to develop or grow your mobile app startup, you'll need a comprehensive overview and outlook of the mobile app industry on a global and local scale. To provide this information, we at S-PRO have studied several hundred-page reports and surveys to summarize them in this report.z

Our mobile app research contains information about:

- The state of the global mobile app industry, talent, and technologies
- The overview and outlook of the app development industry in Switzerland and the UK: talent, technologies, and startup climate
- Leading app development companies and case studies in Switzerland and the UK
- The app industry trends to keep in mind in 2023 and beyond

ABOUT S-PRO

Headquartered in Switzerland, S-PRO is a mobile development company specializing in developing fintech, healthcare, and energy solutions for startups and established tech companies. From AI/ML solutions and blockchain products to Big Data systems, S-PRO's team has remained at the forefront of the tech revolution since its foundation in 2014.

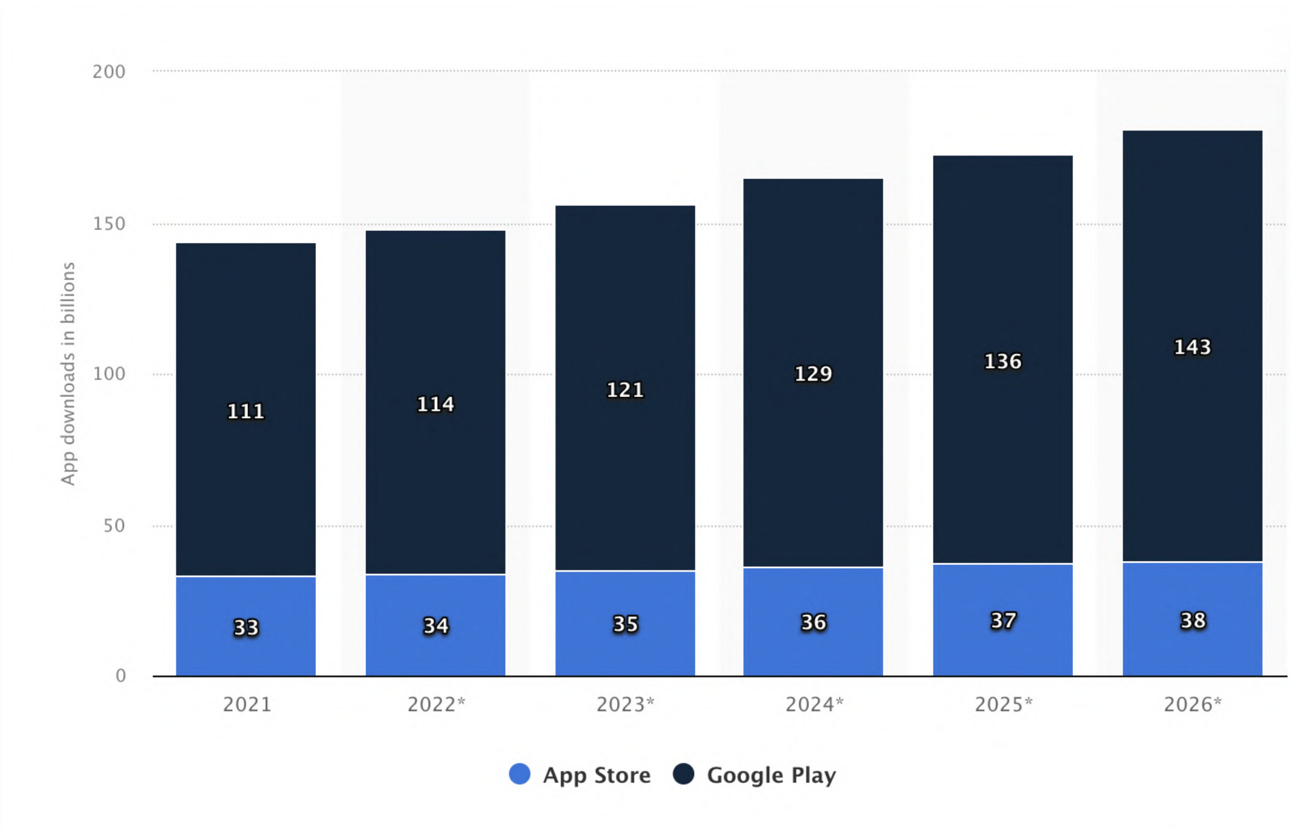
THE STATE OF THE GLOBAL MOBILE APP DEVELOPMENT MARKET IN 2022

The rising smartphone user number and penetration rate explain the mobile app development growth in recent years. In 2018, the global mobile application development market size was estimated at $106.27 billion. By 2021, its value rose to $197.2 billion; this represents an 85.6% cumulative growth rate over the four years.

The industry's market size is projected to grow at a CAGR of 23.8% by 2030 and will reach $366.34 billion, according to Market Research Future's mobile app industry analysis.

Google Play Store vs Apple App Store

As for marketplaces, Google Play Store continues to beat Apple's App Store in the number of downloads (27 billion vs 8.2 billion in Q3 2022, 111 billion vs 33 billion in 2021). This discrepancy will prevail in the coming years. Google Play Store downloads are expected to rise to 143 billion in 2026, while App Store is projected to generate only 38 billion downloads.



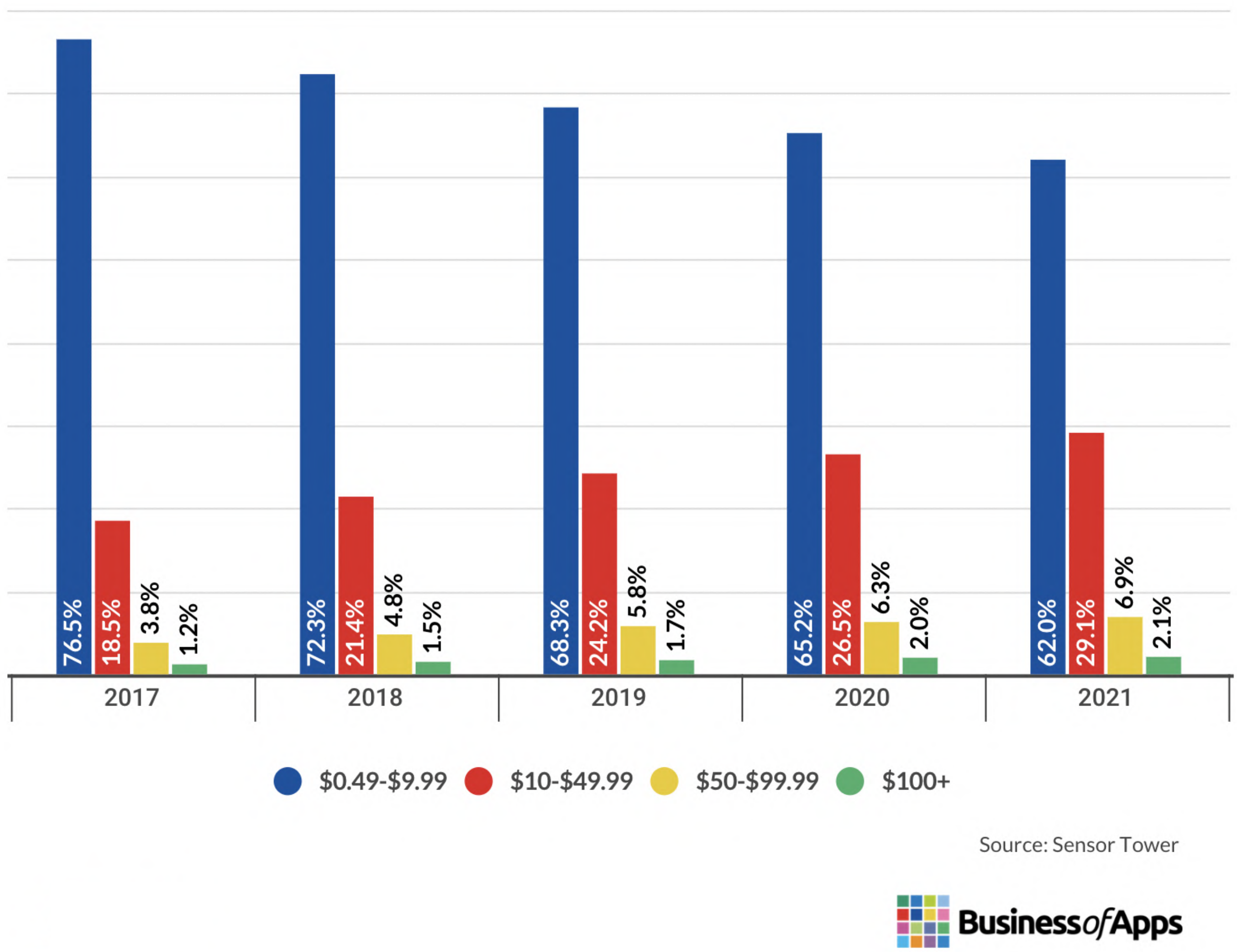
However, App Store generated almost twice as much revenue from its iOS applications than Google Play Store in 2021 ($85 billion vs $47.9 billion). In Q3 2022, App Store brought in $21.2 billion in app revenue (-3%, quarter-on-quarter), while Google Play Store generated $10.4 billion (also a decrease compared to Q2 2022).

What's the reason behind this discrepancy? The prevalence of iOS devices (and, therefore, a higher iOS app market share) in developed countries with higher income per capita.

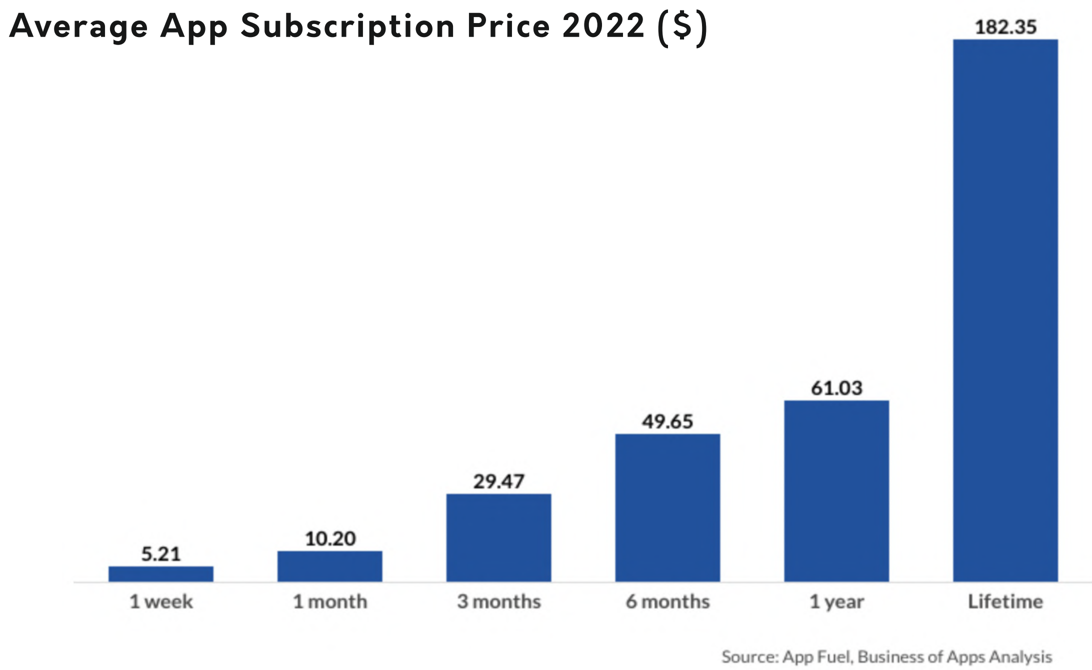
App Revenue & Pricing

Average mobile app spending has hovered around $5 per user since Q2 2020, except for spending skyrocketing to around $10 per user in both Q4 2020 and Q4 2021. However, the average revenue per download is estimated to reach just $1.83 worldwide.

Most in-app purchases (62%) amounted to under $10 in 2021. However, the share of the $0.99-9.99 purchases has been declining since 2017, when it amounted to 76.5%.



The average subscription price across the mobile app industry amounted to $10.20 per month, $49.65 per 6 months, $61.03 per year, and $182.35 for lifetime access in 2022. As of 2021, fitness apps have the highest average monthly subscription price ($15.03), while productivity apps have the lowest ($3.82).



Most of the app revenue is generated by either advertising (estimated at $220.8 billion in 2022) or in-app purchases ($204.9 billion). Paid apps continue to account for a small share of revenue ($5.25 billion).

This trend is expected to continue in the coming years, with paid apps gaining a bit more traction – but they will still constitute only a small mobile app market share in terms of revenue.

Both in Google Play Store and Apple's App Store, the absolute majority of apps are free to download (94.1% for iOS, 96.7% for Android).

Since both platforms take a cut from every in-app purchase (including subscriptions), app owners pushed against their high commission fees (30%). The tech giants caved in and cut their fees in half for the first $1 million in annual earnings (Apple in 2020, Google in 2021).

App Performance by Category

Based on the average daily time spent in the app, social media applications are the most engaging type of app (55.48 minutes). The runner-ups are gaming apps

(16.7 minutes) and entertainment apps (13.53 minutes), closely followed by sports apps (13.21 minutes).

Mobile games continue to generate the largest revenue share of the total mobile applications market size. In 2020, they brought in over $200 billion out of the total $318 billion in revenues generated by mobile apps. Among mobile games, RPGs are the highest-grossing genre, while strategy and puzzle games are the runners-up.

Mobile games will continue to dominate the mobile applications market revenue in the future. Social networking apps are and will continue to be the second-highest-grossing category ($31 billion).

However, in terms of revenue per download, social networking apps passed book and reference applications in 2020 and now rank first. Moreover, their revenue per download will continue to grow well into 2026, while books and reference applications will hold on to the second place.

Talent & Mobile Development Technologies

Mobile app developers accounted for 12.45% of all professional StackOverflow Developer Survey in 2022. Most engineers, however, identified as full-stack (46.82%) or backend (43.38%) developers.

Compared to 2017, the share of mobile developers among respondents shrunk from 23%. This may be related to the shift toward an increased demand for full-stack developers in the general software development market.

Mobile Development Languages

Among professional developers worldwide, JavaScript remains the most commonly used technology (67.9% use it). Similar results are among mobile developers in particular (64.20%). The runners-up are HTML/CSS (54.9%), SQL (52.6%), Python (43.5%), and TypeScript (40.1%).

As for the commonly used technologies, Java has lost its third place since 2017 (now sixth). Python rose in popularity from 27.6% to 43.51%. TypeScript showed an ever larger growth (+28.78%).

Swift and Kotlin both rose to prominence in the past years. Swift showed growth from 17.87% in 2017 to 24.37% in 2022. As for Kotlin, it wasn't even on the list of used mobile development languages in 2017. In 2022, however, it was used by almost 30% of mobile developers worldwide.

Frameworks & SDKs

According to a 2021 survey, Flutter is the most popular framework for developing cross-platform apps (42% of respondents used it). However, only a third of mobile developers worldwide build cross-platform apps; others use native development tools.

As of 2021, CleverTap is the most popular SDK for mobile app and game development worldwide. Airship and Adobe ranked second and third, respectively.

Among app monetization SDKs in particular, AdMob ranked first for iOS apps, while Google Ads AdMob took the lead in Android app development in 2022. AdMob has been holding the lead since 2017 when it showed a whopping 93.27% usage.

As for push notification SDKs, Firebase was the most popular for Android and iOS app development in 2022.

Technologies

Extended reality (XR) technologies, AR and VR, are considered key market drivers in the coming years, according to Market Research Future. Other drivers include the ongoing expansion of the e-commerce sector and the rising smartphone penetration rate. The low average internet access speed in developing countries will continue to be the main challenge.

As for mobile game development in particular, it will benefit from three key factors in the near future. Those are the increasing 5G adoption rate, the evolution of AR and VR technologies, and the introduction of blockchain.

APP DEVELOPMENT IN SWITZERLAND: INDUSTRY OVERVIEW (2017-2022)

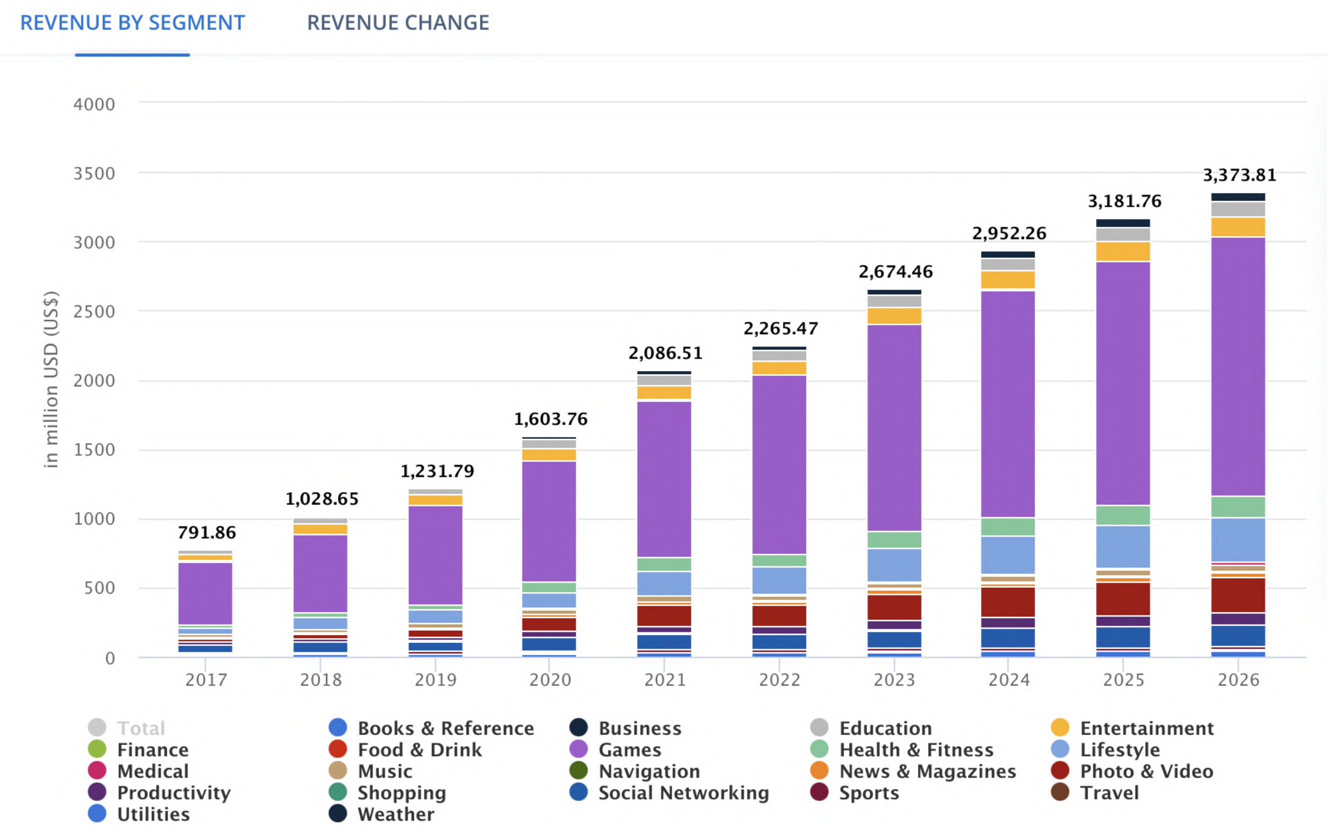
The estimated revenue of the Swiss mobile app industry in 2022 is $2.32 billion.

Swiss Mobile App Industry Statistics

In line with global trends, most of the mobile app revenue comes from either in-app purchases ($1.23 billion) or ads ($1.06 billion). Paid apps account for an insignificant share of the total app revenue ($41 million, or 0.02%).

The Swiss mobile applications market shows a higher average revenue per download than the global one. In 2022, it amounts to $9.56 per download.

Like worldwide, games have remained the highest-grossing mobile app category in Switzerland since 2017. Following games, lifestyle, photo, and video apps are the runners-up in this market. While lifestyle apps showed steady growth, photo and video products gained traction only recently, in 2020.



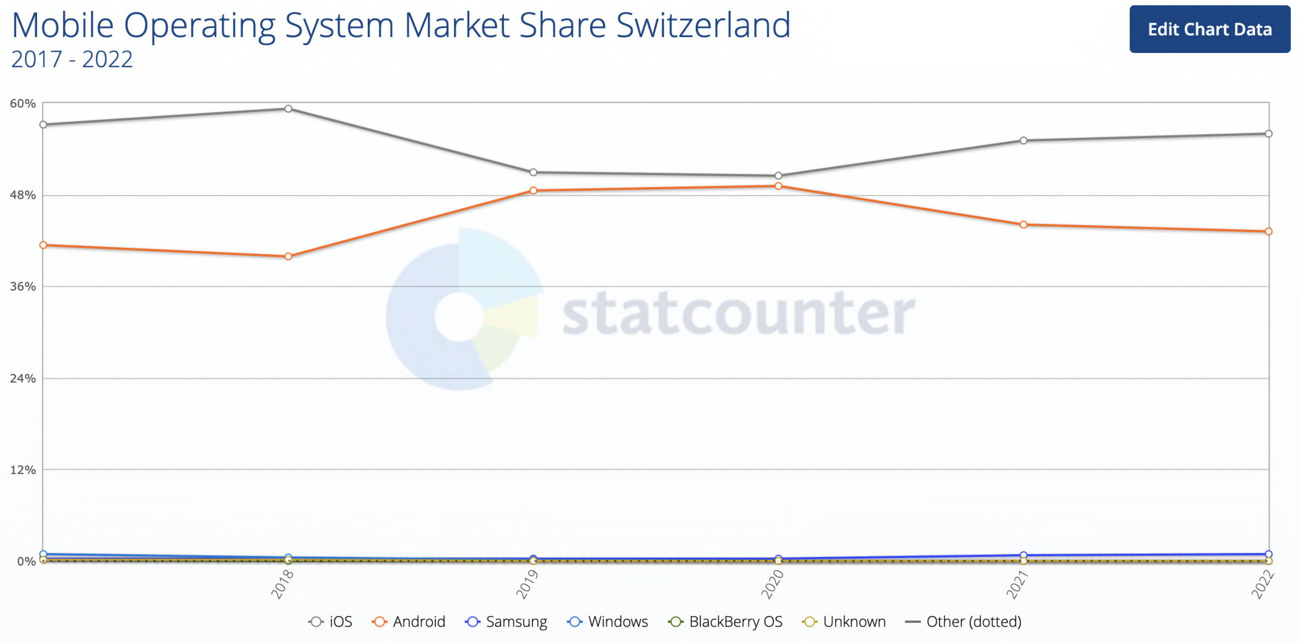
Notes: Data reflects market impacts of the Russia-Ukraine war.

Most recent update: Sep 2022

Source: Statista

Another peculiarity of the Swiss market is that lifestyle apps (not social networking ones, as it is globally) demonstrate the highest average revenue per download. They've demonstrated significant growth since 2017 and are now far ahead of their runner-up, medical apps.

In contrast with global trends, iOS consistently has a larger mobile app market share than Android in the Swiss mobile OS market. In 2017, it amounted to 57.2%, while Android's share was 41.3%. While iOS lost some of its market share in 2019 and 2020, it recovered in 2021 and 2022. In 2022, iOS had a market share of 55.8%, while Android was 43.4%.



Switzerland is well ahead of most other European countries in mobile internet speeds, too. According to Ookla, the Swiss median mobile download internet speed reached 82.91 Mbps in 2022, which earned it the number 14 spot on the global index (ahead of the UK, U.S., and Canada).

That's a significant improvement compared to the 2017 mobile download speed (33.54 Mbps). However, it's also in line with the global increase in mobile internet speed (22.16 Mbps in 2018 vs 33.43 Mbps in 2022).

Talent & Mobile Development Technologies

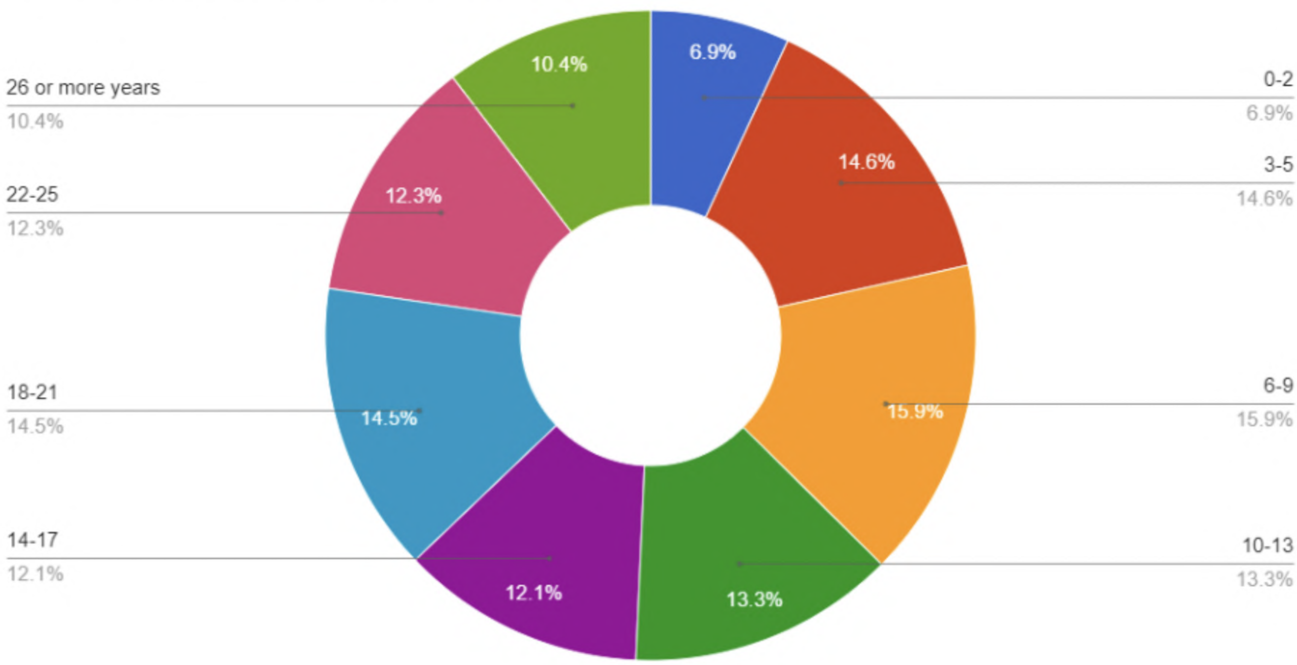
According to the Swiss Developer Survey 2021, over a third of developers identify as full-stack (41%), while 17% are backend developers. However, only 2.6% of respondents specialize in mobile app development – a decrease from 4% in 2020.

StackOverflow data corroborates this decline. It shows that the share of mobile developers among Swiss professionals fell from 16% in 2017 to 11.4% in 2022, according to its surveys.

Developer Profile

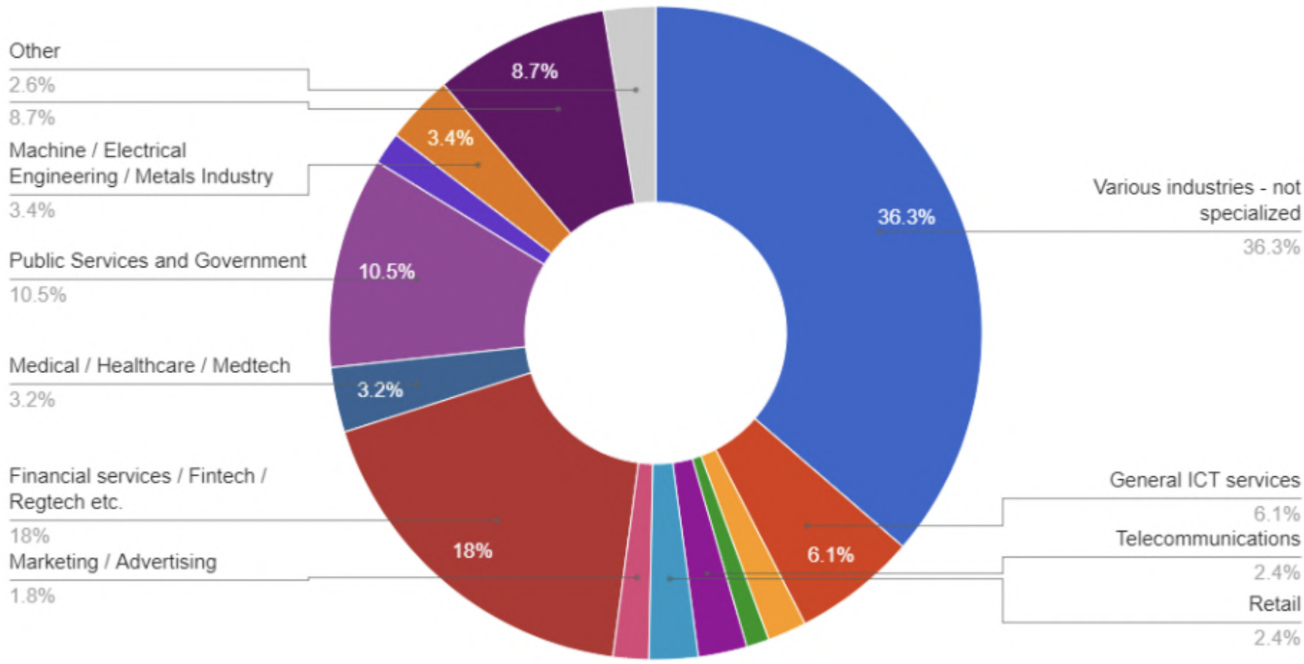
When it comes to professional development experience, most respondents (78.5%) can boast six or more years under their belt. Developers with 3-5 years of experience account for 14.6%, while juniors with up to 2 years of experience are the smallest group among respondents.

How many years ago did you start coding professionally?



Over a third of Swiss developers (36.3%) create software for various industries and don't specialize. Excluding this category, Fintech is the most common specialization for Swiss developers (18%).

Which industry do you primarily develop software for?



Swiss developers show strong ethical considerations. For example, almost two-thirds of respondents (63.7%) would reject the work if they were asked to write code for unethical purposes. Over half (53%) would report ethical issues of the code they're working with within the company. And the absolute majority (83%) would consider the ethical implications of the code they write.

On average, Swiss mobile app developers earn around CHF 42 ($44.65) per hour (CHF 90,915, or $96.647, per year). However, according to Clutch, most Swiss mobile app development companies charge either $100-149 (23.44%) or $50-99 (21.88%) per hour (as of 2022).

Software Development Languages & Frameworks

As for the most popular technologies, JavaScript remains at the top (75.4% in 2021; 68.57% in 2020). In contrast to the global trends, Java is second in popularity among Swiss developers (55.5%), albeit it's losing its share compared to 2020 (63.28%).

TypeScript (47.41%) and Python (29.13%) hold on to their third and fourth place, respectively. TypeScript keeps rising in frequency of use (+5.96%).

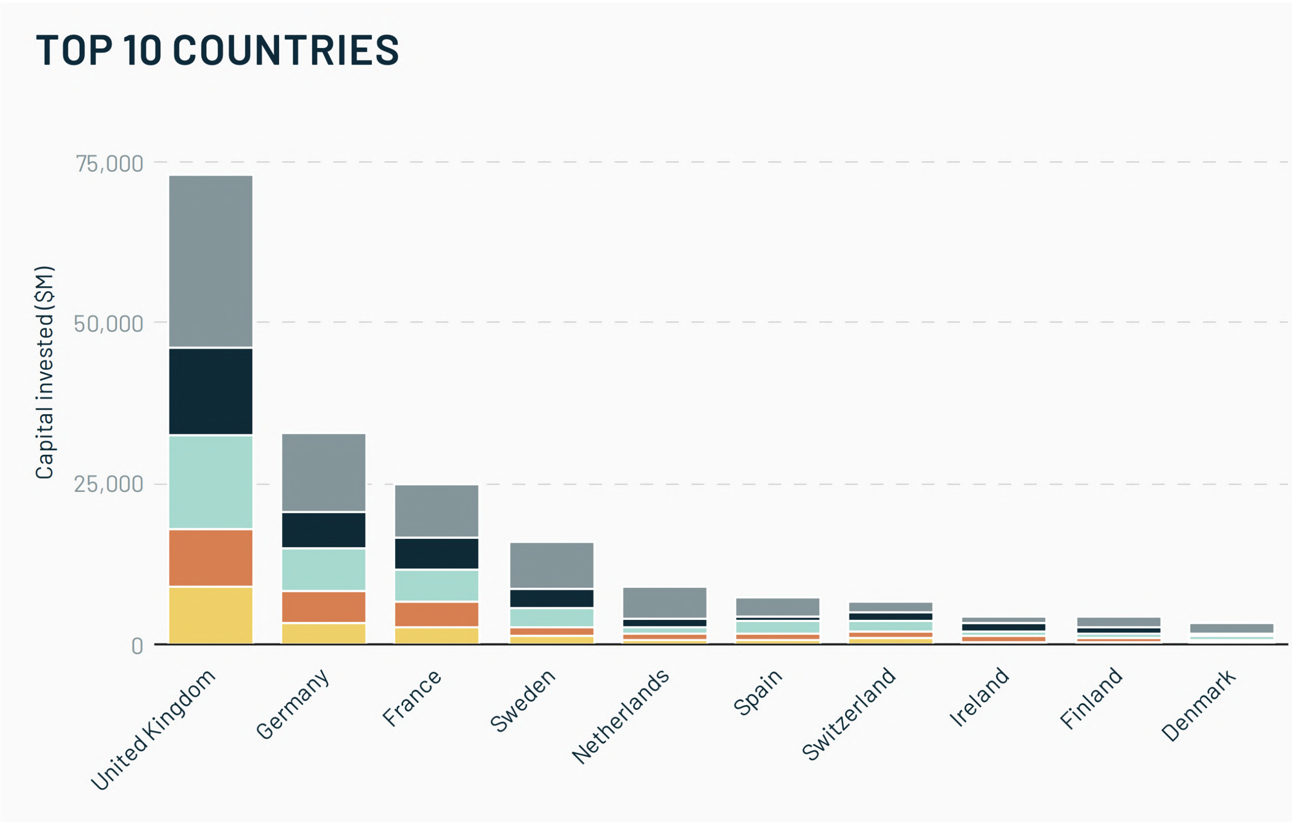
When it comes to frameworks and libraries, Node.js, Angular, and Spring remained the most popular among Swiss developers in 2021, followed closely by jQuery. Compared to the 2017 StackOverflow Developer Survey results, Node.js rose in popularity among Swiss developers, while Cordova, Firebase, and Xamarin lost.

Technologies

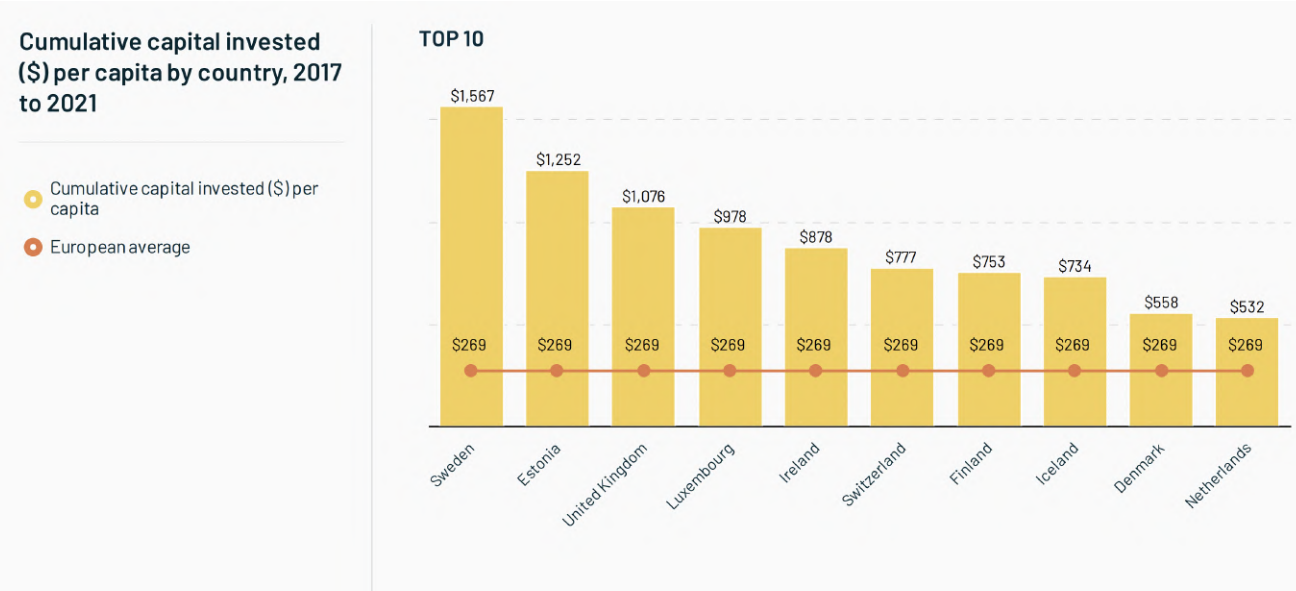
As for technologies, Swiss developers consider Big Data the most important technology of the present. Machine learning and AI came in second, with IoT taking third place.

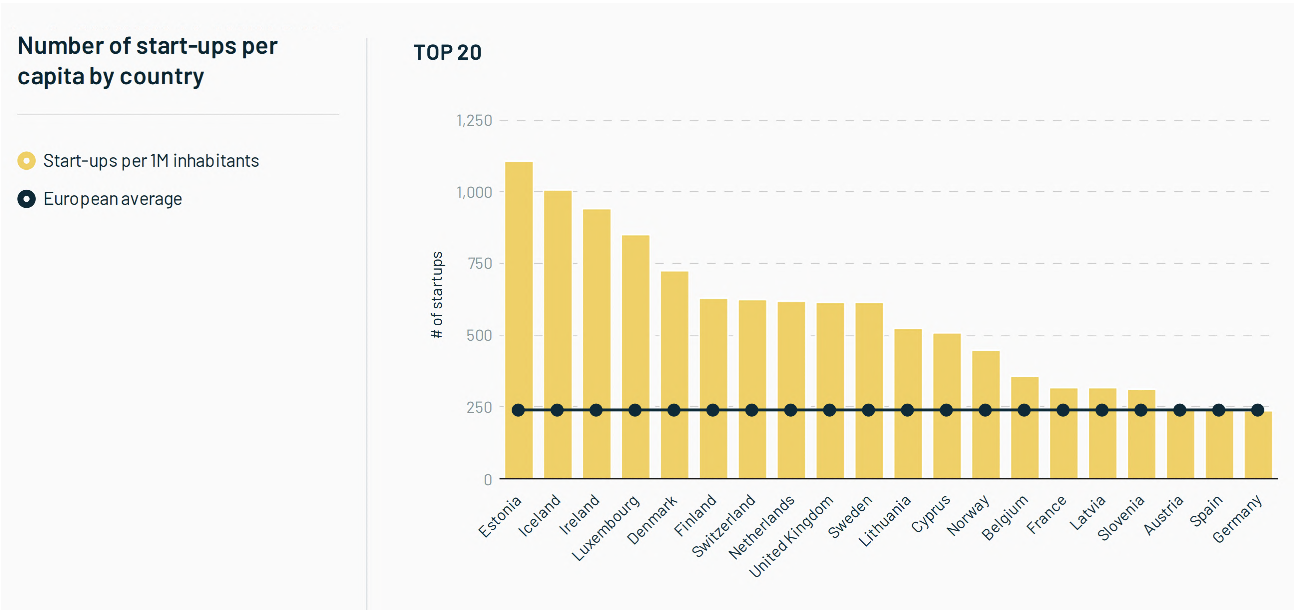
Startup Climate

According to the State of European Tech 2021, Switzerland is among the top ten European countries in gross capital tech investments in 2017-2022; it ranked seventh.

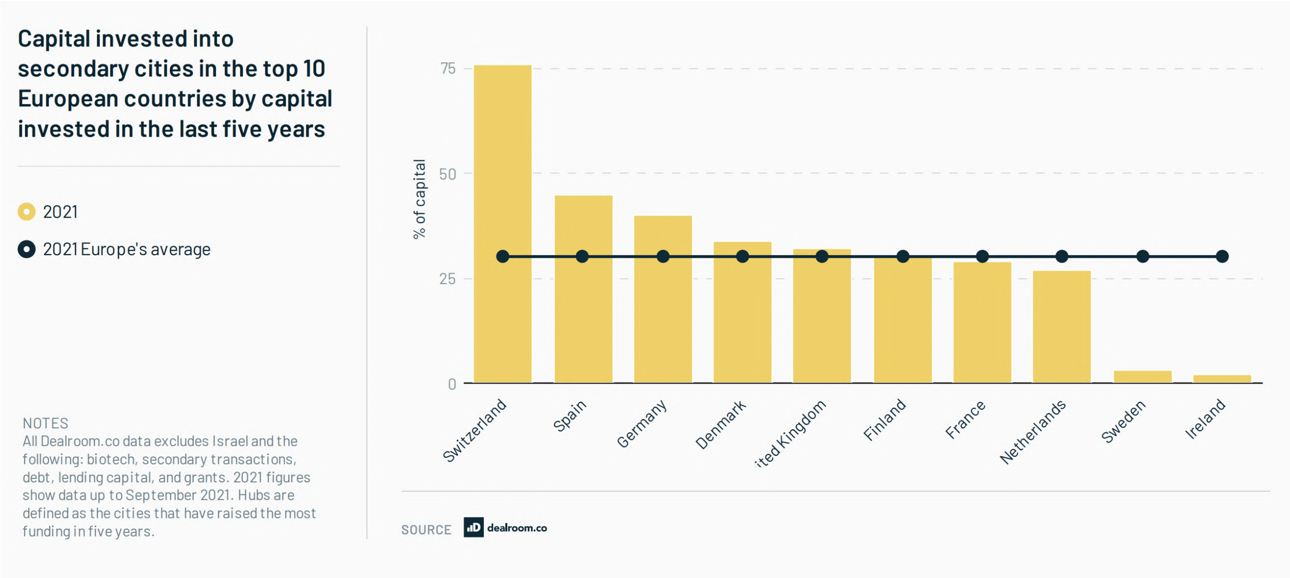


Switzerland also came in sixth in the top 10 European countries based on the cumulative 2017-2021 capital investment per capita (it's twice higher than the continent's average). Plus, the country outpaces established investment leaders like the United Kingdom in the number of startups per capita.



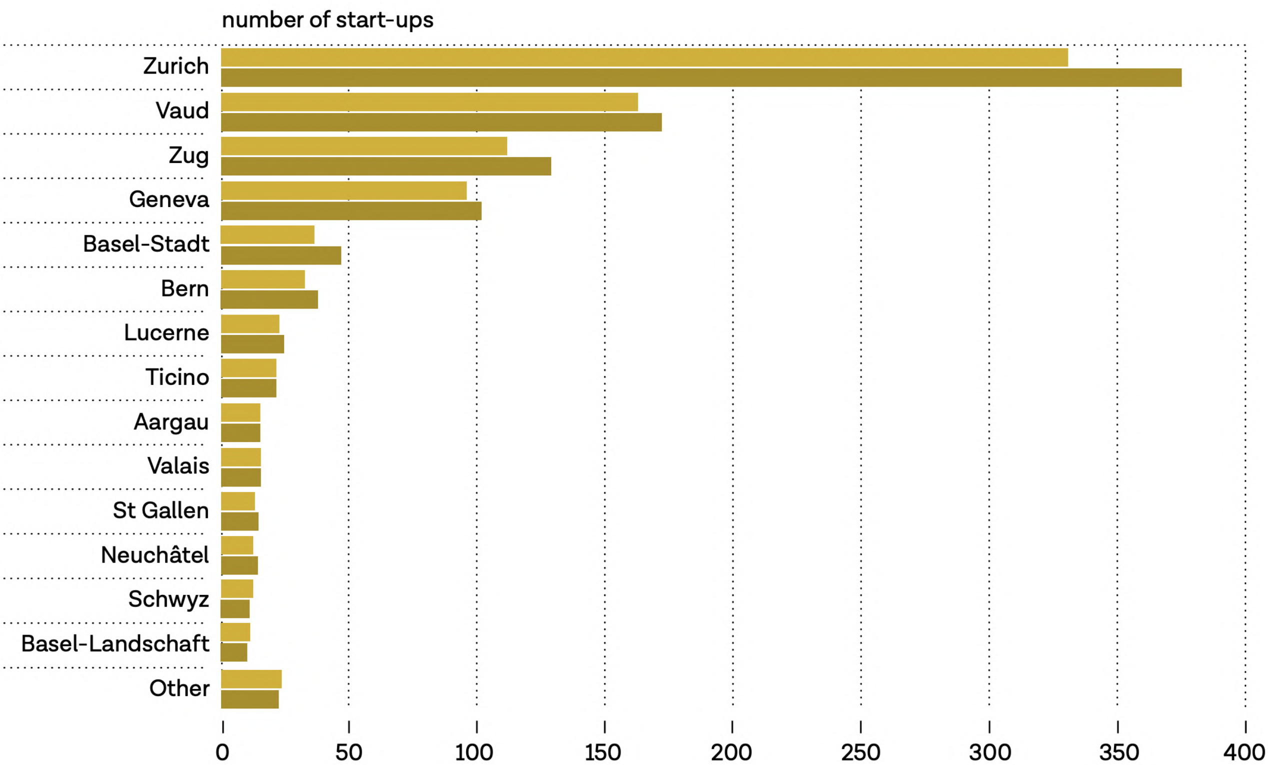


Unlike in most other European countries, three-fourths of the venture capital invested into tech companies (75% in 2017-2021) is concentrated in cities other than Zurich, the primary investment hub. These secondary hubs include Zug and St Gallen, for example.



Nevertheless, Zurich still emerges as the number one location choice for startups with at least one investor, according to Startup Radar 2022. Other startup hubs include Vaud, Zug, and Geneva.

Zurich and Vaud: location advantage



APP DEVELOPMENT IN UK: INDUSTRY OVERVIEW (2017-2022)

The UK mobile application development market size reached £19.4 billion ($23.69 billion) in 2022. The industry has shown an average 18.8% annual growth rate between 2017 and 2022. It outpaced the UK's overall economic growth rate.

According to IBISWorld mobile applications market research, the app development industry employs over 62 thousand people and includes almost 13 thousand businesses.

The mobile applications market size of the United Kingdom in 2022 is estimated at $8.98 billion.

UK Mobile App Industry Statistics

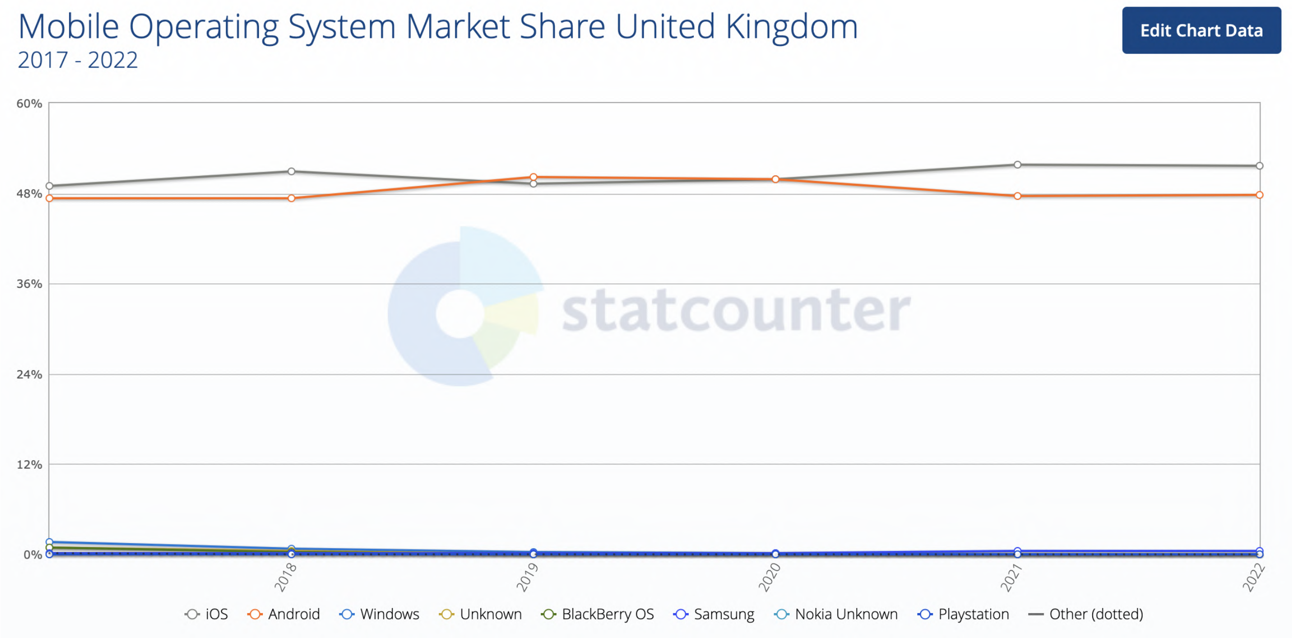
In-app purchases account for around half of UK app revenue ($4.51 billion), followed closely by advertising revenues ($4.33 billion). Paid apps are estimated to bring in only $140 million in revenue in 2022.

Gaming apps account for the majority of app revenue for the sixth year in a row. Entertainment, photo and video, and health and fitness apps are the runners-up.

As for average revenue per download, medical apps have fallen from the second spot in 2017-2019 to sixth in 2020 and haven't made a comeback. On the other hand, lifestyle apps continue to bring in the highest average revenue per download since 2017. Since 2020, the second spot has been reserved for books and reference apps, followed closely by social networking and health and fitness apps.

In 2022, the average revenue per app download amounts to $3.63, which is well above the global average ($1.83).

Unlike worldwide, iOS and Android each account for around half of all operating systems in the UK market. Their market shares fluctuate, with iOS sometimes getting ahead of Android and vice versa. In 2017, iOS had a market share of 49%, while Android's share was 47.3%. And in 2022, iOS accounted for 51% of the UK's mobile OS, while Android was 48%.



Talent & Mobile Development Technologies

Half of the UK-based StackOverflow survey respondents identified themselves as full-stack developers (50.3%). The second-largest developer profile category was back-end developers (45.4%). Finally, mobile app development professionals accounted for 9.2% of respondents.

Developer Profile

Regarding professional experience, most UK developers (69.32%) have been working in their fields for more than four years as of 2022. The largest group among them is programmers with 5-10 years of experience (24.7% of all respondents), followed closely by those with 11-20 years of experience (22.4%) and over 20 years of experience (16%).

The mid-level developers (2–4 years of professional experience) account for 17.29% of UK respondents.

The average hourly rate for mobile app developers is around £23 ($28) per hour. However, on average, those specializing in Android or iOS development earn £33 ($40) and £32 ($39) per hour.

However, according to Clutch, the hourly rates of UK mobile app development companies vary wildly. Around a quarter (23.3%) charge between $150 and $199 per hour, while 18.3% charge $50-99 and 14.8% – $100–149 (as of 2022).

Software Development Languages

According to the StackOverflow Developer Survey 2022, the top three programming technologies among UK developers are JavaScript (67%), HTML/CSS (56%), and SQL (52.4%).

Among UK mobile developers, the top three mobile development technologies remain the same (JavaScript, HTML/CSS, SQL). TypeScript (42.66% of mobile developers) bypasses Python (31.74%).

As for native mobile development languages, Swift (30%) is slightly more popular than Kotlin (26.6%). Objective-C (14.3%) and Dart (13.7%) developers are in the minority.

Among frameworks and libraries, Node.js is the most popular among UK mobile app developers (40.27%). The runners-up are React.js (34.13%), jQuery (25.94%), and ASP.NET Core (24.57%).

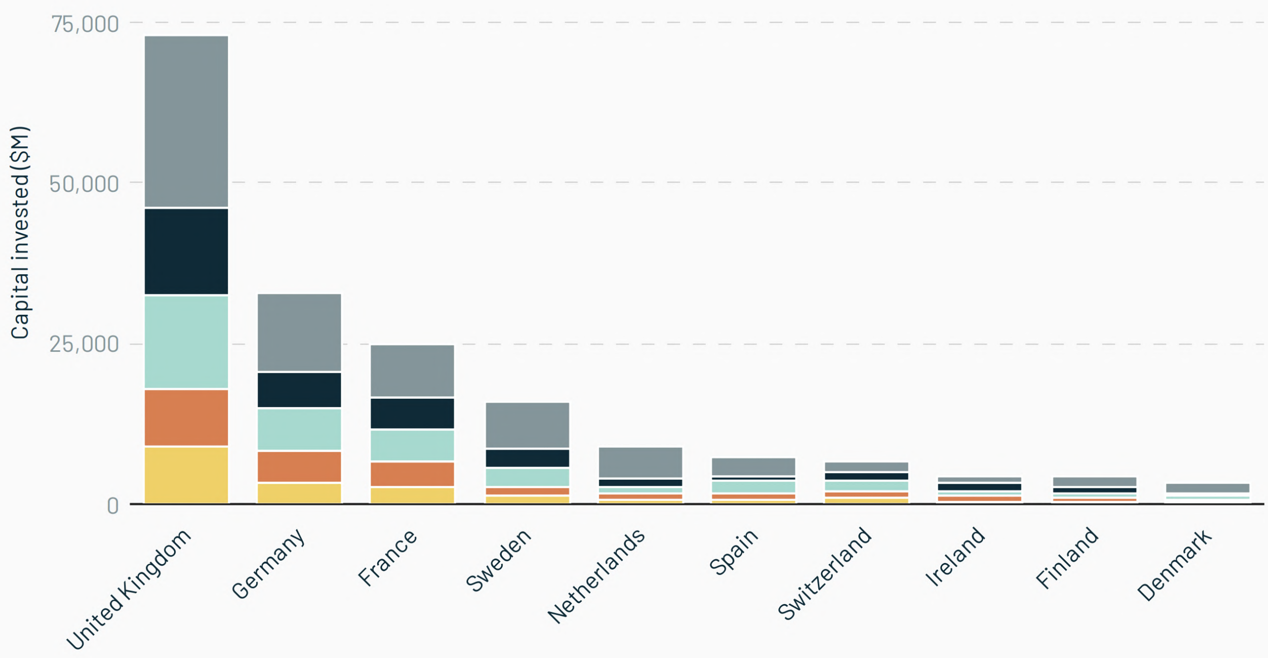
Compared to the results of the 2017 StackOverflow Developer Survey, there are four main takeaways:

- The share of mobile app developers shrunk from 16% in 2017 to 9% in 2022.
- Dart and TypeScript also grew tremendously in popularity, from 0.4% in 2017 to 13.65% in 2022 for Dart and from 11.89% in 2017 to 42.66% for TypeScript
- Node.js grew considerably in popularity (from 26.04% in 2017 to 40.27% in 2022) and retained its first place
- React took over the second spot, growing its share from 12.08% in 2017 to 34.13% in 2022

Startup Climate

Over the past five years, the UK established itself as a haven for tech startups. The total investment in UK tech companies from 2017 to 2021 reached almost $75 billion, double that of France and Germany combined.

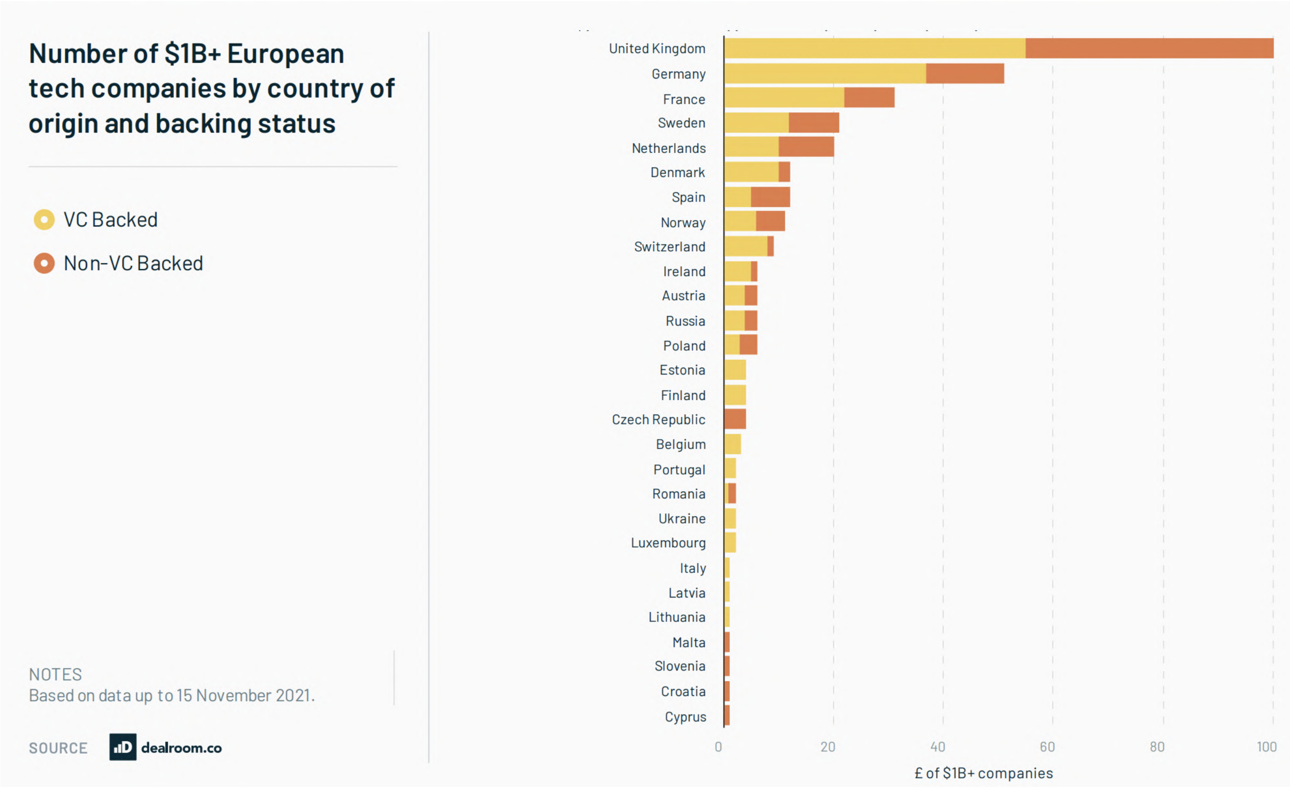
TOP 10 COUNTRIES



The country also comes third in Europe in cumulative 2017-2021 capital invested per capita ($1,076). This indicator is almost four times higher than the continent's average.

London is one of Europe's top five tech investment hubs, with the highest number of deals five years in a row. The city also holds the number two spot in funding purpose-driven tech startups ($5,57 million in 2021) and the number one spot in the number of impact startups (433).

The United Kingdom remains the leader in the number of unicorns emerging in the country, far ahead of other European countries. In 2021, the UK was home to over 100 unicorns, while Germany, the number two, hosted only 50+ unicorns.

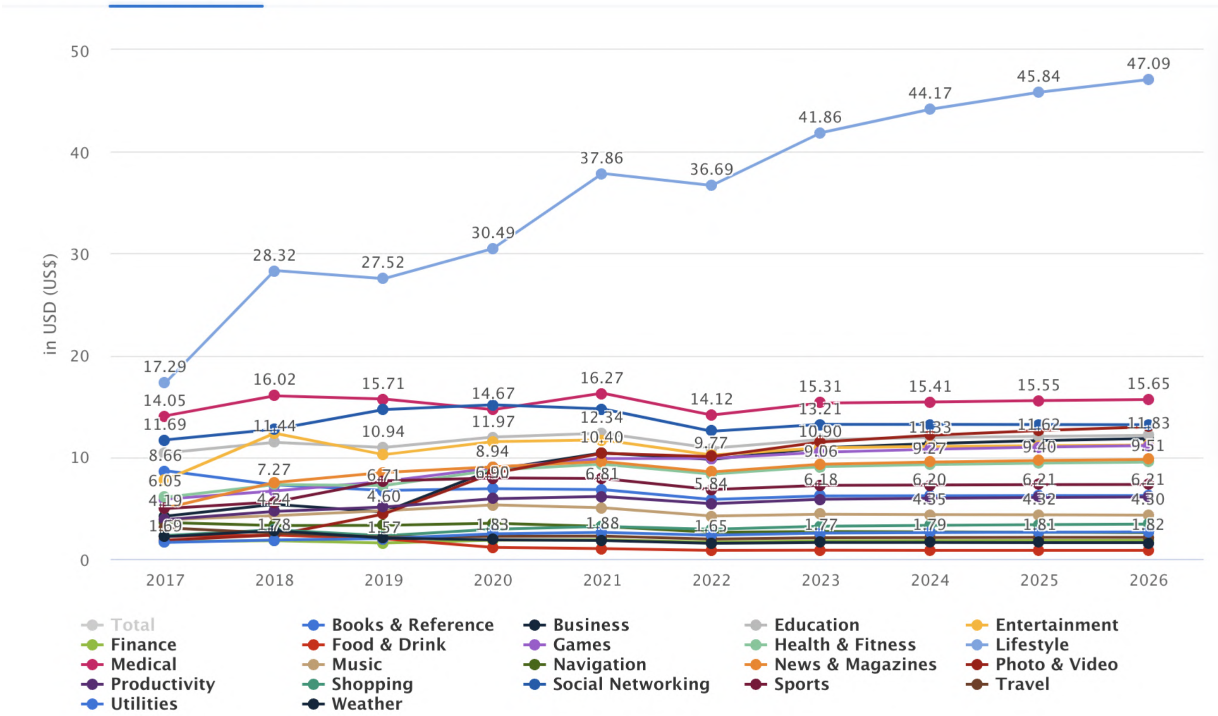


APP DEVELOPMENT IN SWITZERLAND: INDUSTRY OUTLOOK (2023-2027)

Total app revenue in the Swiss mobile applications market is expected to grow at an annual rate (CAGR) of 10.09% between 2022 and 2026, reaching $3.41 billion by 2026.

By far, games will continue to be the most downloaded and highest-grossing category of apps in Switzerland. However, in terms of average revenue per download, lifestyle apps will remain unrivaled, continuing to grow more profitable. Medical apps will hold on to the second place, followed by their social networking counterparts.

AVERAGE REVENUE PER DOWNLOAD

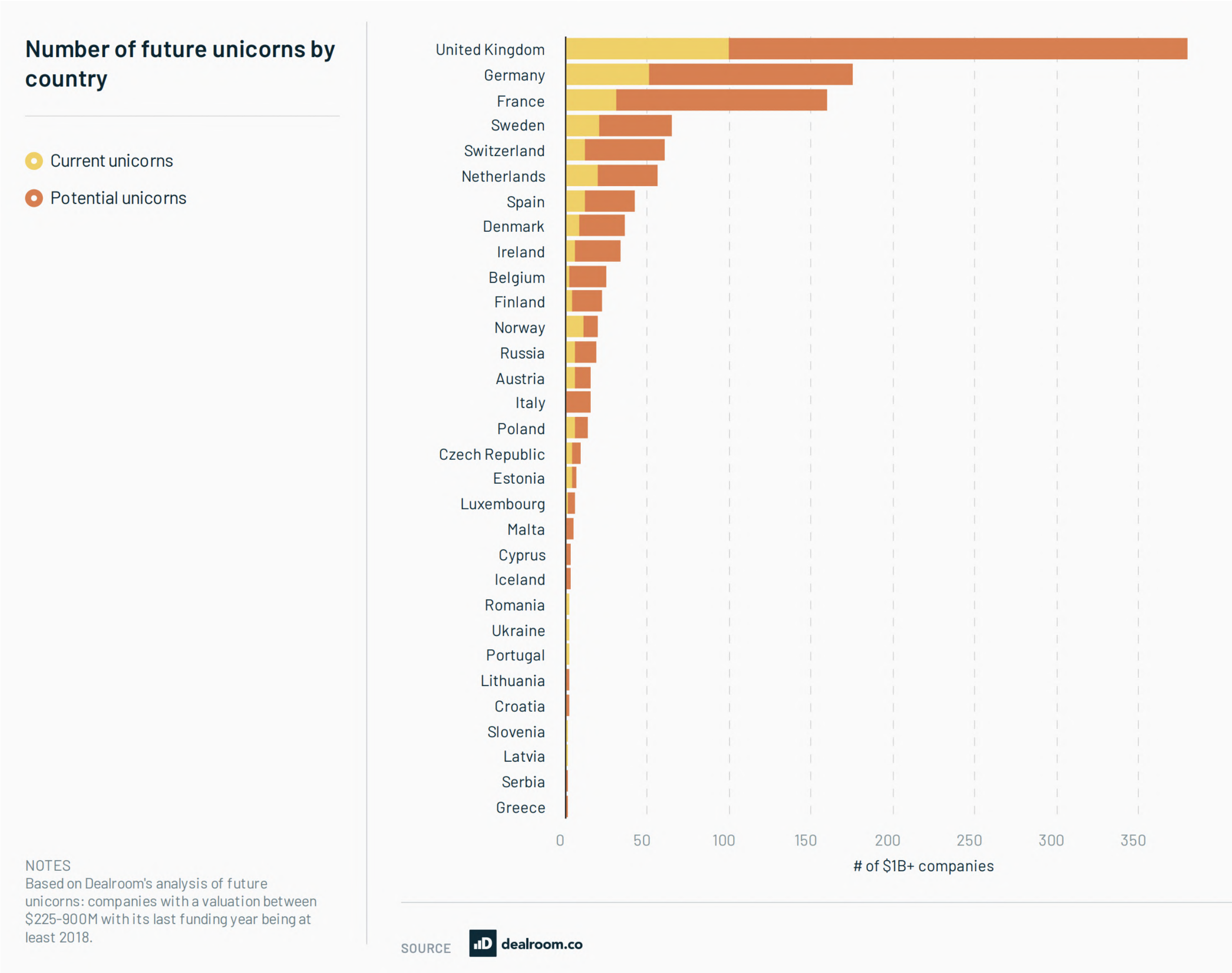


Most recent update: Sep 2022

Source: Statista

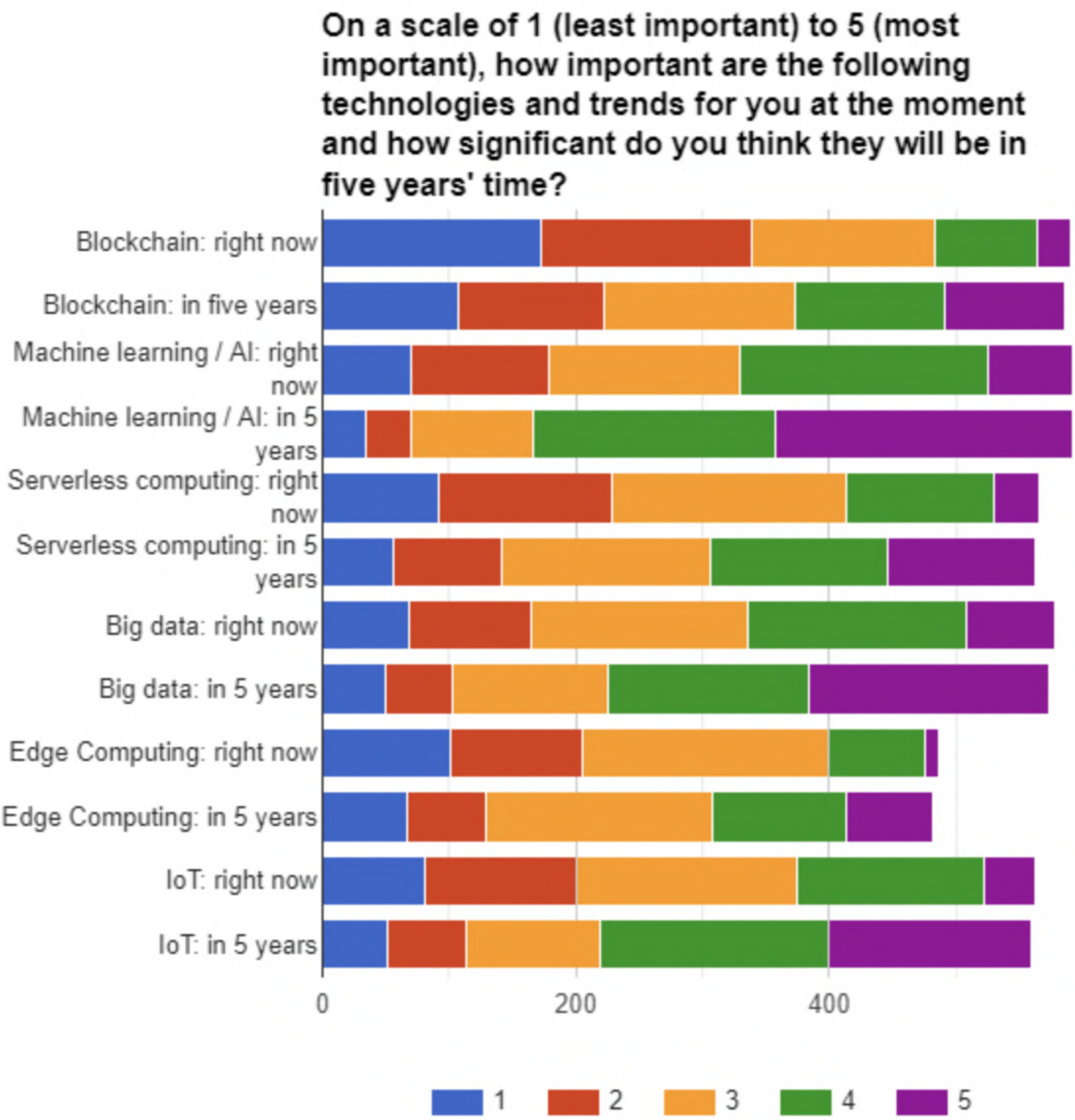
In-app purchases and advertising will continue to account for almost all the app revenues generated. Paid app revenue, although expected to grow, won't challenge the current leading sources of revenue._The App Store outpacing Google Play Store in-app revenues will continue to remain the status quo.

Switzerland has one of the most significant potentials to increase the number of unicorns among European countries. According to Dealroom and its proprietary methodology, there are four times more potential unicorns than current ones in Switzerland.



As for mobile development technologies, according to the Swiss Developer Survey 2021, machine learning and AI will be the most important ones in the next five years. The runner-ups are Big Data and IoT, followed by serverless and edge computing.

Switzerland has been slow in adopting mobile commerce: only a third of all e-commerce transactions take place on mobile devices. However, mobile commerce is projected to show strong annual growth in the future (13.5% by 2024), above the overall estimated e-commerce growth rate.



APP DEVELOPMENT IN UK: INDUSTRY OUTLOOK (2023-2027)

The UK mobile applications market size is estimated to grow at a 9.49% annual rate between 2022 and 2026. In 2026, it's projected to reach $12,91 billion.

The shopping apps revenue growth, which skyrocketed in 2020, is projected to slow down. By 2026, it should reach a growth rate similar to other categories of mobile apps.

Gaming apps will continue to be the category of applications that bring in the highest gross revenue and outpace all other types of apps in the number of downloads. Health and fitness apps are the runners-up in gross app revenue generated, along with entertainment applications.

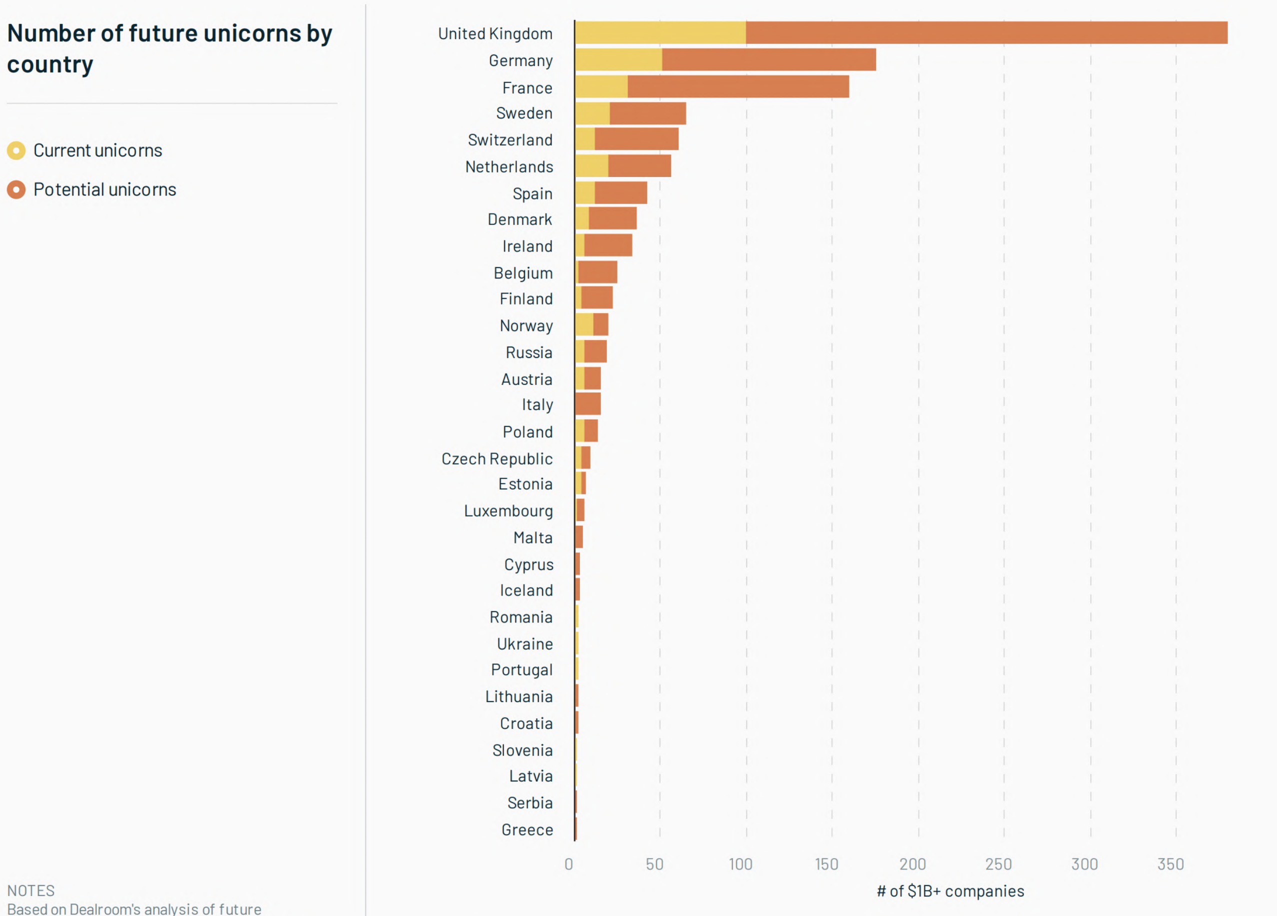
Lifestyle apps, in their turn, will remain the most profitable category in average revenue per download, followed by books and reference applications.

In line with the global mobile app industry trends, Apple's App Store will continue to outperform Google Play Store in the app revenue share in the UK.

Like in Switzerland, mobile commerce is expected to outpace the overall e-commerce sector in its growth rate in the coming years (10.1% CAGR by 2024).

The country will remain the leader in hosting unicorn tech companies. According to Dealroom, the number of unicorns has the potential to quadruple in the UK.

Number of future unicorns by country



NOTES
Based on Dealroom's analysis of future unicorns: companies with a valuation between $225-900M with its last funding year being at least 2018.

SOURCE dealroom.co

7 LEADING MOBILE APP DEVELOPMENT COMPANIES IN THE UK & SWITZERLAND

Who are the key players in the mobile app development market in the UK and Switzerland? Let's review seven companies with prowess and exceptional expertise in building outstanding mobile apps for clients worldwide.

S-PRO

- **Locations:** Zürich, Switzerland; Warsaw, Poland; Berlin, Germany; Lisbon, Portugal; Bucharest, Romania
- **Focus:** Fintech, Healthcare, Energy
- **Rating:** 4.9 (Clutch), 5.0 (GoodFirms)
- **Founded:** 2014

S-PRO is a mobile development company with a team of over 250 talented members and niche expertise in fintech, healthcare, and energy industries.

You can find startups and established businesses among its clients, although S-PRO is unrivaled in helping startups develop and grow. Most of S-PRO's clients come from continental Europe (29.8%), the United States (27.6%), and Switzerland (25.1%).

iteo

- **Locations:** Zug, Switzerland; Katowice, Poland; San Francisco, California, The USA
- **Focus:** E-commerce, Enterprise Software
- **Rating:** 4.8 (Clutch)
- **Founded:** 2011

A digital product studio founded in 2011, iteo started as a mobile app development company. Now, it has a team of 300+ professionals with strong digital product design, e-commerce, and voice solution development skills. You can find Bayer & Bayer, Shell, and Deloitte among iteo's clients.

Apps with Love AG

- **Locations:** Bern, Switzerland; Basel, Switzerland
- **Focus:**dApps, Progressive Web Apps, Travel & Lifestyle
- **Rating:** 5.0 (Clutch)
- **Founded:**2010

A full-service digital agency, Apps with love takes a user-centric to any project and excel in UI/UX research, design, and testing. The company's core team consists of 50 employees in Switzerland, enhanced by 50+ nearshore and freelance experts.

Axisbits GmbH

- **Locations:** Zürich, Switzerland
- **Focus:** Marketplaces, EdTech, FinTech
- **Rating:** 5.0
- **Founded:** 2013

Headquartered in Zürich, Axisbits harnesses the expertise of its full-cycle development team in Ukraine. Axisbits has worked with non-profits, fintech, and education companies and is regularly on Clutch's list of top Swiss web development companies.

hedgehog lab

- **Locations:** Newcastle upon Tyne, United Kingdom; Boston, Massachusetts, United States; London, United Kingdom
- **Focus:** Financial Services, Health & Wellness, Logistics
- **Rating:** 4.7 (Clutch)
- **Founded:** 2007

Ranked as a top mobile app development company by Clutch, hedgehog lab works primarily with enterprise and midmarket clients, such as Deliveroo, Microsoft, and Tesco Bank. The company is also ISO 9001 and ISO 27001 certified.

3-Sided Cube

- **Locations:** London, UK; Bournemouth, UK; St. Petersburg, Florida, United States; Washington D.C., United States
- **Focus:**Non-profit & purpose-driven products
- **Rating:** 4.9 (Clutch)
- **Founded:** 2009

3-Sided Cube specializes in projects that make a social impact. The company has developed digital products for global and local non-profits and movements like the American Red Cross, LUSH, and Global Forest Watch.s.

Coderus

- **Locations:** Martlesham, UK; Milton, UK; Norwich, UK
- **Focus:**Energy & Utilities, Automotive, Health & Wellness, Retail & E-commerce
- **Rating:** 4.7 (Clutch)
- **Founded:** 1998

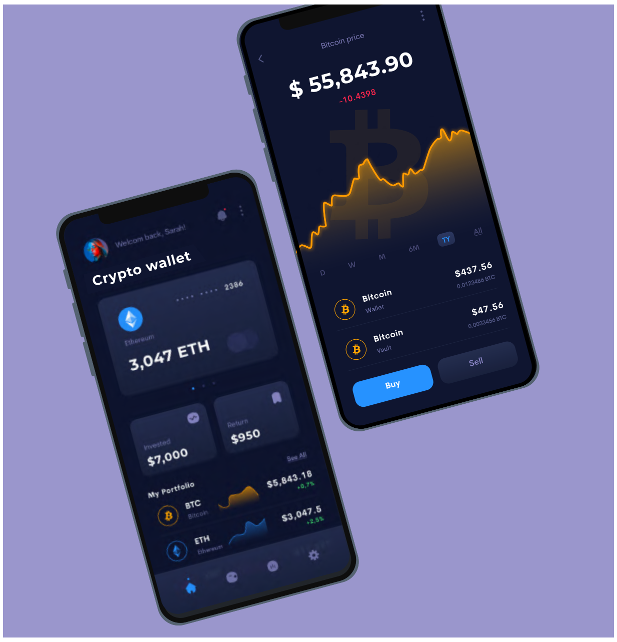
The oldest company on this shortlist, Coderus has a rich portfolio of certifications and memberships. The same can be said about its expertise: Coderus specializes in nine industries, from agriculture to sports. The company also shows a strong knowledge of IoT solution development.

7 TOP MOBILE APPS MADE IN THE UK & SWITZERLAND

Let's review these seven mobile app development case studies to see Swiss and UK developers in action.

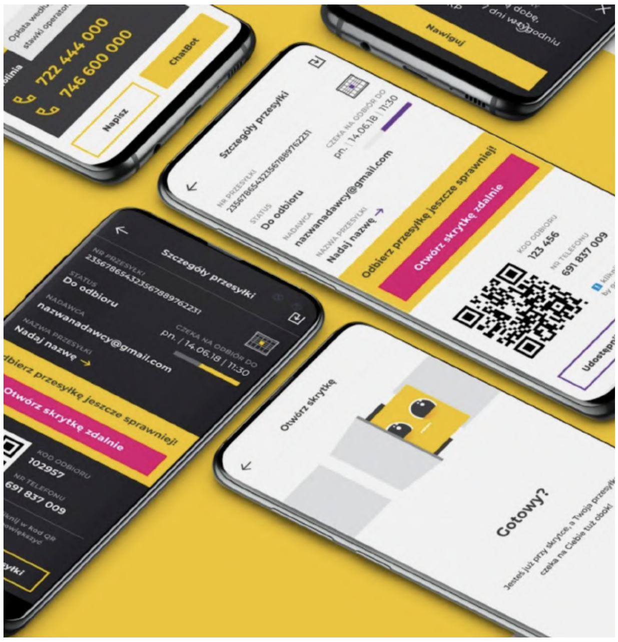
Crypto Wallet

- **Developed by:** S-PRO
- **Category:** crypto and blockchain
- **Platforms:** iOS, Android, web
- **Technologies:** React Native (mobile development); Node.js (backend); web3.js (web development); third-party integrations: WalletConnect, Compound, UNISWAP, CoinMarketCap, Auth0, BSC



Developed for the German Fintech startup behind the XXX cryptocurrency, this crypto wallet allows buying, storing, and exchanging token, as well as other cryptocurrencies. The XXX cryptocurrency is growing in popularity and is now used by 10,000 users worldwide.

InPost



- **Developed by:** iteo
- **Category:** logistics
- **Platforms:** iOS, Android, web
- **Technologies:** Swift, Kotlin, Angular; Java (backend)

Developed for the German Fintech startup behind the XXX cryptocurrency, this crypto wallet allows buying, storing, and exchanging token, as well as other cryptocurrencies. The XXX cryptocurrency is growing in popularity and is now used by 10,000 users worldwide.

Modo

- **Developed by:** S-PRO
- **Category:** energy and utility
- **Platforms:** iOS, Android
- **Technologies:** React Native

This UK-based startup seeks to bring everything that businesses need to know about the alternative energy industry to one place. Modo's mobile app is where users can access all of Modo's materials (articles, podcasts, etc.), even offline.

S·PRO

Pestalozzi Haustech Mobile

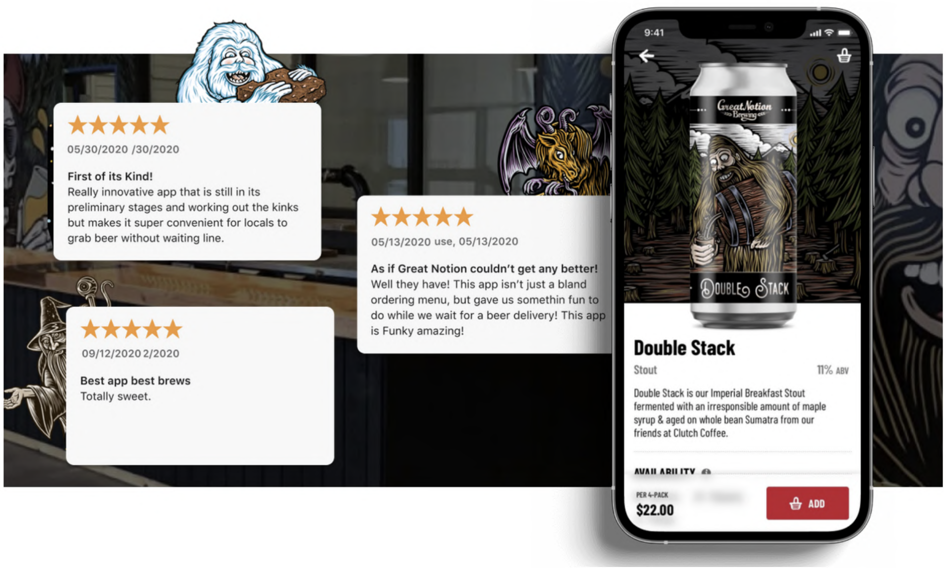
- **Developed by:** Apps with love
- **Category:** e-commerce
- **Platforms:** iOS, Android

Pestalozzi Haustechnik is a Swiss online store specializing in plumbing, heating, and power supply materials and equipment. In 2021, the company decided to replace its outdated 2012 mobile app. The result is an intuitive mobile app with comprehensive search and warehouse inventory features, among others.

Great Notion

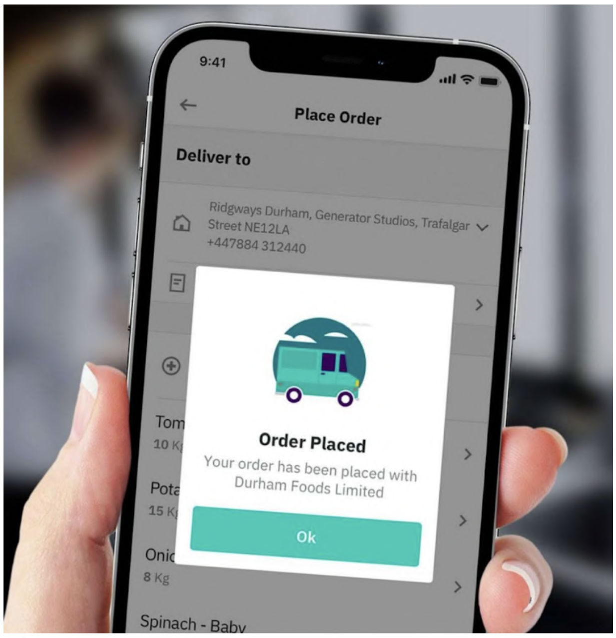
- **Developed by:** Windmill
- **Category:** e-commerce, food and beverages
- **Platforms:** Android, iOS

This is a platform-agnostic mobile app for a US-based brewer, Great Notion Brewing. Great Notion is a whole virtual world with a unique aesthetic to drive beer-loving community building. Great Notion users can play games, earn badges and points, as well as discover special offers and shop – all without leaving the app.



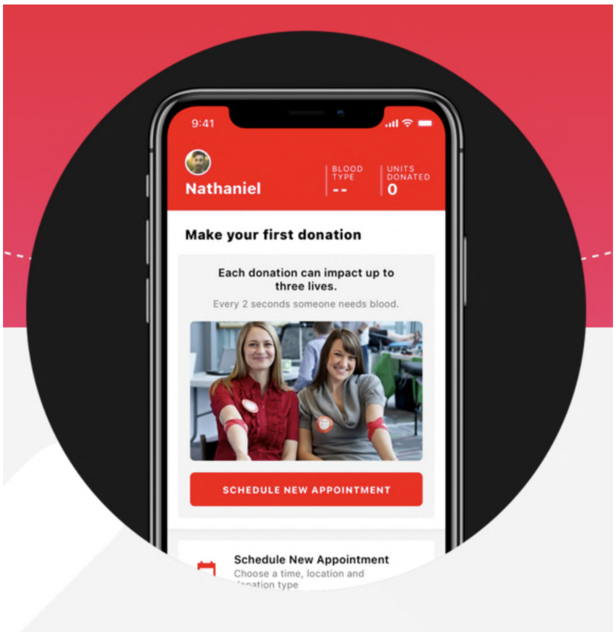
S·PRO

Sourced by Deliveroo



- **Developed by:** hedgehog lab
- **Category:** logistics
- **Platforms:** Android, iOS, web

One of the fastest-growing food delivery startups, as proven by its unicorn status, Deliveroo decided to diversify its business and launch Sourced. It's a digital sourcing platform for restaurants that was launched in 2019.



Blood Donor

- **Developed by:** 3-Sided Cube
- **Category:** medical
- **Platforms:** Android, iOS

Created for the American Red Cross, this application was a game-changer for the blood donation. Blood Donor allows users to easily set appointments at the nearest blood drive, get rewarded for their donations, and receive alerts about blood shortages.

MOBILE APP DEVELOPMENT TRENDS THAT WILL DEFINE 2023

What does the future hold for mobile app development? Let's break it down by examining these six mobile trends 2023 that will define the next year.

1 5G Will Power IoT, Mobile Games & Streaming Apps

In 2019, there were only 12 million 5G subscriptions worldwide. Now, their number is projected to rise to more than 4 billion by 2026. 5G connections are expected to constitute over half of all mobile connections in three regions by 2025: North America, Developed Asia Pacific, and Greater China.

In the UK, the 3.5 GHz 5G network is projected to cover 68% of its population by 2025, while its 700 MHz counterpart will be available to 100% of UK residents by the same year. Switzerland is expected to show similar results, with 99% of its population covered by the 700 MHz 5G network by 2025.

The rapid 5G adoption – and the increased mobile internet speed (e.g., 438 Mbps on average in South Korea) and extremely low latency that come with it – will be the major drivers for other mobile app trends.

Those trends are the growth of the Internet of Things and AR apps, namely. Mobile games and streaming apps will also benefit from an exceptional user experience powered by 5G.

2 More AR Apps Are on the Way

The mobile AR market was worth $12.45 billion in 2021. By 2026, it's expected to more than double in size and reach over $36 billion.

This wouldn't be possible without a significant increase in the number of mobile AR user devices, which is projected to rise from 600 million in 2020 to 1.74 billion in 2026.

Augmented reality apps already have quite a few success stories, from AR filters in Snapchat to the overwhelming success of Pokemon GO.

As one of the key mobile apps trends of 2023 and beyond, AR will continue to find its application in mobile games and social networking. It also has the potential to revolutionize online shopping (see IKEA Place) and bring the metaverse one step closer to everyday reality.

3 Security & Privacy Will Remain a Top Consumer Concern

Personal data ending up in the hands of cyber criminals is the number one concern among smartphone users, with half of the respondents flagging it as such in a 2020 survey. The number two concern among the respondents was getting defrauded and losing money – 49% of them reported feeling worried about it.

Regarding privacy, transparency in data collection and processing is key to building confidence in a mobile app. Being able to review, edit, or delete the data a mobile app has on the user is the number one way to build trust toward an app, according to respondents in another 2020 survey. One more top trust-building policy is a clear and easy-to-understand privacy statement.

These two mobile app industry trends align with a larger one: users worldwide feel more concerned about their privacy and data security. That trend rose in part due to the lockdowns and an increased reliance on online services that followed.

Now, these concerns are cited everywhere, being the number one potential risk for metaverse (U.S, 2022) to super apps (Australia, Germany, UK, US; 2022) and internet use in general (2021).

4 Swift & Kotlin Will Continue to Replace Objective-C & Java

In native app development, Swift and Kotlin have been steadily rising in popularity ever since their introduction in 2014 and 2011, respectively. However, the past five years have shown that these two mobile development languages are the new standard in creating native apps.

Compared to 2017, both Kotlin and Swift rose in popularity among mobile developers, as covered at the beginning of this report. Moreover, since then, Google has explicitly named Kotlin as the preferred Android development language in 2019. Swift, in its turn, naturally surpassed Objective-C in popularity in 2018.

Swift and Kotlin are significantly simpler in use and more secure than their respective predecessors. That's the main reason why their domination in native app development will persist in the coming years – and why they are key technologies for the future of mobile app development in general.

5 Machine Learning & AI Will Continue to Shape Mobile App Development

These two technologies have been a major driver for innovation in mobile app development for quite some time now. They already power predictive analytics, personalization, voice assistants, and chatbots – and have tremendous potential going forward.

Going forward, the advances in natural language, voice, and image processing will continue to shape the future of mobile development. They are expected to improve the quality of virtual assistants and conversational UI while making them more affordable at the same time.

6 Mobile Commerce Is App-First in Certain Markets

In 2021, shoppers spent a combined 100 billion hours in e-commerce apps – that's more than double than in 2018 (48.7 billion), showing 18-percent growth year-on-year. Apps seem to have the upper hand in the fight against mobile websites. In 2021, 54% of complete mobile orders were made using an app, while 46% were placed using a browser on a smartphone.

In the coming years, app-based mobile commerce will continue to grow and prevail as one of the key mobile app industry trends. However, the growth won't be even across all markets due to an already-visible difference in consumer preferences.

In China, for example, 65% of mobile orders are done in an app as of 2021. Similar app shopping levels can be seen in Malaysia (63%) and Vietnam (69%). This indicator amounts only to 48% in the United Kingdom and Japan.

The overall trend is this: mobile-first nations, especially in Asia Pacific, have higher rates of mobile commerce adoption – and a higher share of mobile orders placed via apps.

SUMMARY

As the demand for mobile apps increases worldwide so does the demand for mobile app development services. That's why both industries are expected to show strong growth rates in the coming years, both locally and globally.

The UK app development market is characterized by startups' unrivaled access to capital and strong annual growth, both in 2017-2022 (18.8%) and in the years to come (projected 9.49% in 2022-2026). It's the number one European country in the number of unicorns and startup investments, making it an attractive destination for tech startups.

The Swiss app development market forte is its engineers with strong experience and ethics, as well as deep knowledge of Fintech. Capital and startup distribution is more decentralized in Switzerland than in other European countries. Mobile app commerce, as it’s not as widespread as elsewhere on the continent, represents a growth opportunity in this app market.

Globally, the future of mobile app development will be defined by two larger groups of trends:

1. **Technology**. 5G adoption, the prevalence of Kotlin and Swift combined with the dominance of native development, and advances in AR and AI will all define the industry in the nearest future.
2. **Consumers.** Concerns about security and privacy and mobile commerce preferences are not to be disregarded, either.