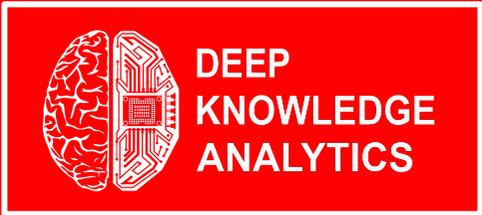
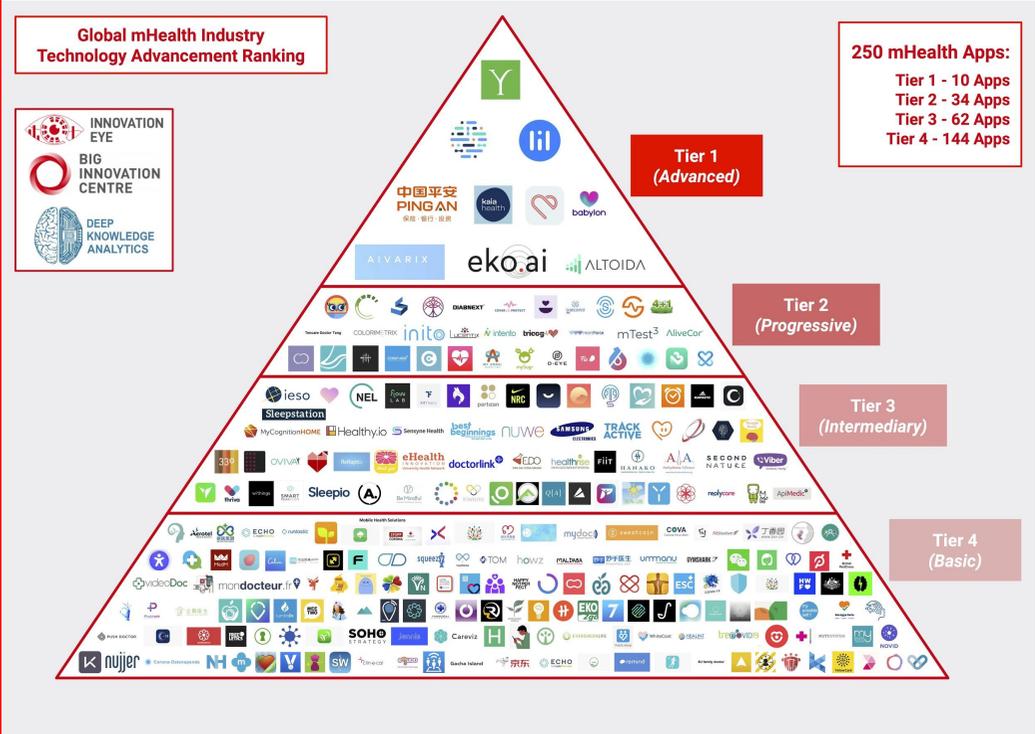
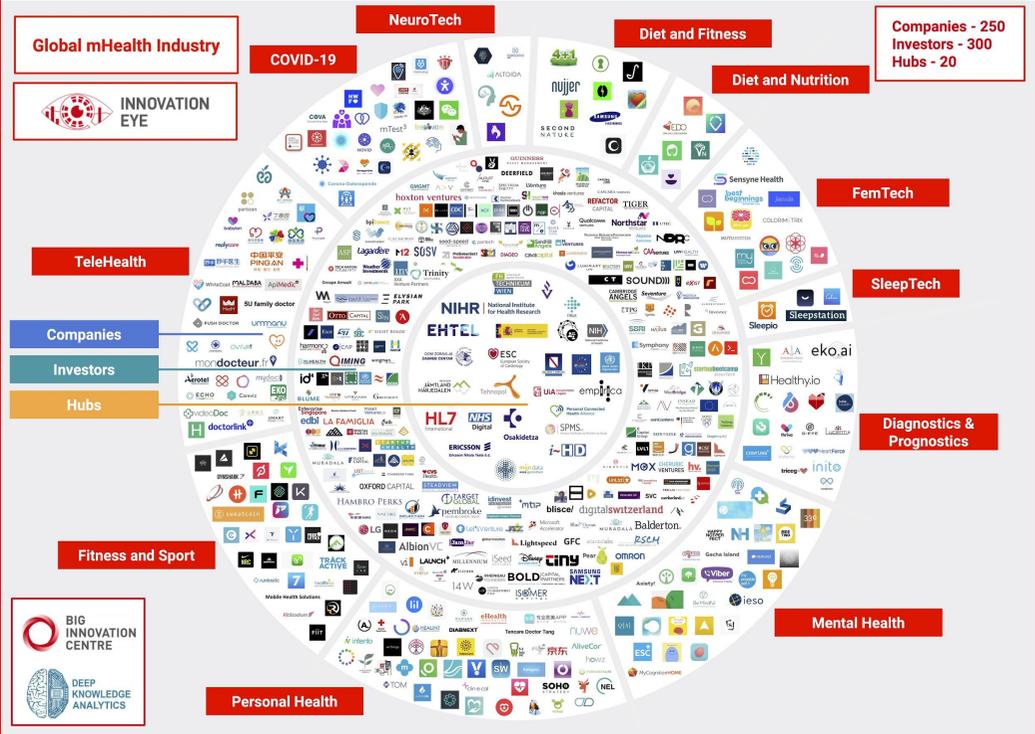


# Global mHealth Industry Landscape Overview 2020



APPS, COMPANIES, INVESTORS, HUBS



[www.innovationeye.com](http://www.innovationeye.com)  
[www.biginnovationcentre.com](http://www.biginnovationcentre.com)  
[www.dka.global](http://www.dka.global)

# Introduction

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“Global mHealth Industry Landscape Overview 2020”, produced by [Innovation Eye](#) (and powered by [Big Innovation Centre](#) and [Deep Knowledge Analytics](#)), presents a brief overview of the Global mHealth Industry Ecosystem.

The special case study profiles and categorizes 250 companies, 330 investors and 25 hubs, and classifies them according to 11 industry subsectors and practical applications (Personal Health, Mental Health, TeleHealth, COVID-19, NeuroTech, SleepTech, FemTech, Diet and Nutrition, Diet and Fitness, Fitness and Sport, and Diagnostics & Prognostics) and 12 regions (United Kingdom, USA, Singapore, China, Israel, Switzerland, Germany, France, Italy, Austria, India and Others).

The report also features an accompanying Interactive IT-Platform (consisting of a dynamic [mHealth Sectors MindMap](#) and a corresponding [mHealth Regions MindMap](#)) containing individual profiles on all entities companies included in the report.

Additionally, the analysis includes a preliminary ranking of its apps’ level of technological advancement, segregating all 250 companies and their apps into 4 distinct tiers of advancement: Advanced, Progressive, Intermediary and Basic.

This first edition was produced in order to gain a better understanding of the general size and diversity of the mHealth sector, and future iterations of the report and associated IT-Platforms will include a more diverse array of sectors and practical applications, a larger scope of geographic regions, and a deeper and more comprehensive set of factors and parameters used to formulate the technology advancement ranking component of the special analytical case study.

# Methodology

The present special analytical case study is intended to provide insight into the most capable, functional, popular and sophisticated mobile health (mHealth) apps available today, including a representative sample of the majority of the market's constituent sectors, in order to derive insights into major industry growth and diversification factors, and lay the groundwork for more comprehensive future iterations of the report.

Importantly, the special case study also provides a preliminary ranking of the level of technological sophistication and advancement offered by the mHealth apps featured in its MindMaps and lists.

mHealth apps, companies and developers were selected for inclusion in the special case study in accordance with factors that impact their overall applicability and potential user-base, scope of applications and functionalities, and technological sophistication. The report has made a specific effort to feature a sufficiently wide level of geographic diversity in the constituent apps and companies comprising its list, selecting a representative sample of the most useful apps within each region.

The data represented in the company profiles featured in this report's accompanying Global mHealth Interactive IT-Platform were aggregated from a wide variety of reputable and public sources of data, including general and industry-specific databases, media and news reports, Apple and Google Play stores, and company websites. While the information herein is believed to be reliable, the report's authors make no representation as to the accuracy or completeness of its constituent materials, information and data.

## mHealth Sector Classification

Personal Health

Mental Health

TeleHealth

NeuroTech

SleepTech

FemTech

COVID-19

Diet and Nutrition

Diet and Fitness

Fitness and Sport

Diagnostics & Prognostics

## mHealth Regional Classification

United Kingdom

United States of America

Singapore

China

Israel

Switzerland

Germany

France

Italy

Austria

India

Others

# Global mHealth Industry

# NeuroTech

# Diet and Fitness

Companies - 250  
Investors - 300  
Hubs - 20

# COVID-19

# Diet and Nutrition



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# TeleHealth

# FemTech

# Companies

# Investors

# Hubs

# SleepTech

# Diagnostics & Prognostics

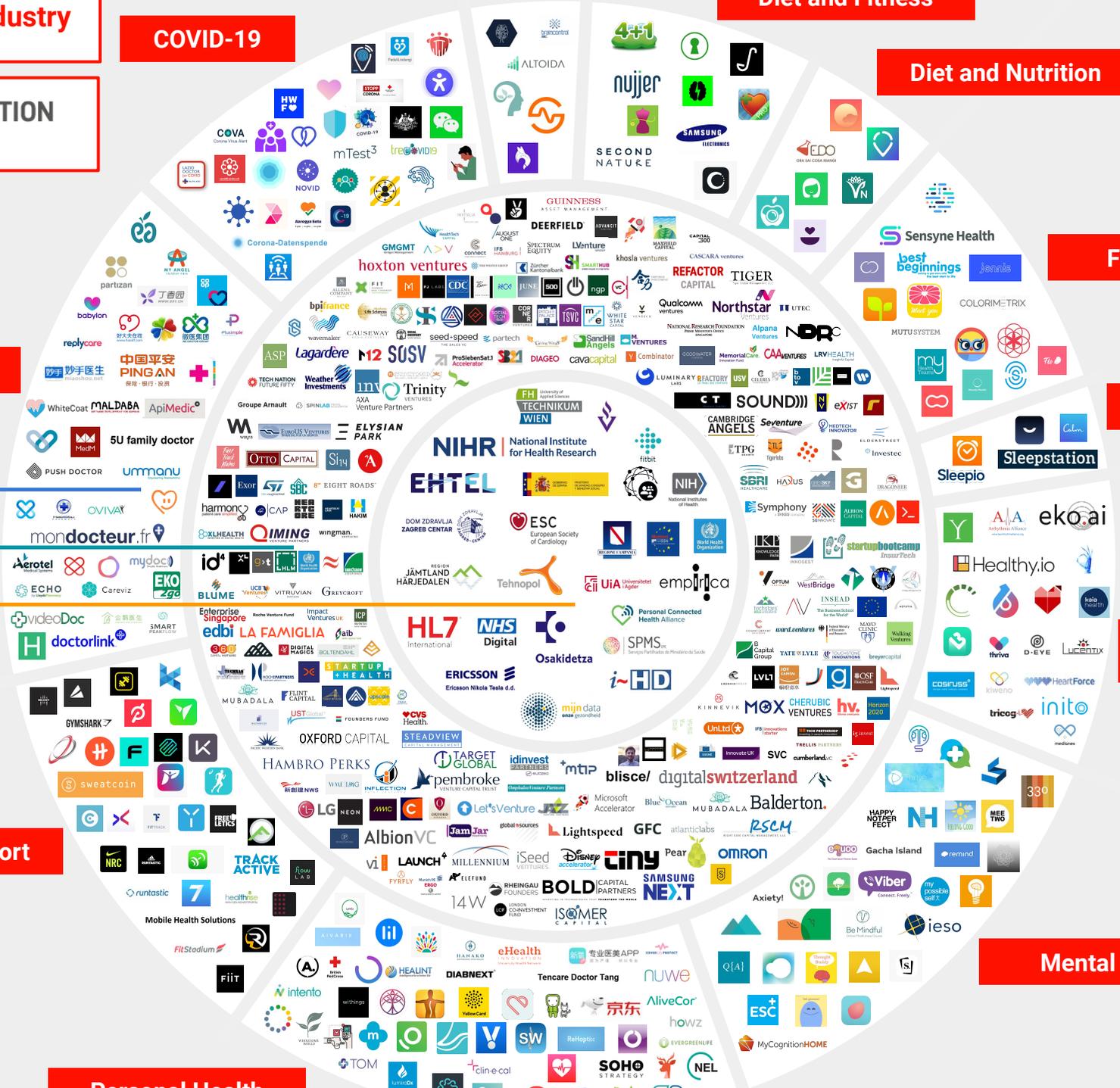
# Fitness and Sport

# Mental Health

# Personal Health

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# Global mHealth Industry



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Germany

US

Companies - 250  
Investors - 300  
Hubs - 20

France

Italy

China

India

Companies

Investors

Hubs

Austria

Israel

UK

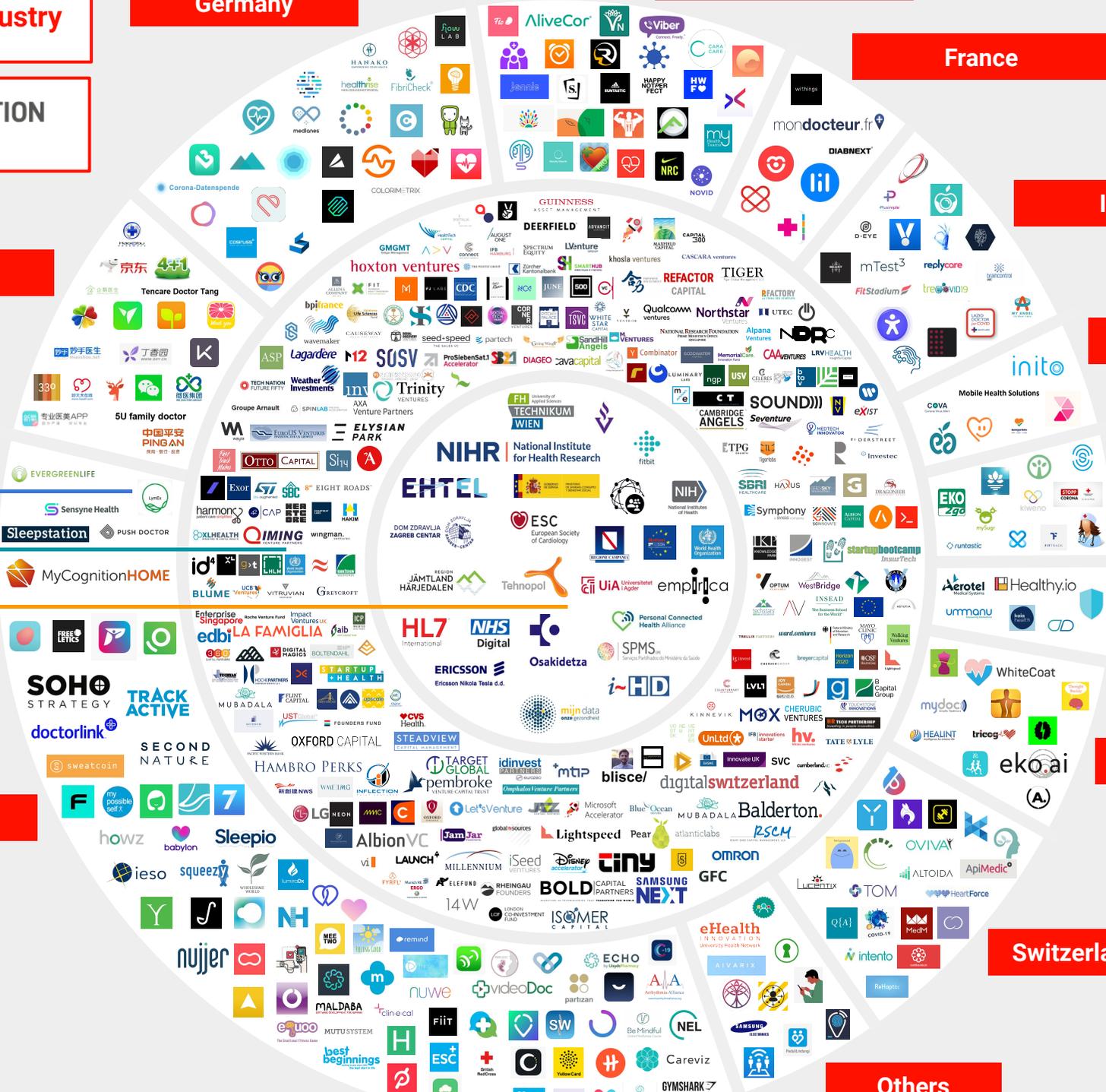
Singapore

BIG INNOVATION CENTRE



Switzerland

Others



# 4-Tier Technology Advancement Ranking System

The present analysis employs a 4-tier ranking of apps according to their levels of technological advancement.

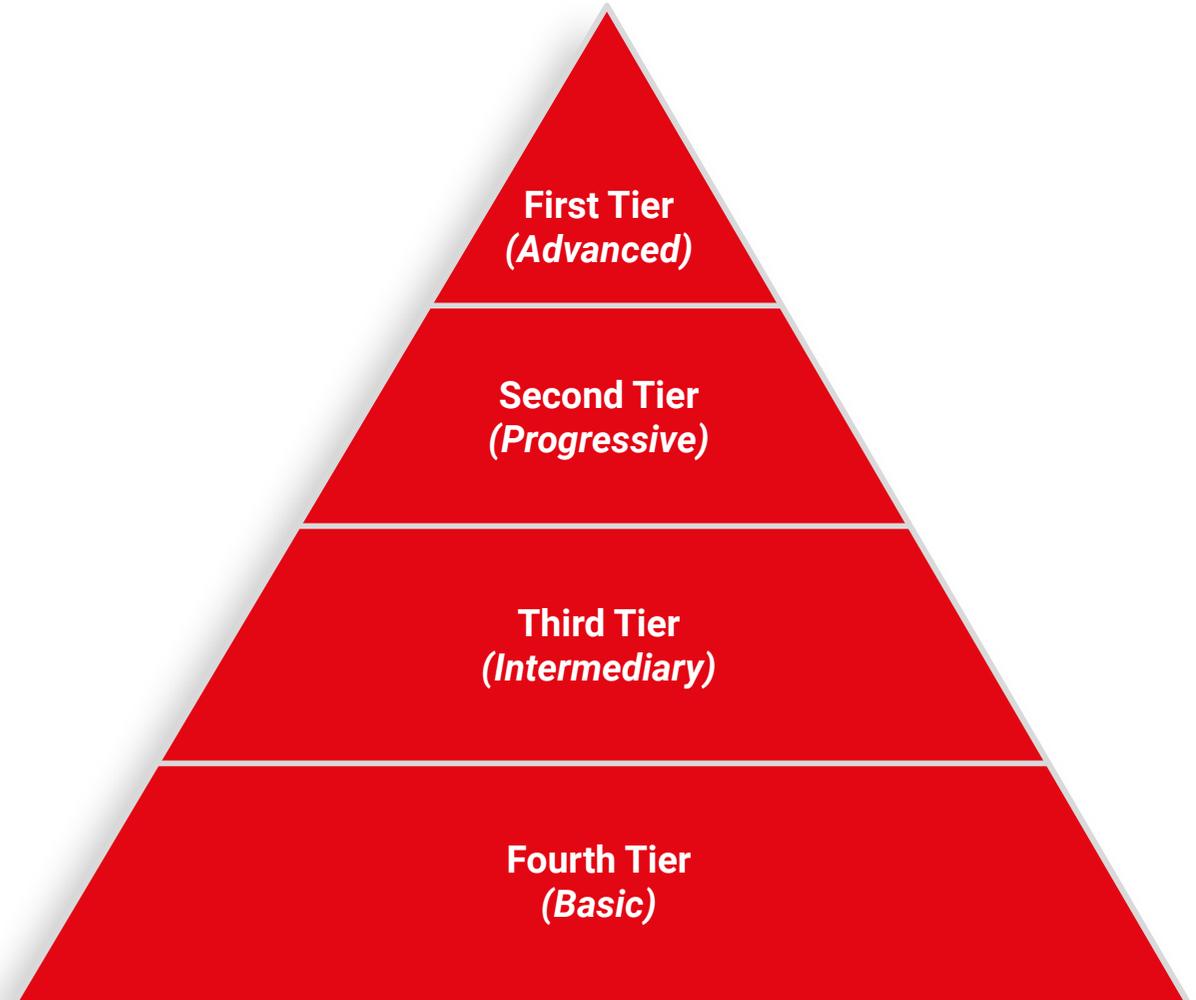
Tier 1 apps utilize advanced forms of Artificial Intelligence (such as Deep Learning and Machine Learning), have a wide scope of use-cases, a broad focus and a large potential user-base, feature a high degree of user personalization and/or incorporate a high degree of specialist or expert knowledge.

Tier 2 apps incorporate modern (but not cutting edge) forms of AI and/or feature connectivity to wearables and other external devices, have a fairly broad focus and scope of use-cases, personalized data analysis and incorporate some degree of expert knowledge.

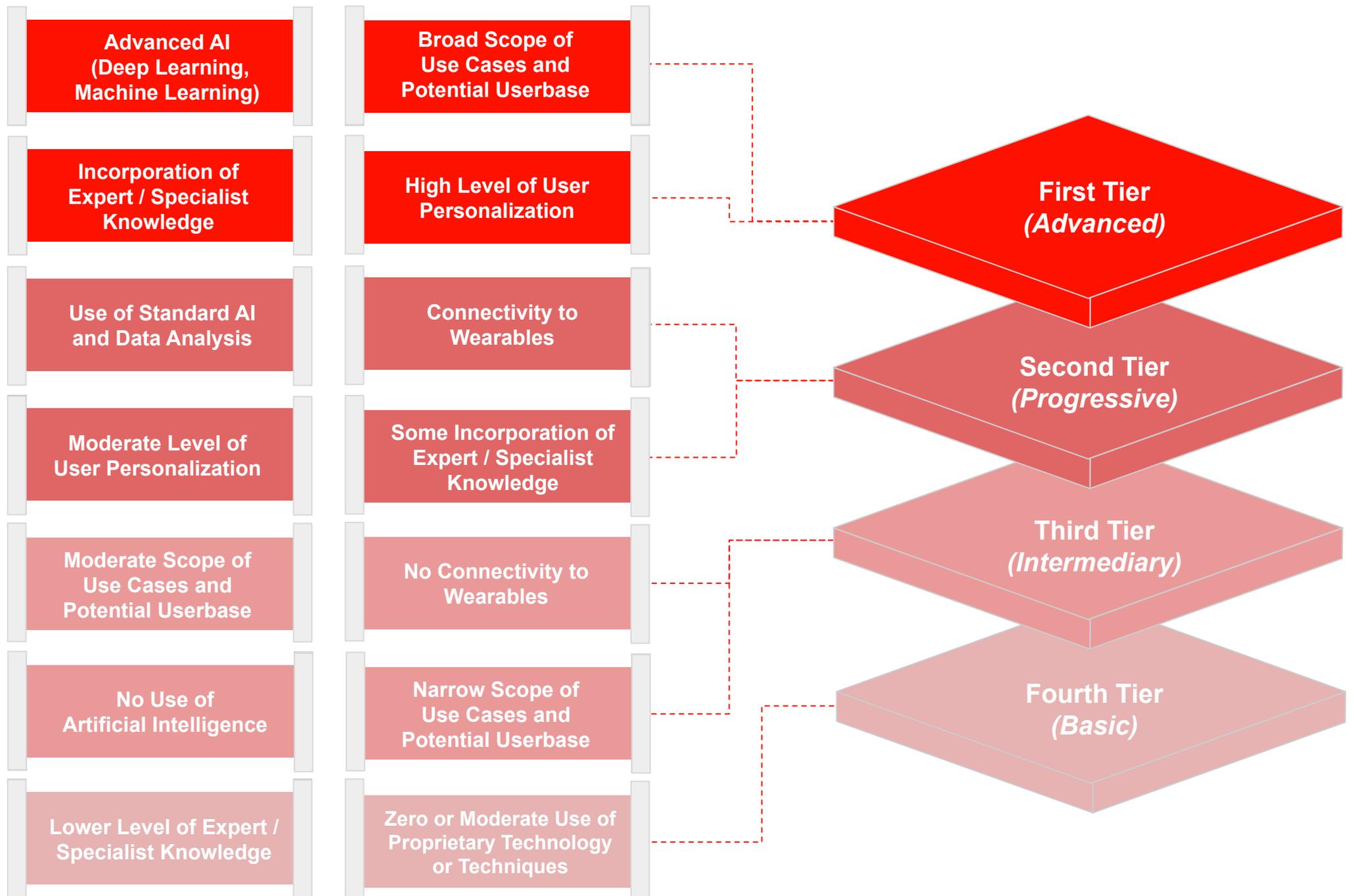
Tier 3 apps feature very little or no incorporation of AI, moderate user personalization, low or no connectivity to wearables and typically have a more moderate scope of use cases.

Tier 4 apps have the most narrow scope of use-cases, do not utilize a substantial degree proprietary technology or techniques, have low to zero use of specialist or expert knowledge, and no incorporation of AI.

This general framework will be expanded in future editions of this report to encompass a broader scope of factors and features taken into account when formulating app technology advancement rankings.



# 4-Tier Technology Advancement Ranking System



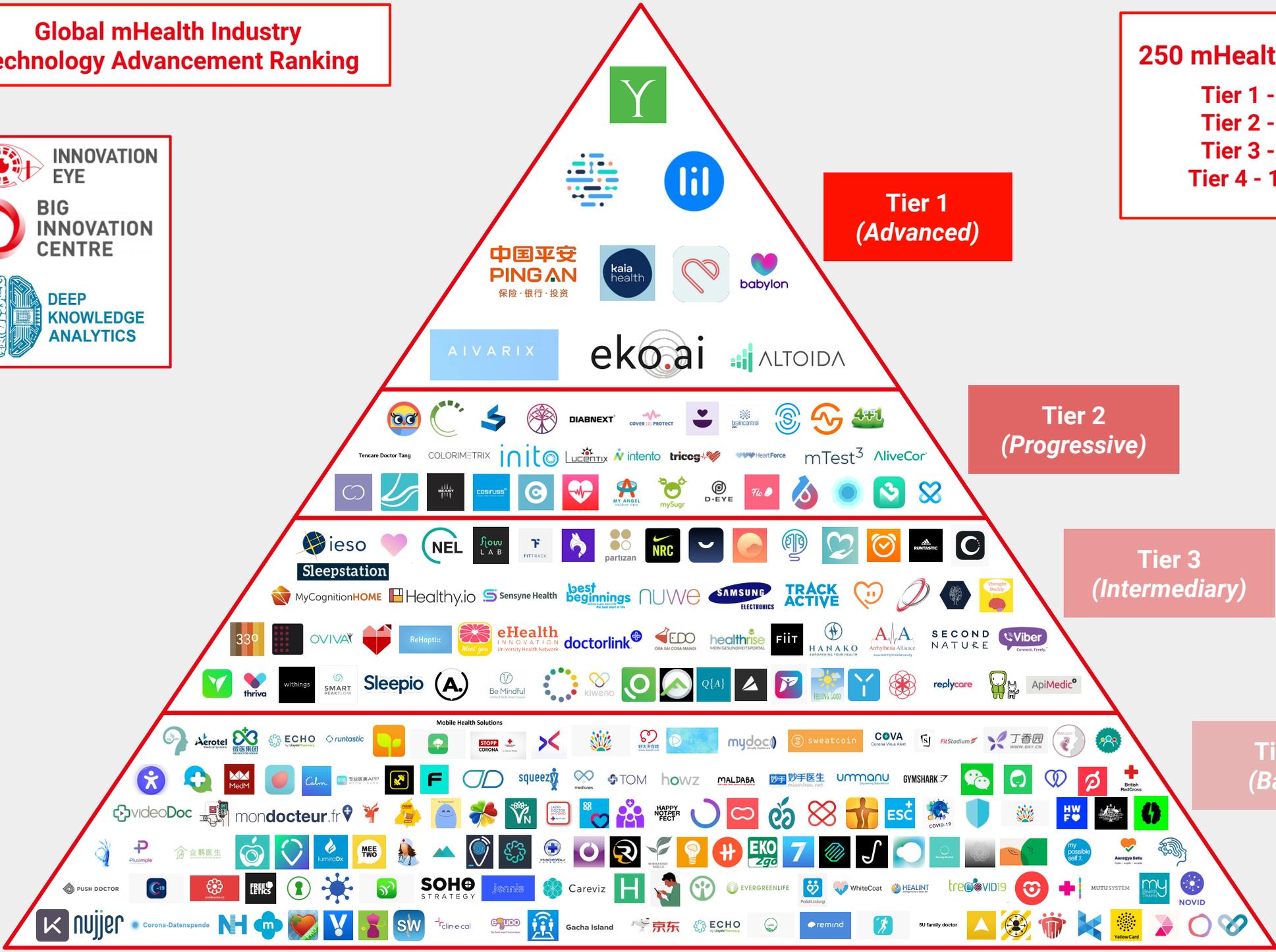
# Global mHealth Industry Technology Advancement Ranking

**250 mHealth Apps:**  
 Tier 1 - 10 Apps  
 Tier 2 - 34 Apps  
 Tier 3 - 62 Apps  
 Tier 4 - 144 Apps

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**DEEP KNOWLEDGE ANALYTICS**



**Tier 1  
(Advanced)**

**Tier 2  
(Progressive)**

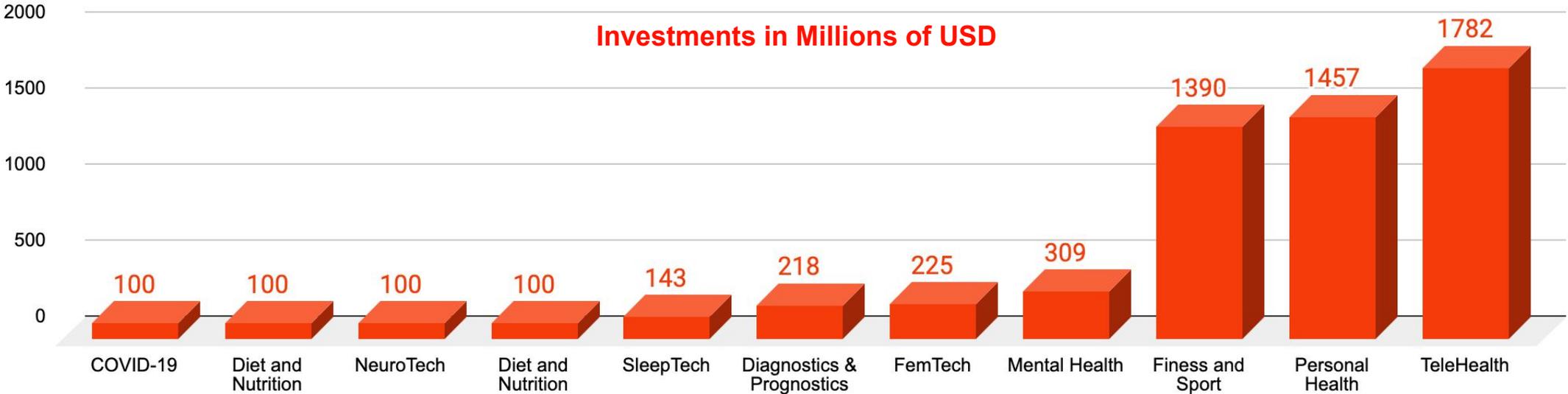
**Tier 3  
(Intermediary)**

**Tier 4  
(Basic)**

# Comparative Analysis of 250 mHealth Companies

Overall, the size of the mHealth sector, the range and diversity of its constituent sectors and practical applications, and the level of technological sophistication offered by its apps has seen tremendous growth in recent years, driven in tandem by increasing mobile phone penetration (the proportion of the global population with access to mobile phones generally and smartphones in particular) and internet availability. Furthermore, these positive growth factors also appear to be working synergistically with a number of negative growth factors that increase the need for novel approaches to healthcare delivery and personal health optimization, including rising healthcare costs, decreasing healthcare affordability and economic disparities centered around access to healthcare resources and services, as well as ongoing rise in the prevalence of Non-Communicable Diseases (NCDs) and ageing population in developed nations.

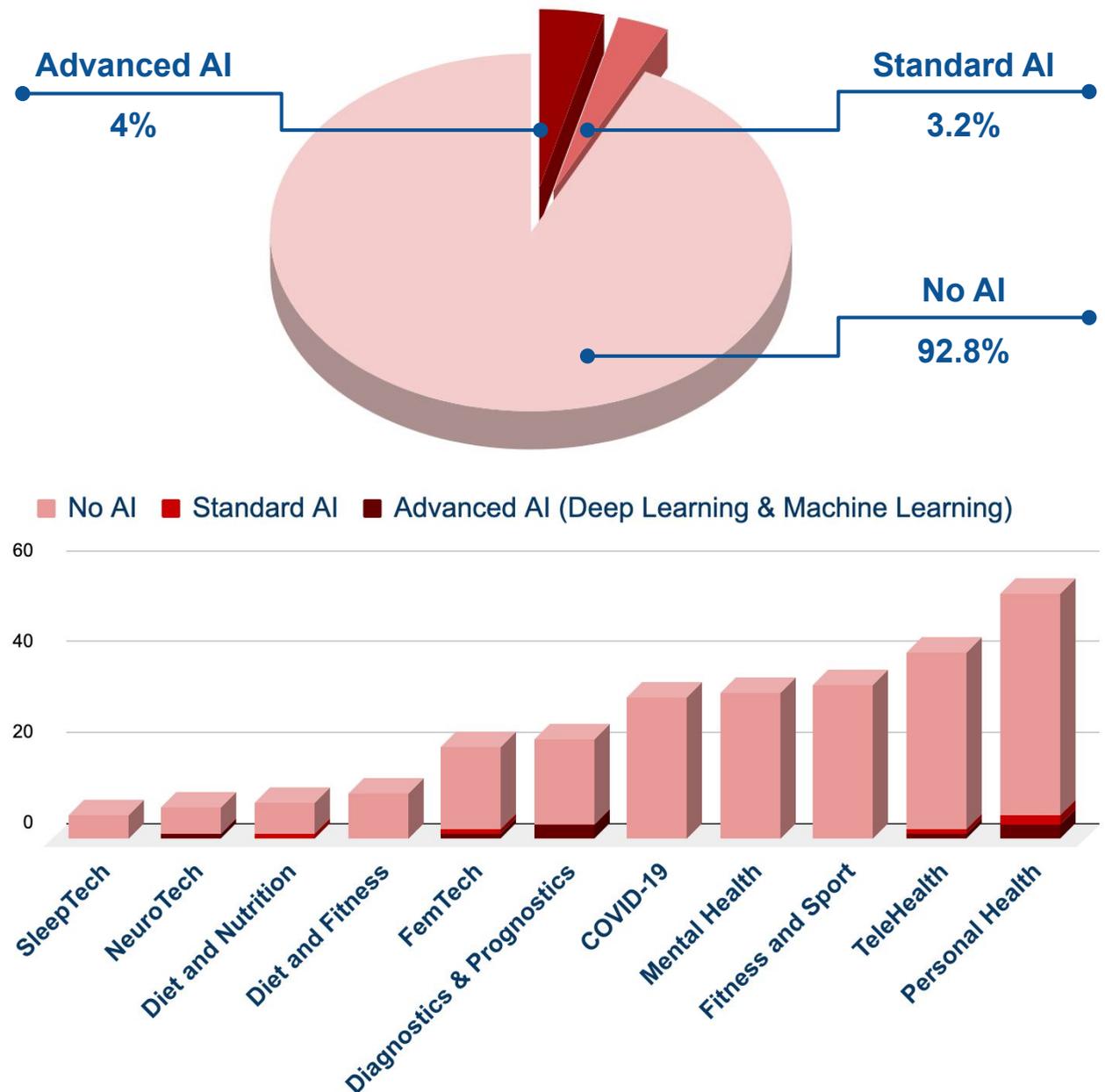
These factors, in combination with the overall rise in mHealth app technological sophistication, are converging in order to establish a self-perpetuating mechanism driving overall industry growth and diversification. And, while traditional and long-standing mHealth sectors such as TeleHealth, Personal Health and Fitness and Sport still appear to occupy dominant proportions of the overall market, we are also seeing significant growth in several emergent sectors like apps focused on Mental Health, FemTech and those aiming to improve access to services, social connectivity and quality of life for the elderly growing (as subsectors of the overall Personal Health and TeleHealth segments of the industry) quite rapidly as the issues they aim to ameliorate and optimize continue gaining increasing levels of public awareness, and rising degrees of public and private sector prioritization and support.



# Main Technological Trends in mHealth in 2020

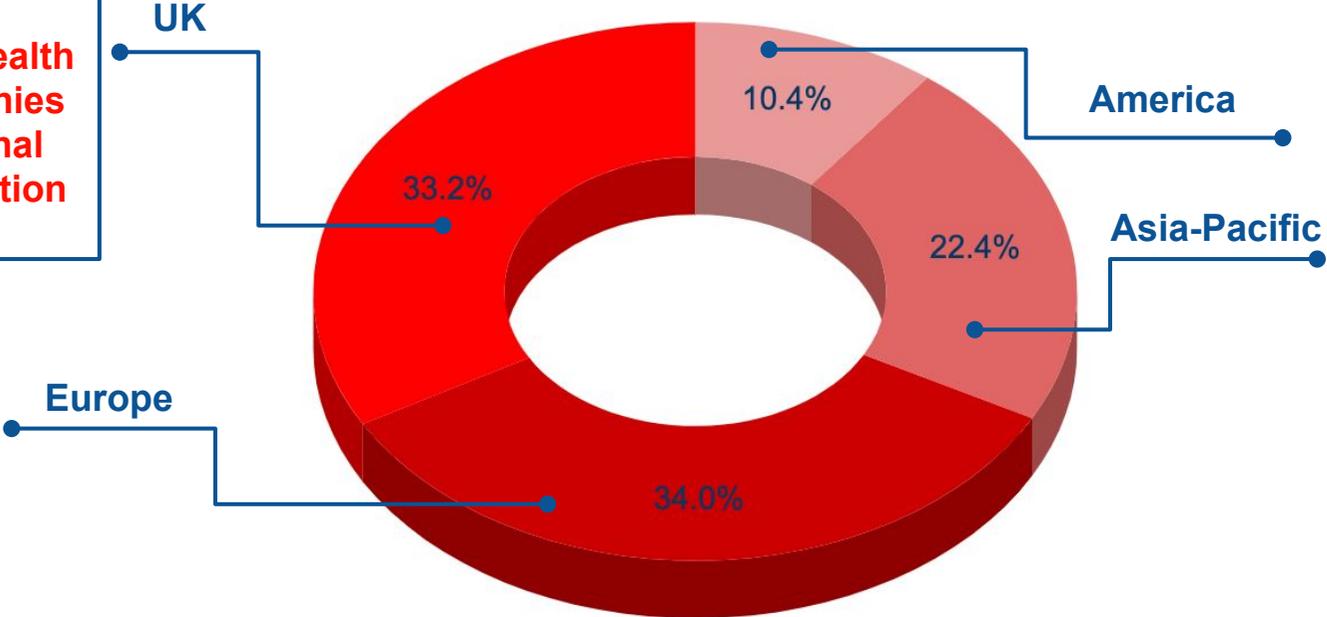
The role of AI in mHealth is growing rapidly, with a still-small but steadily increasing proportion of mHealth apps incorporating modern AI technologies and techniques, data science and personalized analysis of user data in order to deliver tailored recommendations, due to the increasing sophistication and functionality of AI generally, as well as its decreasing cost and growing availability to SMEs. In turn, this appears to be driving an overall increase in the level of user personalization, and the precision of user-specific data monitoring, analysis and tailored recommendations offered by mHealth apps. As the capacity to collect and analyze larger volumes of user data rises, the breadth and depth of insights that can be extracted from AI-driven analysis of such data also increases. Meanwhile, the number of apps that feature advanced and cutting-edge forms of AI, such as Machine Learning and Deep Learning, is also growing. We see this general trend particularly present in regions where governments have prioritized the development of modern, progressive and cutting-edge AI technologies as a major component of their national agendas and industrial development strategies, such as Asia-Pacific and the UK.

Proportion of mHealth Apps Incorporating Advanced and Standard AI

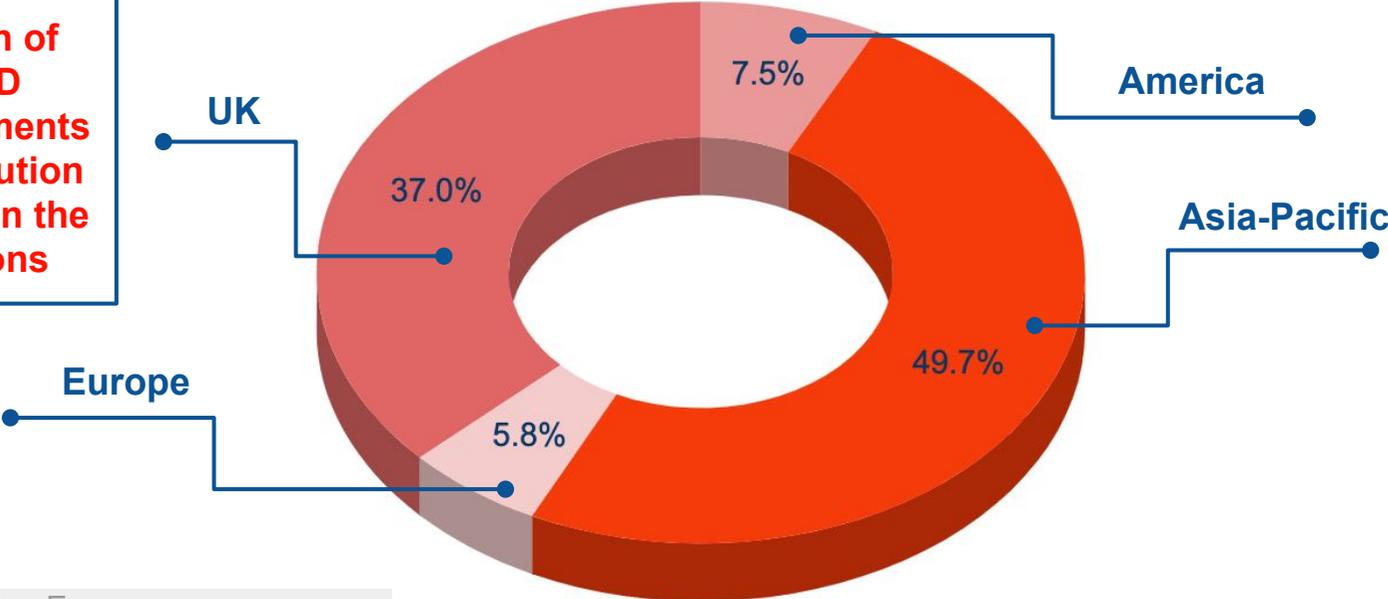


# Regional Distribution of mHealth Apps by Quantity and Investment Volume

250 mHealth Companies Regional distribution



5.9bln of USD Investments distribution between the regions



An analysis of the regional distribution of the apps selected for inclusion in the present special case study, and of the volume of investment in the companies behind their development, reveal some interesting trends.

The majority of apps that met the inclusion criteria of the present analysis are made by companies based in the EU and UK, with slightly less from Asia-Pacific, and with North America comprising the region with the least number of included companies.

Meanwhile, the region with the highest level of investment is Asia-Pacific and the UK, both of which are home to governments that seem to be proactively prioritizing the use of mHealth to decrease the economic burden of health issues upon their national economies, which may be a contributing factor to this interesting observation.

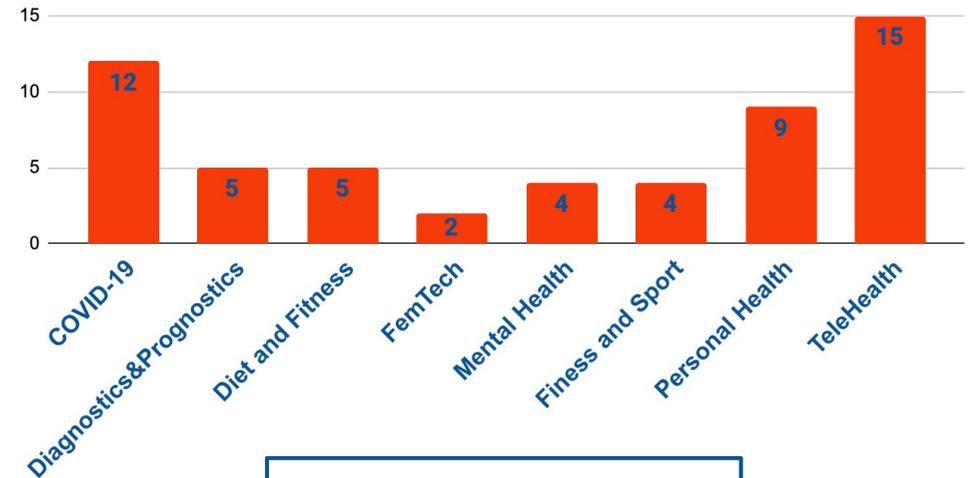
# Main Trends in Asia

The mHealth industry in Asia is one of the most rapidly growing segments, in line with high rates of mobile phone and internet penetration within the geographically broad region, with recent projections indicating that the industry will grow at a CAGR of 8.7% between now and 2025.

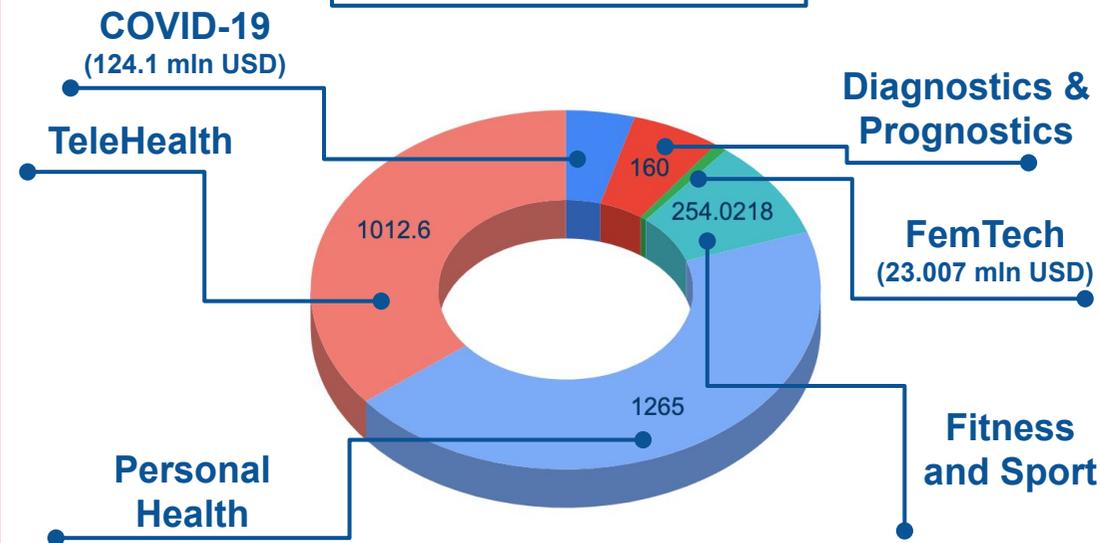
Like many other regions generally, and Europe in particular, the rapidly growing proportion of individuals aged 60+ seen in Asia is driving the growth of a large number of mHealth solutions specifically targeted at the elderly, and given the economic pressure that ageing population is projected to put upon many countries and territories' national healthcare systems, we can expect this to remain a significant market growth factor in the years to come.

We also see very active participation in the mHealth Industry by some of Asia's largest Tech corporations, such as Tencent, which either owns or has made major investments in a significant proportion of the Asia-based mHealth apps included in the present special case study, including Ping An Good Doctor, Tencent Trusted Doctor, and WeChat (which has released a mandatory COVID-19 contact tracing app, the WeChat Intelligent Healthcare platform, that allows users to book appointments and make payments at hospitals and other medical facilities through WeChat public accounts, and WeSure, a medical insurance underwritten by Tencent and insurer Taikang). Given Tencent's substantial AI resources and IP, it is also not surprising to see several Tencent-associated apps that use either advanced or standard forms of AI.

**Number of Companies and Apps per Industry Sector**



**Investments (in mln USD)**

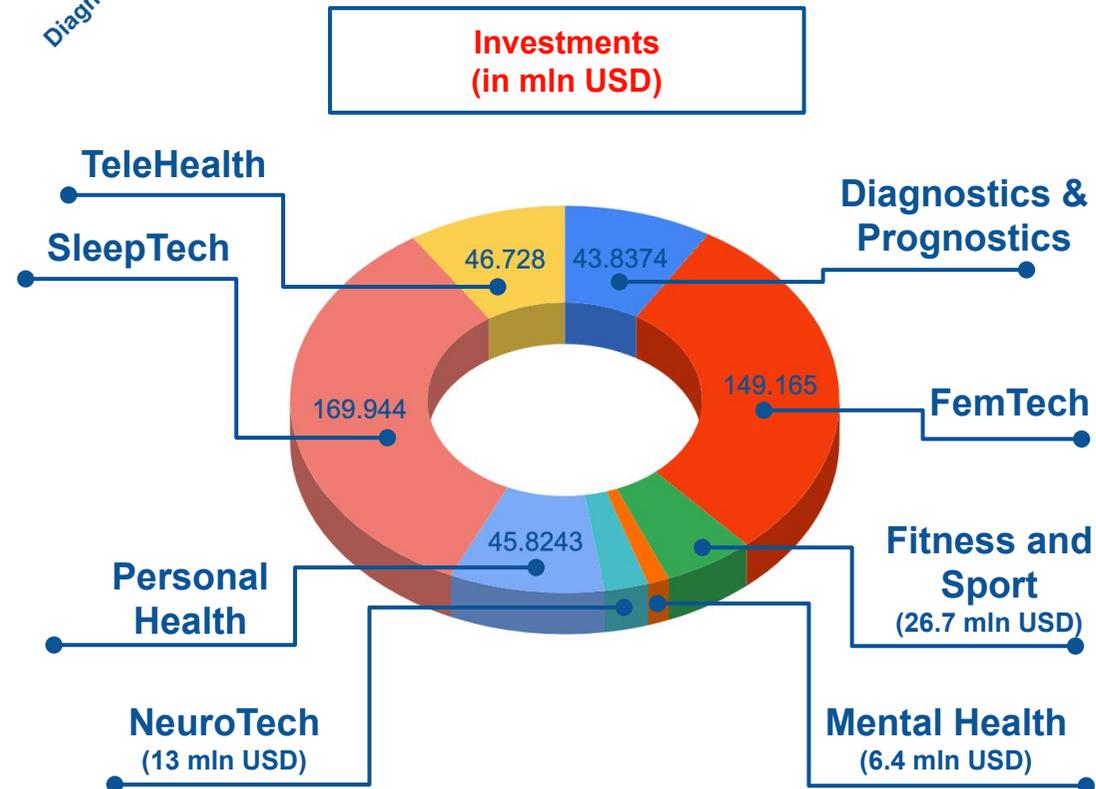
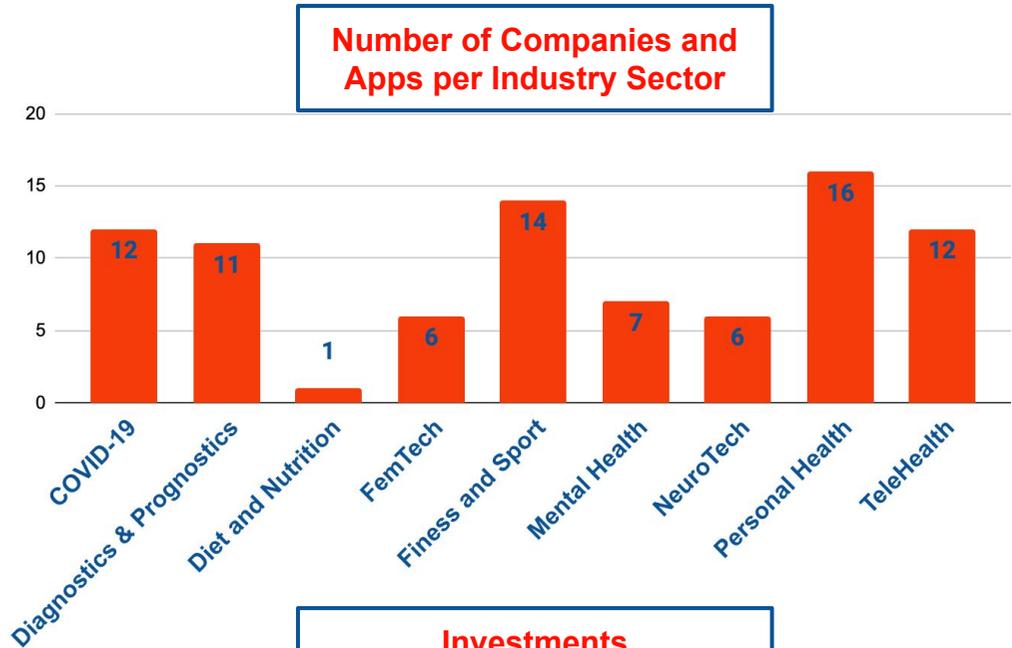


# Main trends in EU

From a policy standpoint, many EU governments appear to be prioritizing the development of their public mHealth resources, as well as proactively supporting the growth of their private mHealth industries, which is serving to drive regional industry growth.

One major milestone in this regard was the establishment of the [mHealth European Hub](#), a collaboration between the World Health organization and the International Telecommunication Union of Switzerland to support countries in integrating the use of mHealth in national healthcare services. Initiated in 2017, the project builds on lessons learnt from the “Be He@lthy, Be Mobile” initiative and is funded through the European Union’s Horizon 2020 mechanism.

The hub seeks to establish guidelines for best practices and support other regional initiatives and governments within the EU to implement relevant initiatives and to scale their benefits nationally, including research into key drivers and challenges for the adoption of mHealth in the European region and identifying standards, regulatory and policy goals relevant to mHealth. The Hub’s [formal objectives](#) include establishing the infrastructure necessary for collecting and disseminating research and experience relating to the large-scale implementation of mHealth programs, and building the capacity for the Hub to be able to support Member States and implementing partners in setting up large-scale mHealth programs nationally and locally.



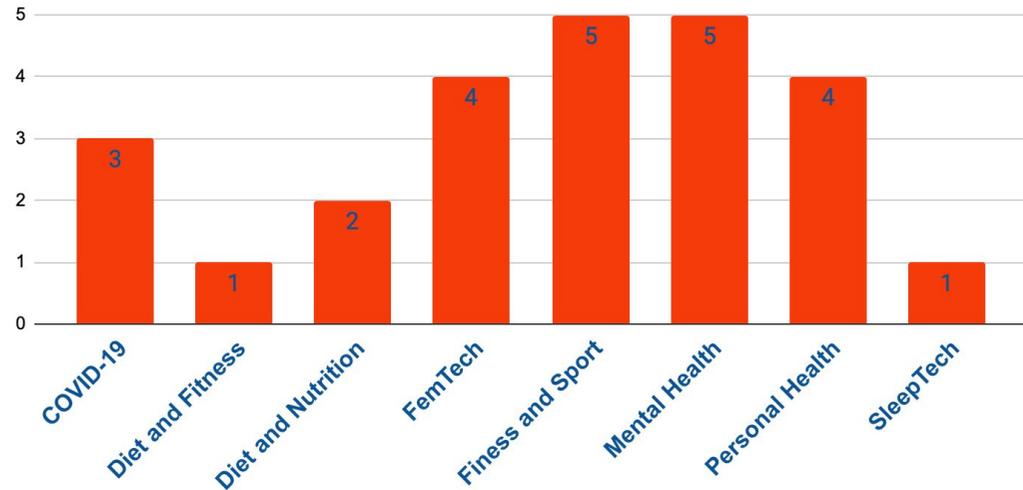
# Main Trends in the US

The United States has generally lower levels of explicit support on the growth of its mHealth ecosystem, and the use of mHealth apps as a specific tool to reduce the burden of ageing population and NCDs, by the federal government than other countries, like the UK, which seem to be viewing the industry as a highly actionable strategy to reducing major healthcare and economic burdens related to specific medical and quality of life issues in its general population.

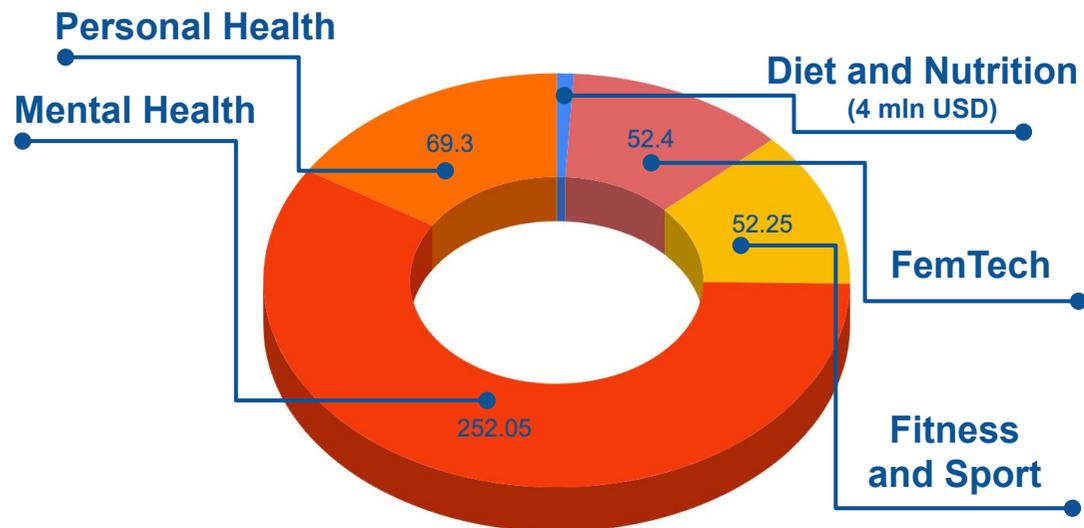
We also see a generally lower degree of advanced and standard AI adoption and on-boarding by US-based apps than those in the UK and Asia, which is somewhat anomalous given the USA's strength in the global AI race, and the prioritization of AI prowess and international dominance by the country's federal government.

While the United States still occupies a very large proportion of the global mHealth market in terms of numbers of apps and users and volume of investments, generally speaking we see a higher proportion of apps with lower technological sophistication and range of use cases (and many focused on generic categories like Fitness and Sport and Diet and Nutrition), despite visible growth in other more recent and emergent mHealth sectors such as COVID-19, FemTech and Mental Health. Furthermore, the generally low number of USA apps that met the selection criteria for inclusion in the present special case study reflects the generally lower breadth use-cases, scope of functionality and degree of technological sophistication found among USA-based apps during the course of the present analysis.

Number of Companies and Apps per Industry Sector



Investments (in mln USD)



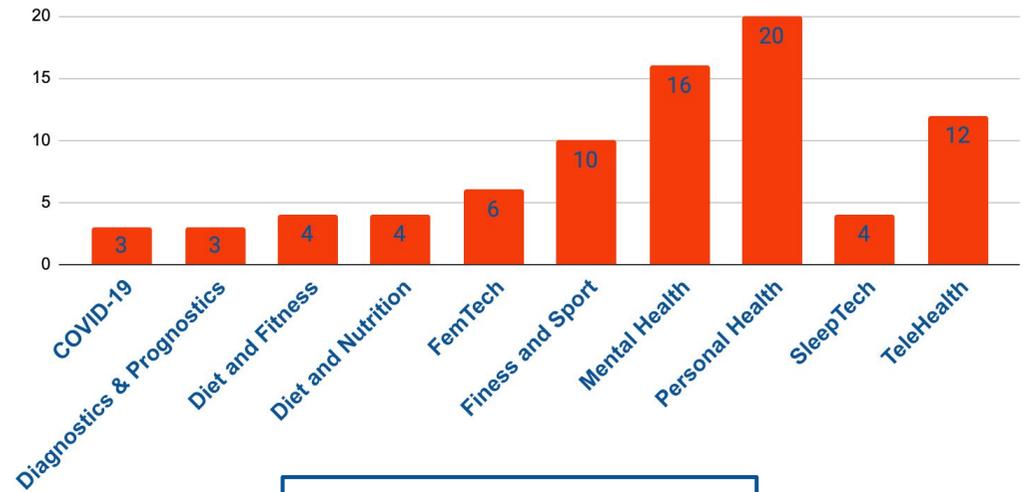
# Main Trends in the UK

The UK National Health Service has in recent years taken an active stance on supporting increased access to health resources for its citizens. In 2017, after four years of debate on how to effectively analyze new mHealth apps, the NHS (and NHS Digital in particular) launched its library of mHealth Apps in 2017, allowing NHS-approved reviewers to assess potential mobile health apps available to UK citizens, and approve them for inclusion on the platform if they comply with government safety and effectiveness standards.

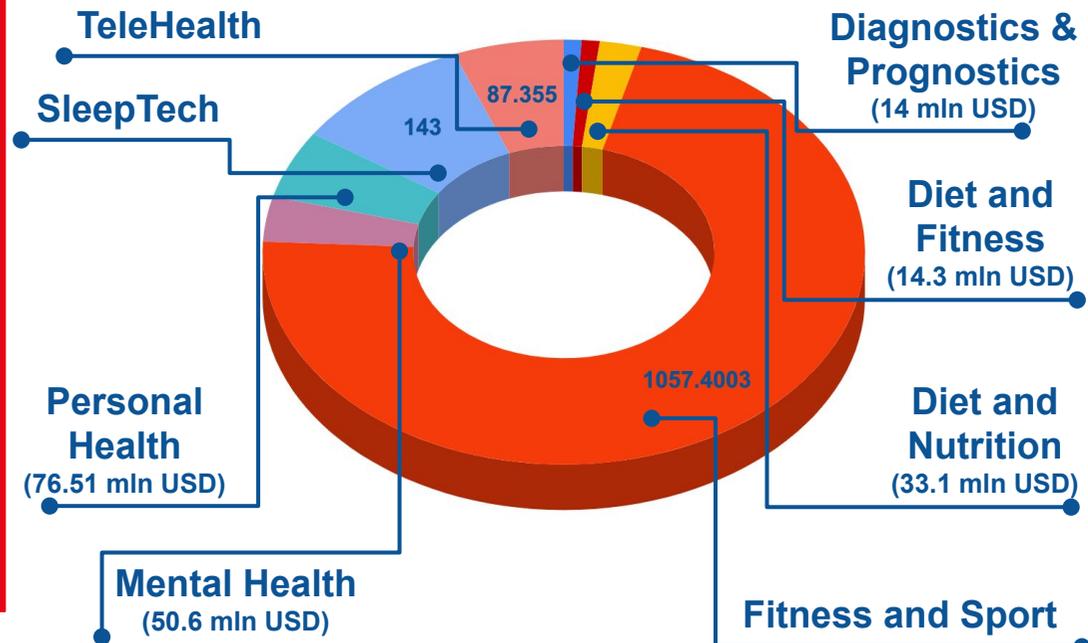
Given the UK government's high-level prioritization of developing their AI public and private sector resources, and choosing AI as one of their four main Industrial Strategy Grand Challenges, combined with the nation's overall reputation as an international leader in AI, we can expect the technological sophistication of mHealth apps, as well as the number of which incorporate modern and advanced AI techniques and technologies in the UK to increase in the coming years.

We also see rapid growth in the subectors of TeleHealth and Personal Health focused on providing remote care and monitoring for the elderly, and general overall quality of life and wellness in those aged 60+, which is sensible given the degree with which the UK government has prioritized the issue of ageing population, selecting it as one of their four Industrial Strategy Grand Challenges, and we can expect the overall proportion of UK mHealth apps focused on the elderly to increase in the coming years as well.

**Number of Companies and Apps per Industry Sector**



**Investments (in mln USD)**



# Main Findings

Generally speaking, the global mHealth market is seeing steady growth in terms of quantity of users, numbers of companies active within the sector, levels of investment and an increasing diversification of practical applications and solutions, driven in part by increasing mobile phone penetration and use rates, and ongoing growth in internet connectivity around the world, and with recent estimates projecting the global market to reach 57.57 billion USD by 2026, with a CAGR of 29.1% between 2019 and 2026.

We are also seeing an increasing shift from narrowly-focused apps towards ones with a broader scope of use-cases, and a growing prioritization of preventive approaches to health. Several sectors that previously occupied smaller proportions of the overall mHealth market are also growing rapidly, such as Mental Health apps, likely due to growing levels of public awareness of the impact and importance of anxiety, depression and overall social and psychological wellness.

The extent with which mHealth apps are incorporating AI technologies, data science techniques and user-specific data analysis in order to provide personalized recommendations, while still small, is also steadily increasing, spurred by the increasing democratization of AI techniques and technologies, which are increasing in capability and functionality, and decreasing in cost, making them available to a wider range of mHealth companies and developers. Additionally, the number of apps incorporating advanced AI techniques such as Deep Learning and Machine Learning is also growing, for many of the same reasons.

One factor that appears to be driving overall industry growth in recent years is the increasing need for and adoption of mHealth solutions targeted towards maintaining the health, functionality, mental wellbeing and overall quality of life in the elderly, as the overall size of many developed nations ageing populations continue to increase, placing pressure on the economic sustainability of national healthcare and social welfare systems. One of the fastest growing segments within this particular sector is mHealth solutions that allow for remote patient monitoring, TeleHealth and care provision (CareTech) for the elderly in order to deliver access to care in a more cost effective and safe manner.

Meanwhile, one of the biggest and most recent factors driving market growth and diversification is the ongoing COVID-19 health crisis, which is serving both to increase the number of COVID-19 symptom tracking and contact tracing apps, as well as to drive overall industry growth more broadly, as individuals continue to pay increasing attention to their overall health in general, while also avoiding physical interaction and unnecessary visits to healthcare providers.

It would be reasonable to assume that the industry will continue to feel the effects of the current coronavirus pandemic for many years to come, given general growth in the perceived importance of general health and wellness, as well as protection from potential future pandemics and biodefense threats, combined with the rapidly growing interest in health-related sectors by the global investment community.

# About Innovation Eye

[Innovation Eye](#) was jointly founded in March 2019 by Big Innovation Centre and Deep Knowledge Analytics to provide sophisticated market analytics, industry intelligence, comparative industry classification frameworks and benchmarking case studies.



**INNOVATION  
EYE**

The company develops advanced tools for analysis and visualization of technology and innovation ecosystems through reports, custom-made consultancy products and services, and dynamic interactive online IT-platform with the aim of optimizing the strategic agendas of international corporations and technocratic governments seeking to implement, stabilise and optimise their global positions in advanced technology-driven industries.

Big Innovation Centre has substantial expertise in these areas, having run cross-industry taskforces since 2011 on building innovation and investment ecosystems, future proofing corporate businesses models, and being the secretariat company for the UK All-Party Parliamentary Group on Blockchain and the All-Party Parliamentary Group on Artificial Intelligence. Meanwhile, Deep Knowledge Analytics has established itself as the leader of sophisticated DeepTech industry intelligence and analytics relating to DeepTech sectors including AI, FinTech and GovTech.

By combining AI-driven big data analytics with advanced infographic mind-maps and the production of state-of-the-art data visualization and dynamic data analytics, industry intelligence platforms, Innovation Eye aims to provide multinational corporate and governmental clients with an advanced - and user-friendly - suite of tools, frameworks and solutions for formulating, optimising and stabilising their development and execution plans underlying their specific strategic interests.

In summary, Innovation Eye:

- implements advanced ecosystem mapping projects relating to interactive online IT-platforms using dynamic infographic mind-maps and smart-matching capabilities for industry stakeholders
- does tangible technological forecasting of advanced tech-driven industries and innovation economies
- informs international corporations and governments on how to become and remain competitive and utilise their resources in a maximally efficient and synergetic manner

# About Big Innovation Centre

[Big Innovation Centre](#) is a leading hub of innovative companies and organisations, thought leaders and 'what works' open innovators. Launched in September 2011, Big Innovation Centre exists to build a global innovation hub by 2025, create great companies, and make the world more purposeful and inclusive through the enormous potential of technology, creativity and innovation.



Big Innovation Centre is a business-backed innovation hub that provides thought leadership, research and consulting services for big companies and public bodies to address shared economic challenges and raise their innovative capabilities.

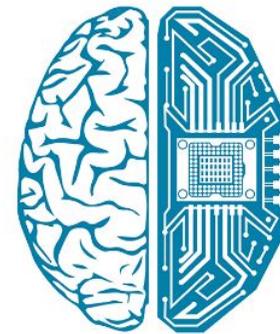
The company convenes innovation champions in companies, government and world class universities, thinking forward about how to promote innovation and the best use of intellectual property, in particular through co-creating open innovation ecosystems and communities, and piloting digital platforms where they see gaps and opportunities in order to create more purposeful, mission-driven organisations, which we think are a key part of the innovation landscape.

- Open interaction **across disciplines**, industries, organisations and occupations
- Catalytic processes that are **both practical and intellectually grounded**
- **Cross-fertilisation** of ideas, **common cutting edge insights** and knowledge for all
- Active engagement of our partners and stakeholders along with the development of our **in-house talent**
- **Meaningful interaction** that generates practical value, including how to evaluate and manage risk
- Equipped to **support evidence based** co-created business strategy or public policy development

The company has suitable research labs, office and events space plus cutting-edge IT equipment with support, and its spaces are conveniently located in central London next to UK Parliament Square; and in central Riyadh, as well as the business bay of Dubai.

# About Deep Knowledge Analytics

[Deep Knowledge Analytics](#) is a DeepTech focused agency producing advanced analytics on DeepTech and frontier-technology industries using sophisticated multi-dimensional frameworks and algorithmic methods that combine hundreds of specially-designed and specifically-weighted metrics and parameters to deliver sophisticated market intelligence, pragmatic forecasting and tangible industry benchmarking.

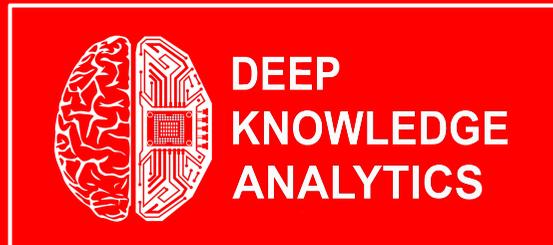


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ANALYTICS

It is an analytical subsidiary of [Deep Knowledge Group](#), an international consortium of commercial and non-profit organizations focused on the synergetic convergence of DeepTech and Frontier Technologies (AI, Longevity, MedTech, FinTech, GovTech), applying progressive data-driven Invest-Tech solutions with a long-term strategic focus on AI in Healthcare, Longevity and Precision Health, and aiming to achieve positive impact through the support of progressive technologies for the benefit of humanity via scientific research, investment, entrepreneurship, analytics and philanthropy.

Deep Knowledge Analytics specializes in conducting special case studies and producing advanced industry analytical reports on the topics of Artificial Intelligence, GovTech, Blockchain, FinTech and Invest-Tech. It has produced a number of comprehensive analytical reports in coordination with the [UK All-Parties Parliamentary Groups on AI](#) and on [Blockchain](#), including its AI in UK Landscape Overview 2018 and Blockchain in UK Landscape Overview 2018, unprecedented in their scope and length, and collectively more than 3000 pages. The company has also recently deployed advanced interactive online IT-platforms that feature dynamic mindmaps and filterable, customizable databases updated with new industry developments in real-time.

Deep Knowledge Analytics will continue to expand the scope, depth and topics covered by its analytical reports on frontier technology-driven industries, with the aim to develop the next iterations of their analytical frameworks with a wider breadth and depth of metrics and overall analytics, to apply efficient methods to cross-sector analysis between different industries, and to apply both existing and new analytical frameworks to the design of the new Invest-Tech solutions (novel investment technologies and strategies relevant for the third decade of the twenty-first century), which is the only relevant way to implement the long-term strategic vision of Deep Knowledge Ventures.



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## Innovation Eye Disclaimer

The information and opinions in this report were prepared by Innovation Eye, Deep Knowledge Analytics and Big Innovation Centre. The information herein is believed by Innovation Eye to be reliable but Innovation Eye makes no representation as to the accuracy or completeness of such information. There is no guarantee that the views and opinions expressed in this communication will come to pass. Innovation Eye may provide, may have provided or may seek to provide advisory services to one or more companies mentioned herein. In addition, employees of Innovation Eye may have purchased or may purchase securities in one or more companies mentioned in this report. Opinions, estimates and analyses in this report constitute the current judgment of the author as of the date of this report. They do not necessarily reflect the opinions of Innovation Eye and are subject to change without notice. Innovation Eye has no obligation to update, modify or amend this report or to otherwise notify a reader thereof in the event that any matter stated herein, or any opinion, estimate, forecast or analysis set forth herein, changes or subsequently becomes inaccurate. This report is provided for informational purposes only. It is not to be construed as an offer to buy or sell or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy in any jurisdiction.