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THE BUSINESS OF HEALTHTECH IN MENA

Globally, Digital Health is ballooning into a US \$660 billion industry by 2025. MENA based healthtech startups have raised over \$600 million and reached a combined valuations of nearly \$2 billion. Learn how technology is giving us greater access to healthcare and better health outcomes.



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EDITOR'S NOTE



Erika Masako Welch

Erika Masako Welch
 Chief Content Officer, Special Reports
 Entrepreneur & Lucidity Insights
 erika@lucidityinsights.com

Healthtech is burgeoning the world over.

Whether we're talking about tele-health and other forms of optimized healthcare delivery, digital therapeutics, drug discovery, personalized medicine – such as those geared towards DNA and blood testing for reproductive health or personalized care – insurtech or admin workflow SaaS companies that help optimize booking doctor appointments... there is a lot going on in the healthtech and digital health space.

As of February 2023, there were 140 healthtech unicorns globally. Healthtech happens to be the 3rd most unicorn-producing sector. What's more, 39% of healthtech unicorns reach unicorn status within five years, with another 40% reaching unicorn status between year 6 and year 8. Despite the current funding crunch and challenging business climate, healthtech has proven to be the most resilient sector, with digital health funding and deals being the first to stabilize in Q1 2023.

In the MENA region, healthtech players have seen the steepest rise in valuations, which is also part and parcel to why there has been an influx of dedicated healthcare and healthtech funds in the region. But

funding is still relatively low compared to other sectors, with a cumulative raise by MENA (excl. Israel) healthtech startups totalling to just over US \$600 million. Admin workflow players like Bayzat and Vezeeta lead the way in terms of fundraising, having raised \$96 million and \$68 million to date. Care Delivery is the second largest sub-segment in the region, with players like Altibbi and Okadoc leading the way with tele-medicine products.

There's still significant room for growth, with no healthtech raising a mega-round to date, despite 17% of the region's healthtech startups having successfully raised 3 rounds or more. The race of the soonicorns is still on-hand, as the mantle for the "first healthtech unicorn in MENA" is still up for grabs.

The United Arab Emirates is the dominant backdrop for healthtech in the region, with 75% of all MENA (excl. Israel) VC healthtech funding going to UAE based startups. It will come as no surprise then that nine out of ten of the most well-funded startups in MENA also fly the UAE flag. Egypt and Saudi are also growing their healthtech startup ecosystems. Read on to find the latest trends in this hot startup sector.



FOREWORD

Healthtech is emerging as a beacon of hope for improved healthcare delivery and better medical outcomes. Driven by a growing appreciation for the convergence of tech such as artificial intelligence (AI) with healthcare, an array of innovative products and solutions is becoming available to raise the efficiency of service delivery, improve diagnostics, and provide personalised and patient-centric care.

Healthtech breakthroughs across the world have displayed an ability to overcome legacy industry challenges and improve access to healthcare services. Wearable devices equipped with health monitoring features enable individuals to proactively manage their health and prevent the onset of chronic conditions, while digitised medical records and insurance procedures help to simplify and streamline complex patient management frameworks.

Appetite for such innovation is unlikely to taper off given the nature of healthcare challenges that are expected to shape the diverse needs and priorities of growing middle-

and old-aged populations as well as socioeconomic budgets around the world. According to the Economist Intelligence Unit, climate change alone will threaten healthcare systems as heatstroke and natural disasters increase and health providers and pharmaceutical companies come under more pressure to cut emissions.

This outlook makes it even more essential that public- and private-sector efforts are aligned to empower start-ups and entrepreneurs – the lifeblood of the healthtech movement – to redefine and revolutionise the future of meaningful medicine. Nurturing entrepreneurial creativity and ambition with guidance, mentorship, and access to investment is an essential part of this journey, and it is to strengthen these pathways that in5 and Dubai Science Park – TECOM Group PJSC's start-up incubator and science-focused ecosystem, respectively – launched the in5 Science vertical in June 2023.

in5 Science is aligned with strategic priorities such as those underlined by Dubai Economic Agenda 'D33',

Dubai Research and Development Programme, and We the UAE 2031 to support homegrown and international founders in futureproofing industries such as healthcare and advanced manufacturing. Its ecosystem includes innovators and disruptors like RelphaCare Technologies, a social healthcare tracking platform that enables real-time communication and monitoring by doctors and family, and Detectiome, which in October 2023 announced Revonco, an AI-powered multi-cancer early detection test designed for the Middle Eastern population's unique genetic makeup.

Life-changing promise

These successes matter because they reiterate the life-changing promise of healthtech innovation and the possibilities that can be transformed into tangible solutions that solve the world's most complex problems. From remote patient monitoring to AI-powered diagnostics, healthtech is already transforming traditional models and services into more proactive, preventive, and patient-centric

approaches that will better serve future populations. Our endeavour at Dubai Science Park is to serve as the glue that brings and binds together innovators and creative thinkers from around the world to facilitate this transformation.

With more than 450 industry leading customers including Pfizer, AstraZeneca, Virax Biolabs, and Innovate Life Science Lab, our district serves as a catalyst for collaborative healthcare innovation and for ideas to converge. The network of more than 5,500 professionals within our ecosystem – which is also home to dedicated research and development labs operated by industry leaders like Himalaya and offers cross-sector collaboration opportunities through its sister districts at TECOM Group such as Dubai Knowledge Park, Dubai Industrial City, and Dubai Internet City – further empowers innovators to build invaluable connections with researchers, scientists, and investors from all walks of life.

Such networks are essential for

the healthtech value chain – be it legislators drafting approvals structures, researchers working on new drugs, technologists rethinking insurance processes, or doctors enhancing telemedicine services – to address multifaceted industry challenges through the cross-pollination of ideas between diverse experts.

As we navigate the challenges of an evolving healthcare landscape around the world, the synergy between technological advancements, research, and innovation enabling platforms will continue to drive the growth of healthtech that delivers not just product-led advancements, but actionable solutions that can enhance and save lives. In line with the UAE's and Dubai's goals to deliver globally impactful social innovation, Dubai Science Park and in5 Science will continue to unite the brightest minds in healthtech to brainstorm, innovate, and ultimately, change the landscape of healthcare. We welcome you along this journey.



Marwan Abdulaziz
Executive Director, Dubai Science Park

THE STATE OF HEALTHTECH

Healthcare technology, more commonly referred to as “healthtech”, refers to any technology utilized to improve the delivery, payment, and the consumption of care. Healthtech, from a startup and investor standpoint tends to be more dominated by what we know as “Digital Health”. That’s because Healthtech is so broad, it includes many other major sub-sectors that are giants in their own right; these includes well-established sectors such as medtech (ie. medical devices), biotech (ie. “wet” tech, nanotechnology, etc.) and insurtech (ie. technology that works to improve for the insurance ecosystem), and systems, and the digitization of healthcare. For the purposes of this report, we dive more into “Digital Health”, as this is where startups mostly reside: at the intersection of health and digital technology.

WHAT IS HEALTHTECH?

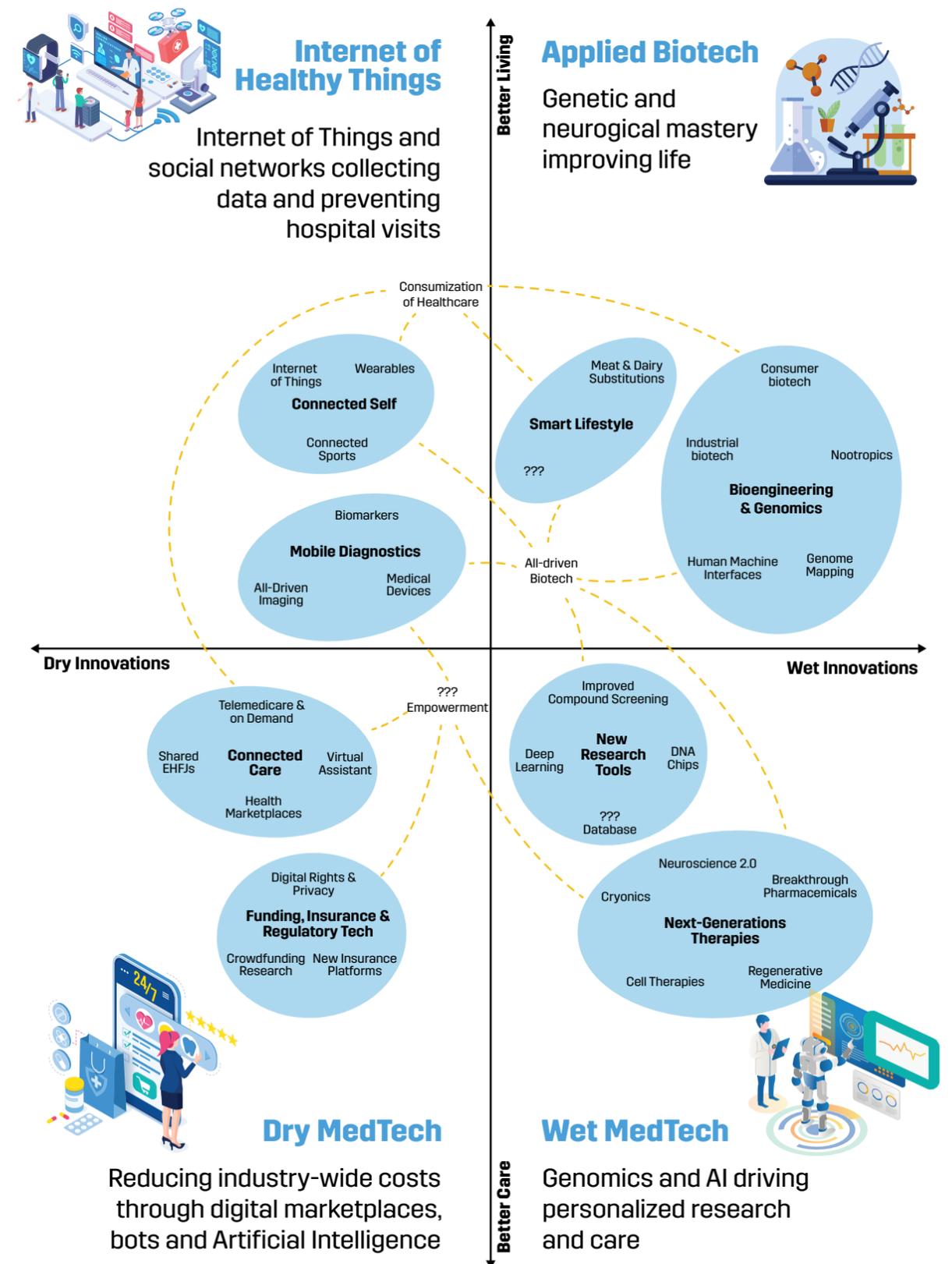
Healthcare technology, more commonly referred to as “healthtech”, refers to any technology-enabled healthcare products or services that bolster the healthcare system. In essence, healthtech startups use technology to improve the delivery, payment, and the consumption of care. If that sounds broad, it’s because it is.

Healthtech can involve the entire value chain, from the development of new medical devices - also referred to as Medtech, which can involve everything from the development of next-generation diagnostic and imaging machines and robotics to the development of personalized wearables

that use biosensors to gather health data. Biotechnology, “wet” tech and drug discovery also can fall under healthtech, which can involve complex and deep-tech research applications, from utilizing nanotechnology for tissue engineering and regenerative medical applications, or the discovery and development of new medicines and vaccines.

There is also the large field of Digital Health, which covers software and SaaS which might work on streamlining healthcare procedures and systems. Have you ever had a video appointment with your doctor? That’s tele-health,

one of the fastest growing digital health sectors in our post-pandemic world. Under digital health we also include insurance claims processing, personalized healthcare apps such as those that track your sleep, diet, or hormonal cycles. It also includes startups working with blockchain technology to enhance data security and develop secure methods to transfer patient medical records, manage medical supply chains, and strengthen cybersecurity measures. It also includes digital marketplaces that help hospitals and healthcare providers hire medical professionals which have also gained steam in this arena.



THE DIGITAL REVOLUTION OF HEALTHCARE

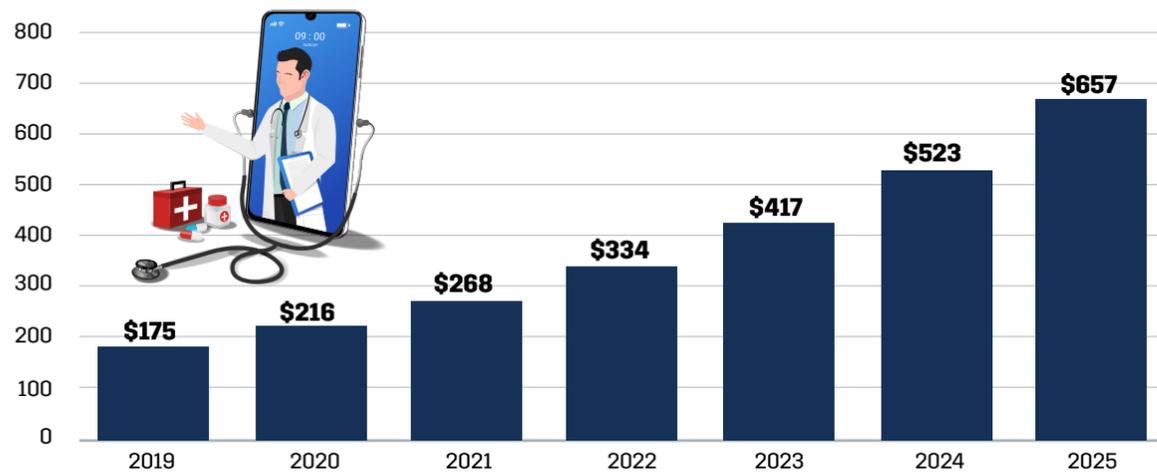
In a world where technology continuously intertwines with our daily lives, healthcare is no exception. With every heartbeat monitored, calorie tracked, and medical consultation just a click away, we're witnessing a profound transformation in the way we perceive and manage our health. The Global digital health market is projected to reach a valuation of \$660 billion by 2025, growing at a CAGR of 25%.

Show me the Money

Recent analysis by CB Insights shows that in Q2'23, care delivery and navigation tech dominated the healthtech VC scene, securing a staggering US \$1.5 billion in 3 months;

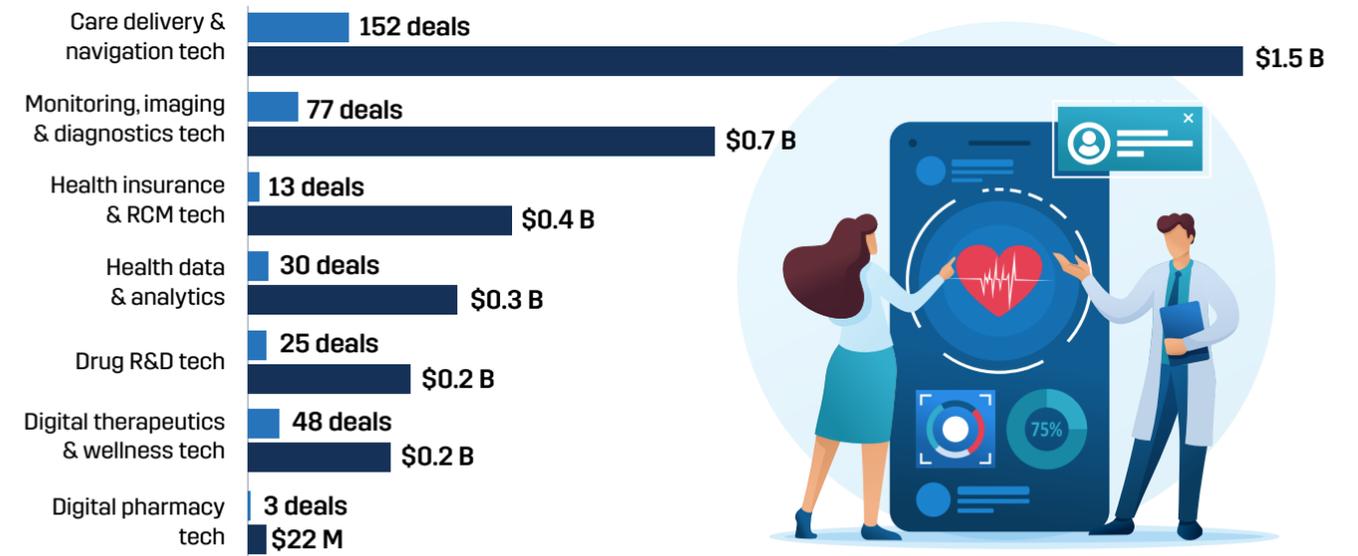
this makes it the sole digital health segment to breach the billion-dollar threshold in a single quarter. Care delivery and navigation tech makes up roughly 45% of the entire digital healthcare business, and roughly 49% of all digital healthcare companies fall under this category – providing better therapy, patient remote assistance or patient treatment. Hot on the heels of patient care, was startups in the monitoring, imaging, and diagnostics tech, which garnered \$700 million in fundraising in Q2 2023. The drug research & development sector wasn't far behind, raising \$400 million in the same quarter.

GLOBAL DIGITAL HEALTH MARKET SIZE: 2019-2025 (IN BILLIONS USD)



Source: Appinventiv

DIGITAL HEALTH: GLOBAL DEALS & FUNDING IN Q2 2023



Source: CB Insights

CB Insights also unveiled the most promising healthtech startups in its 2022 edition of the Digital Health 150, which collectively raised an astonishing \$5.6 billion in equity funding in 2022. Several newcomers reimaged clinical care, amplified healthcare access for marginalized communities, and innovatively used AR/VR for surgical training. 90% of these startups were fresh on the list, having not been featured in 2021. This seismic shift mirrors the industry's evolution, as healthtech witnessed an unparalleled flurry of M&A and IPO activities in 2021, registering record-setting exits.

Although the US still holds the mantle in healthtech innovation, this growth isn't limited to one geography. In fact, the 2022 list of promising startups spanned 18 countries, with companies from the UK, Canada, and Brazil standing out.

Not just for Healthcare Startups

Digital health is such a burgeoning industry, that it has caught the attention of all the big boys too. Here's a timeline of MAAMA (Meta Platforms (formerly Facebook), Amazon, Apple, Microsoft, and Alphabet (formerly Google)).

Digital Health Activities

by MAAMA in 2022



Q1 2022

- **Alphabet** Alphabet's Verily unit announced a skin health partnership with L'Oreal
- **Microsoft** Microsoft completed the Nuance acquisition, opening up opportunities for health care services and artificial intelligence
- **Microsoft** Microsoft partnered with Andor Health to extend Microsoft capabilities for virtual health and hospital-at-home services

Q3 2022

- **amazon** Amazon announced its intention to acquire primary care company One Medical for \$3.9 Billion
- **Apple** Apple published a report outlining the company's intended role in healthcare
- **amazon** Amazon revealed plans to shut down Amazon Care service at the end of 2022 after three years of piloting

Q4 2022

- **Microsoft** Microsoft released Cloud for Healthcare enhancements around patient engagement, workflow and data access
- **Meta** Meta unveiled a protein-folding AI technology to provide prediction capabilities for protein structure. Although not yet live, Meta has hinted its ambitions of applying the metaverse to surgical training and practice
- **Alphabet** Alphabet acquired Sound Life Sciences and its FDA-cleared app that monitors breathing
- **Alphabet** Alphabet launched Google search pilot with two health systems
- **Alphabet** Alphabet rolled out a search feature to improve the Medicaid and Medicare (insurance) enrollment process in the USA
- **Alphabet** Alphabet signed a licensing partnership with ICAD to integrate its AI mammography platform
- **amazon** Amazon launched Amazon Clinic as a 'virtual health storefront' to enable customer access to third party telehealth providers
- **aws** AWS launched Amazon Omics, a genomics data analysis service
- **Apple** Apple earned FDA clearance for an Apple Watch app to monitor Parkinson's disease symptoms
- **Apple** Apple published a study in the journal of iScience highlighting the potential for Apple AirPods as a hearing assistive device



SPOTLIGHT

THE METEORIC RISE OF HEALTHTECH UNICORNS



Not too long ago, Healthtech was considered a niche segment in our digital age. It was a sector that the tech giants hummed and hawed over, while simultaneously salivating at the potential. The industry was slowly plodding through its own digital transformation, as it was rife with challenges. First, there was the issue of deeply entrenched healthcare information systems, which were largely closed looped and far from agile. Issues around critical patient data and data security put an array of speedbumps in front of innovators looking to disrupt and streamline the industry. Then there was the separate issue of too many stakeholders and

sign-offs being required, from the private healthcare institutions to the insurance companies to government and regulatory bodies- and all the parties in between. It was a tangled mess to say the least.

Today, it's a different story – as many companies have found Healthtech niches that need digitization, without as many roadblocks. The healthtech industry is birthing unicorns at a pace that's leaving even seasoned market watchers astonished. Fueled by an insatiable global demand for health solutions and turbocharged by the pandemic's revelation of virtual care's sheer potential, these pioneers are not

just reshaping the medical landscape—they are defining its future. From the bustling tech hubs of the US to the innovation-laden corners of Europe and Asia, healthtech unicorns are paving the way for change in the global medical community.

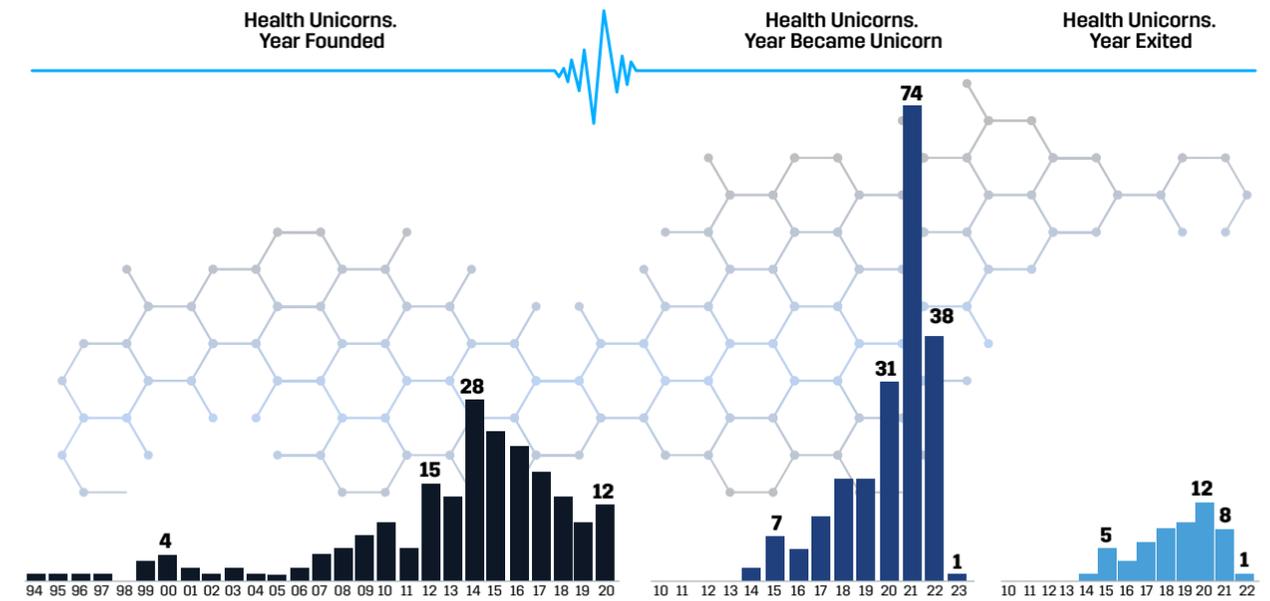
HealthTech's Global Contingent

As the COVID-19 storm swept across the globe, the world of healthtech began to flourish in unexpected ways. With face-to-face interactions becoming a luxury of the past, people everywhere sought new, safer ways to connect with healthcare. Amidst this shift,

healthtech startups and digital healthcare platforms emerged as champions, capturing the lion's share of VC investments for a number of quarters.

According to HolonIQ, there are 140 healthtech unicorns around the world who were collectively valued at over US \$320 billion in February 2023. When adding medtech and biotech, that number increases to 200 health unicorns born in the last 10 years. 53 have exited, the vast majority (47) through IPO or SPAC, leaving 147 based on last valuations.

Moreover, 84% of the 147 healthtech unicorns worldwide reached this status post-pandemic, with Asimov and Capital Rx having joined the club in Q1 of this year. By mapping HolonIQ's data on Health Tech Unicorns to the Global Healthcare Landscape taxonomy, healthtech represents nearly 10% of the list, ranking 5th in most unicorns by sector topping media (7%), and insurance (2%), which is no surprise given the explosion in 'virtual first' care during the



Source: HolonIQ, March 2023

SPOTLIGHT



MEET THE UNICORNS

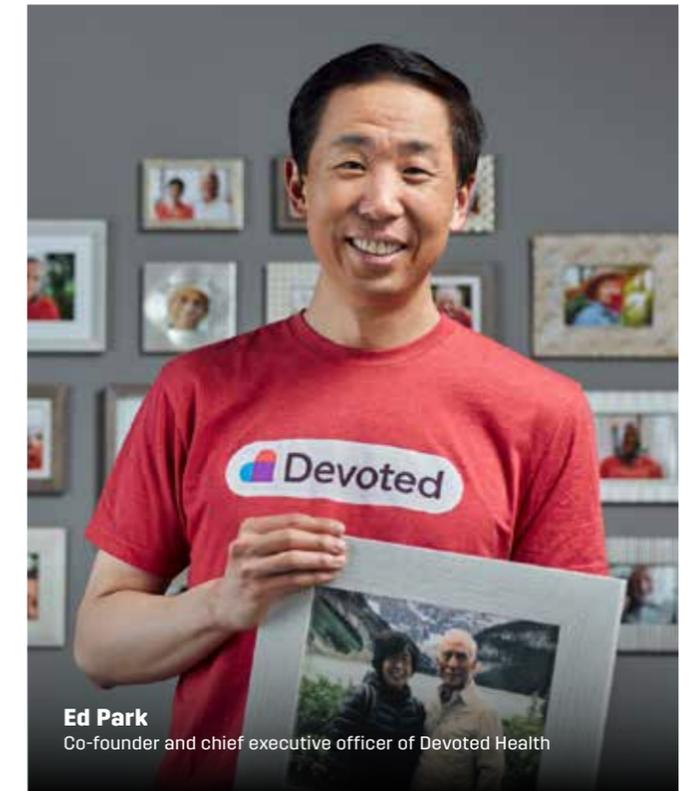
TOP 5 GLOBAL HEALTHTECH UNICORNS

Company	Country	Industry	Last Round	Type	Valuation
Devoted Health	United States	Health Insurance	Oct 2021	\$1.15B Series D	\$12.7B
biosplice	United States	Health Discovery	Apr 2021	\$20M VC Round	\$12.4B
RESILIENCE	United States	Drug Production	Jun 2022	\$625M Series D	\$9.0B
TEMPUS	United States	Precision Medicine	Oct 2022	\$275M VC Round	\$8.0B
Caris Life Sciences	United States	Precision Medicine	Jan 2022	\$830M PE Round	\$7.8B



- Sector: **Health Insurance**
- Country: **USA**
- Valuation: **\$12.7 Billion**
- Established: **2017**
- Fundraising to Date: **\$1.2 Billion**

Founded in 2017, Devoted Health has embarked on a mission to reshape healthcare with a focus on Medicare Advantage plans in the United States. Devoted Health guides the senior community through the complex healthcare insurance system with personalized guides, employing cutting-edge technology for streamlined experiences and joining forces with leading providers to ensure optimal health results. They raised \$2 billion in total funding across five rounds since its inception, most recently securing a \$1.2 billion Series D round with lead investment from SoftBank Vision Fund and Uprising Ventures in October 2021. "We are very proud that others understand and believe in the value of our mission and model, and we are very much looking forward to using this capital to bring the Devoted Health experience to people across the country," said Ed Park, co-founder and CEO at Devoted Health. While they may be the new kid on the block, Devoted Health's unwavering dedication to the welfare of Medicare recipients has not gone unnoticed, and their pronounced emphasis on preventive measures, complemented by tailored support for chronic conditions, sets them apart from other insurtechs.



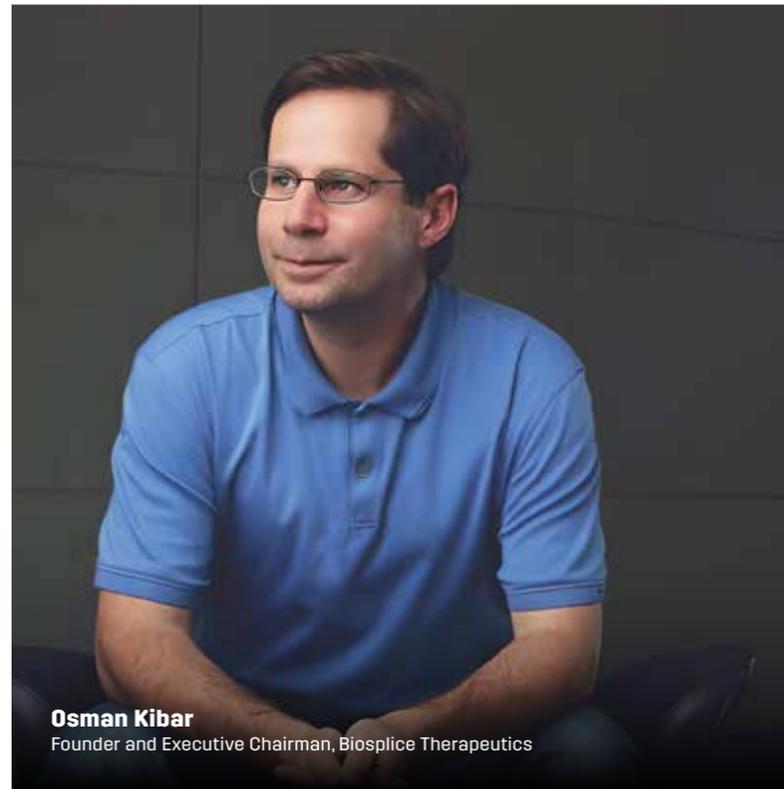
Ed Park
Co-founder and chief executive officer of Devoted Health



SPOTLIGHT

biosplice

-  Sector: **Health Discovery**
-  Country: **USA**
-  Valuation: **\$12.4 Billion**
-  Established: **2008**
-  Fundraising to Date: **\$778 Million**



Osman Kibar
Founder and Executive Chairman, Biosplice Therapeutics

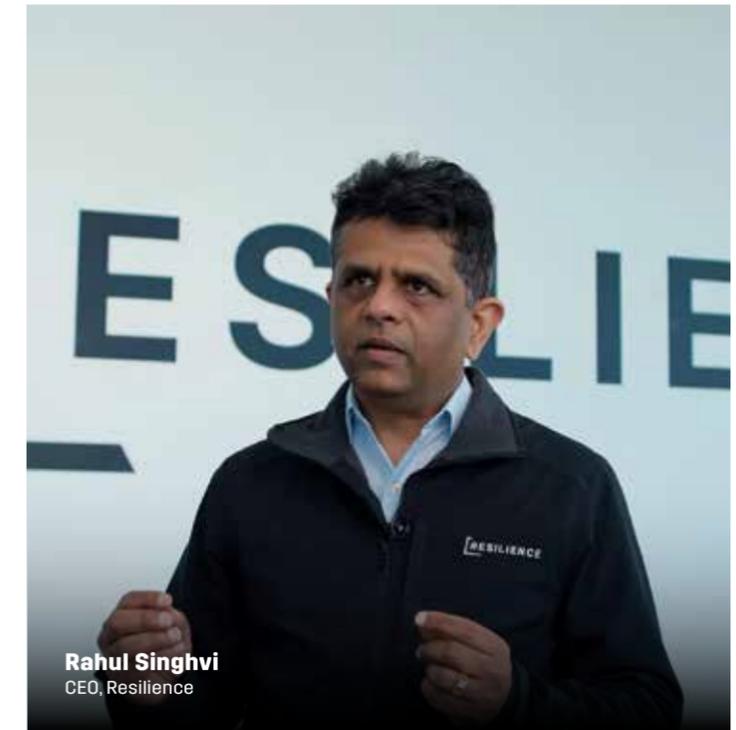
Biosplice Therapeutics has been developing tissue-engineering technologies in functional and regenerative medicine since 2008. Having achieved its \$12 billion valuation in 2018, the Biosplice team narrowed its focus in 2022 to harness small molecules and modulate RNA splicing to regulate harmful protein production and investigate splicing's potential in treating major diseases including osteoarthritis, cancer, Alzheimer's and other degenerative conditions. So far, Biosplice Therapeutics have made strides in studies and clinical trials for Knee Osteoarthritis, Idiopathic Pulmonary Fibrosis, and Endometrial Cancer treatments.



RESILIENCE

BIOTECHNOLOGIES INC

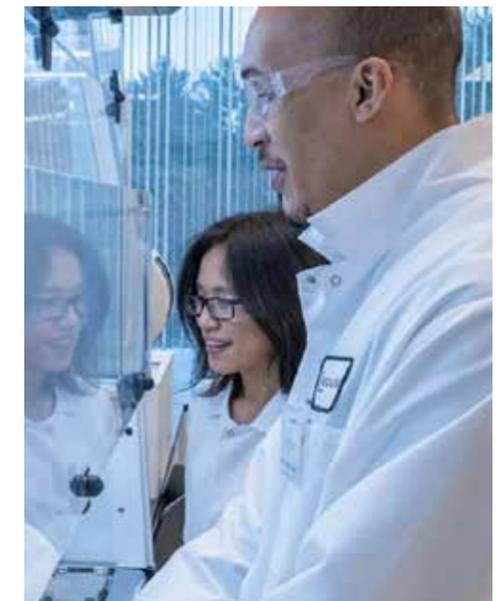
-  Sector: **Drug Production**
-  Country: **USA**
-  Valuation: **\$9.0 Billion**
-  Established: **2020**
-  Fundraising to Date: **\$2.5 Billion**



Rahul Singhvi
CEO, Resilience

Founded in La Jolla, California, Resilience is a biomanufacturing company which develops cell therapy, gene therapy, nucleic acids, and vaccines to help biopharmaceuticals with the drug development process from pre-clinical development to commercial supply. Since 2020, Resilience has forged strategic collaborations with key industry players, including Takeda's Plasma-Derived Therapies Business Unit, Be Biopharma's proprietary engineered B-Cell Medicines platform, and gene therapy leader, Opus Genetics.

Resilience has been making strides in health technology such as integrating SwiftScale Biologics' innovative cell-free protein synthesis into their fold to enhance drug manufacturing efficiency. The company also entered a 10-year agreement with a major pharmaceutical firm, and are anticipating record 2023 revenues for its portfolio of services across Process and Analytical Development, Drug Substance, and Drug Product manufacturing. Most recently, Resilience announced their expansion plans with Saudi Arabian biopharma, Lifera, to develop biomanufacturing capacity in the Kingdom's capital of Riyadh.



SPOTLIGHT

"TEMPUS

-  Sector: **Precision Medicine**
-  Country: **USA**
-  Valuation: **\$8.0 Billion**
-  Established: **2008**
-  Fundraising to Date: **\$778 Million**



Eric Lefkofsky
CEO, Tempus

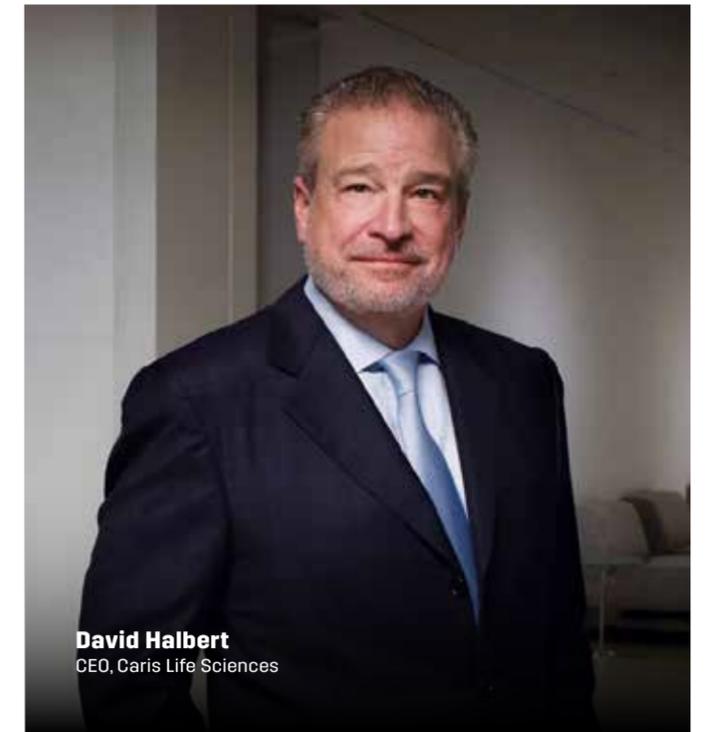
One of the leading healthtech startups in the US, Tempus uses AI to help physicians make more informed diagnoses and open patients' treatment options. Founded in 2015, Tempus had raised over \$1.3 billion following its latest venture funding round in October 2022. In addition to collaborations with pharma-giants AstraZeneca and GSK, Tempus' latest major pharma move came earlier this year when they signed with Pfizer focusing on cancer drug discovery and development with the aim of getting novel treatments to patients faster.

"The benefits of data science and AI have the potential to increase the probability of success of Pfizer's existing efforts, both internally and with their biotech partners, which in turn, benefits patients," said Tempus founder and CEO, Eric Lefkofsky. If Lefkofsky sounds familiar, he was one of the co-founders of Groupon.

Earlier this summer, Tempus announced the launch of Tempus One – the first, AI-enabled clinical assistant that leverages advancements in generative AI to provide clinicians access to patient insights directly at their fingertips.



-  Sector: **Precision Medicine**
-  Country: **USA**
-  Valuation: **\$7.8 Billion**
-  Established: **2008**
-  Fundraising to Date: **\$778 Million**



David Halbert
CEO, Caris Life Sciences

As a US based trailblazer in transformative healthcare, Caris Life Sciences boasts the world's most extensive and insightful platform for cancer analysis offering unparalleled tumor profiling. With its latest funding round led by Sixth Street drawing an impressive \$830 million in PE financing in 2021, Caris reached a staggering valuation of \$7.8 billion.

In January 2023, Juniper Biologics was entrusted with the distribution of Caris' molecular profiling services in Southeast Asia, an initiative set to equip medical professionals with top-tier diagnostic tools. Simultaneously, Caris forged a partnership with ConcertAI, a frontrunner in oncology data and AI, to create one of the largest platforms geared toward advanced drug research and development, which expanded into a shared database paving the way for pivotal breakthroughs in precision medicine and therapeutic research just this June.



SPOTLIGHT

Healthtech Unicorns from Around the World

19 out of the most highly valued healthtech unicorns hail from the USA; but there are many other countries minting their own unicorns. Here are a list of the most highly valued unicorns from countries around the world.

 Company	 Country	 Industry	 Last Round	 Type	 Valuation
		Telehealth	Jan 2021	\$411M Series F	\$7.0 B
		Telehealth	Mar 2022	\$549M Series F	\$6.4 B
		Health Records	Jan 2021	PE Growth Round	\$4.0 B
		Devices	Dec 2019	\$106.9M Debt	\$3.5 B
		Pharmacies	Nov 2021	Private Equity	\$3.4 B
		Wearables	Apr 2022	VC Round	\$2.6 B
		Precision Medicine	Jun 2021	Venture Round	\$2.4 B
		Telehealth	Apr 2021	\$319M Series D	\$2.0 B
		Imaging	Apr 2021	\$136M VC Round	\$1.2 B
		Health Discovery	May 2019	-	\$1.0 B
		Diagnosis Tech	Sep 2022	\$20M Series D	\$1.0 B
		Specialist Care	Feb 2022	\$105M VC Round	\$1.0 B



DISRUPTIVE HEALTHTECH SECTORS

Increasing adoption of digital technologies, the transition to value-based care, increasing government support and investment, especially after the impact of COVID-19 are all driving forces for the growth of healthtech innovation and adoption. Prior to the pandemic, telemedicine visits accounted for only 1-2% of all ambulatory care visits; now they account for 30% of all visits. The conventional fee-for-service healthcare model is being replaced by a value-based care model, which increasingly prioritizes patient outcomes and a greater focus on preventative care powered by AI/ML predictive analytics and remote monitoring systems.



EXPLORING THE 7 HOTTEST SUBSECTORS IN HEALTHTECH

In 2022, healthtech startups raised \$26 billion in VC funding across over 2,100 deals. The year before, healthtech celebrated its banner year, with startups having raised a total of \$60 billion in investments across 3,160 deals. Despite the 2022 dip in funding, Healthtech startups were found to be more resilient on a deal value basis than many other industries such as FinTech, SaaS and AI/ML.

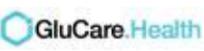
1 Care Delivery

Central to the healthtech boom is the quest to enhance healthcare delivery. Technologies such as telehealth platforms have democratized access, allowing remote doctor-patient interactions. Furthermore, advancements in remote patient monitoring systems ensure vital signs are tracked from the sanctuary of one's home, while care management software provides personalized care to those with complex needs. This subsector is also empowering patients, giving them more control over their health and facilitating smoother clinical workflows. It's a subsector that was pushed forward during the pandemic, and has only continued to gain steam. It has been the most widely funded digital health segment for the past five years.

	Global Example	MENA Example
	 KRY	
Startup Name	Kry	Altibbi
Industry	Telehealth	Telehealth
Headquarters	Stockholm, SWE 🇸🇪	Dubai, UAE 🇦🇪
Founded	2015	2010
Amount Fundraised	\$729.4 million USD	\$52.5 million USD

2 Digital Therapeutics

Merging technology with holistic health, this arena provides tools ranging from mobile applications for managing chronic conditions to fun games teaching kids about healthy eating habits. Virtual reality is particularly noteworthy, offering therapeutic solutions for conditions like PTSD. Moreover, a focus on wellness has given rise to fitness trackers, nutrition apps, and meditation programs, emphasizing a holistic approach to health.

	Global Example	MENA Example
		
Startup Name	Click Therapeutics	GluCare Health
Industry	Digital Therapeutics	Digital Therapeutics
Headquarters	New York, USA 🇺🇸	Dubai, UAE 🇦🇪
Founded	2012	2020
Amount Fundraised	\$926.4 million USD	\$20 million USD

3 Research and Drug Development

The driving force behind medical progress is the research subsector. Clinical trial management systems, sophisticated data analytics tools, and biobanks form its' core, ensuring smooth progress and safeguarding future investigations. Further, platforms dedicated to drug discovery, bolstered by AI, are speeding up the creation of new therapeutic solutions, revolutionizing the drug development landscape.

	Global Example	MENA Example
		
Startup Name	Insitro	Metabomed
Industry	Drug Discovery	Drug Discovery
Headquarters	San Francisco, USA 🇺🇸	Yavne, ISR 🇮🇸
Founded	2018	2014
Amount Fundraised	\$743 million USD	\$30.5 million USD

4 Personalized Health

The one-size-fits-all approach is becoming obsolete, thanks to the rise of personalized health. This subsector boasts genetic tests revealing individual disease risks and employs precision medicine to tailor treatments. Digital therapeutics also play a role, using technology to treat or manage ailments in a bespoke manner.

	Global Example	MENA Example
		
Startup Name	KindBody	Valeo
Industry	Personalized Reproductive Health	Personalized Blood Testing & Health Tracking
Headquarters	New York, USA 🇺🇸	Dubai, UAE 🇦🇪
Founded	2018	2021
Amount Fundraised	\$306.3 million USD	\$x million USD

5 Insurance and Financial Tech

Financing healthcare requires a blend of technology and strategy. Comprehensive health insurance plans, tools assessing patient health risks, and efficient insurance claim processing systems form the backbone of this financial subsector.

	Global Example	MENA Example
		
Startup Name	Collective Health	Bayzat
Industry	Insurtech	Insurtech
Headquarters	San Francisco, USA 🇺🇸	Dubai, UAE 🇦🇪
Founded	2013	2013
Amount Fundraised	\$719 million USD	\$53.6 million USD

6 Administrative Workflow

Behind the scenes, administrative tasks are going digital. Appointment booking, billing, coding software, HR systems, document management software, and procurement tools are all streamlining operations. Additionally, with data being healthcare's gold, this subsector uses tools like EHRs, data warehouses, and analytics platforms to extract invaluable insights, shaping healthcare's future.

Global Example
Doctolib

MENA Example
Vezeeta.com **Okadoc**

Startup Name	Doctolib	Vezeeta	Okadoc
Industry	Patient Engagement	Patient Engagement	Patient Engagement
Headquarters	Paris, FRA 🇫🇷	Cairo, EGY 🇪🇬	Dubai, UAE 🇦🇪
Founded	2013	2012	2018
Amount Fundraised	\$816.5 million USD	\$71.5 million USD	\$22.3 million USD

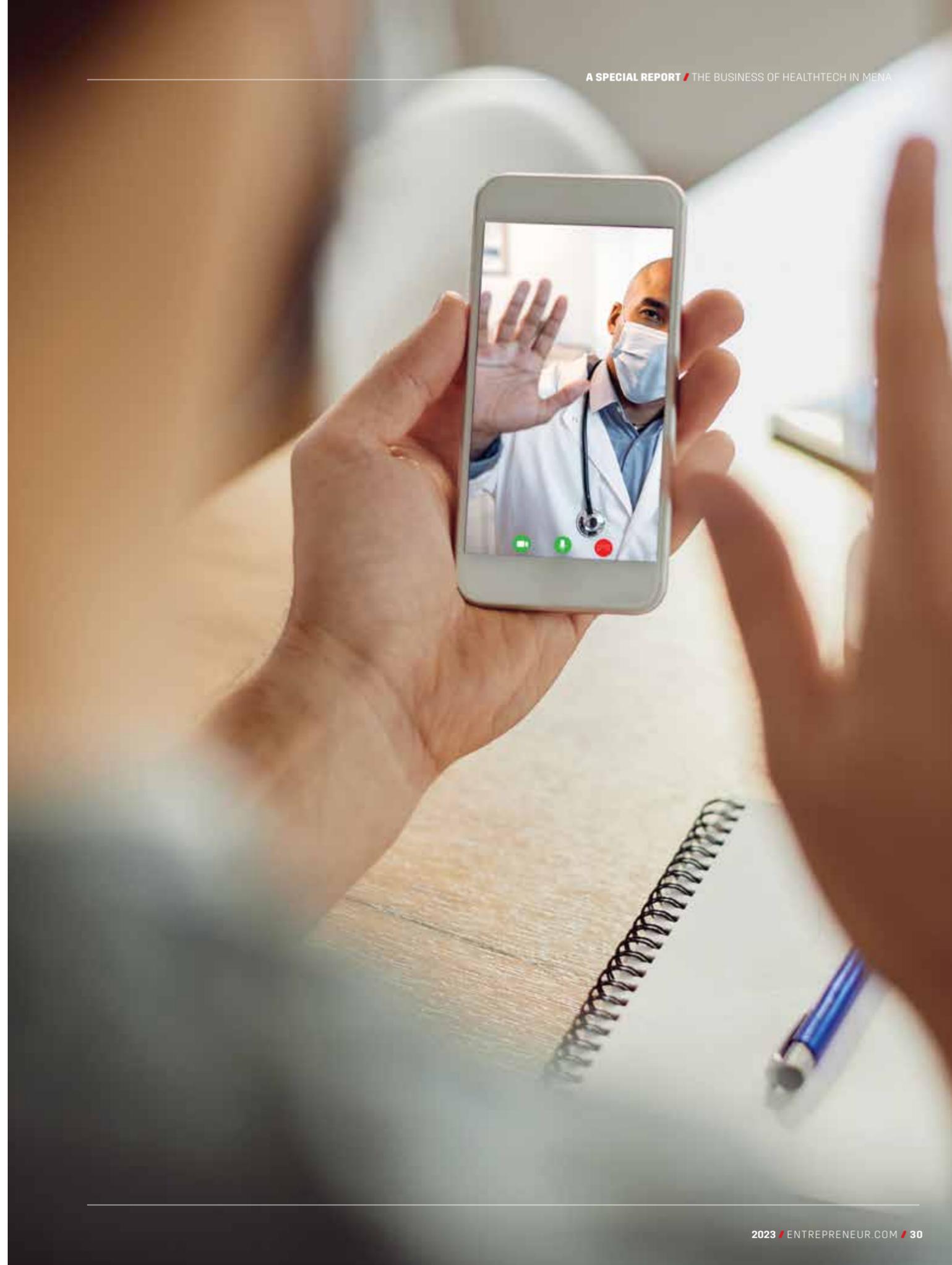
7 Biometric Data Acquisition, Monitoring, Imaging, and Diagnostics

The modern healthtech landscape is incomplete without a focus on biometric data. Wearables, sensors, and cutting-edge imaging technologies are at the forefront, providing intricate insights into the human body. From tracking heart metrics to early cancer detection, these tools are reshaping diagnosis and monitoring.

Global Example
Biofourmis

MENA Example
MEDASENSE
PAIN INTELLIGENCE

Startup Name	Biofourmis	Medasense
Industry	Biometric Diagnostics	Biometric Diagnostics
Headquarters	Boston, USA 🇺🇸	Tel Aviv, ISR 🇮🇱
Founded	2015	2008
Amount Fundraised	\$743 million USD	\$30.5 million USD



HEALTHTECH IN THE MIDDLE EAST & AFRICA

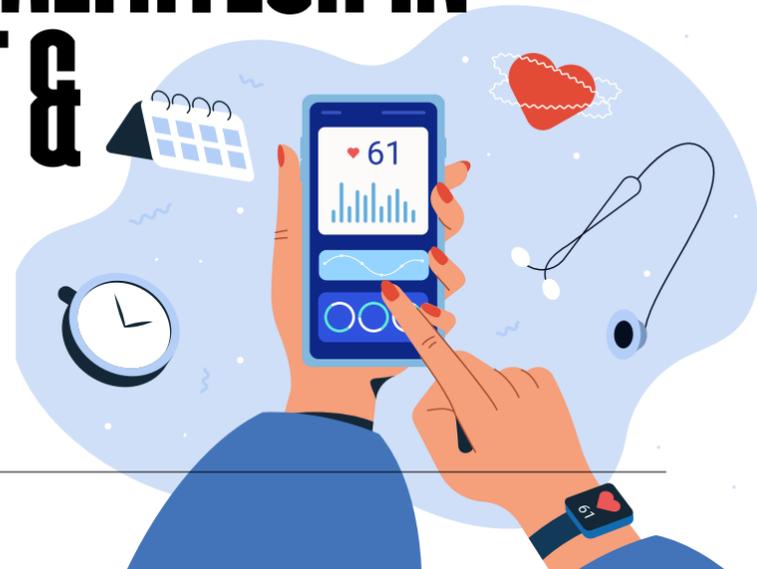
The MENA region's healthcare market is projected to grow at 11.7% CAGR from US \$185.5 billion in 2019 to \$243.6 billion in 2023. Current healthcare expenditure in the GCC was estimated to reach US \$105 billion 2022. Demand for healthcare services in the region is soaring, unlocking immense investment opportunities. The UAE alone accounts for 25% of the GCC healthcare spending, with the government having historically been the primary investor; new data shows private sector participation has increased in the past decade. The latest research shows that the digital health market of the United Arab Emirates and Saudi Arabia could reach US \$4 billion by 2026. The UAE has already registered 257 Healtech startups.





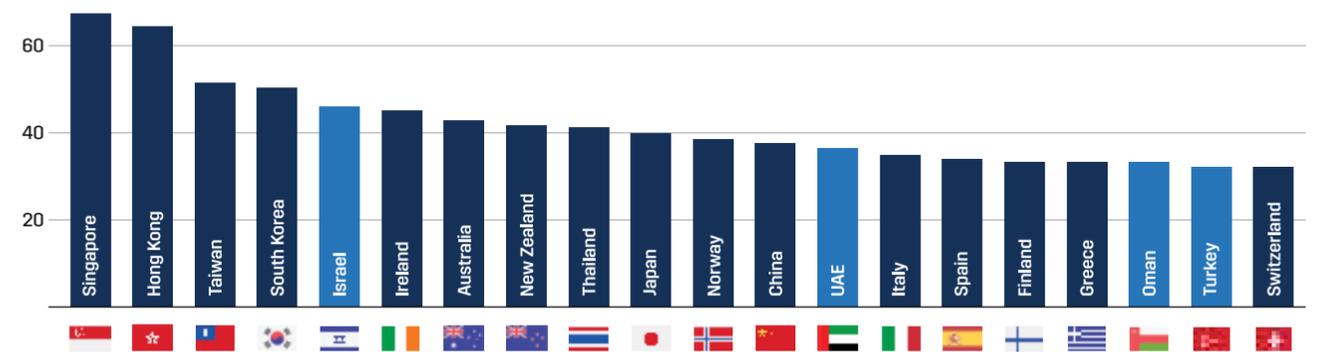
INFOBYTES

THAT EXPLAIN HEALTHTECH IN THE MIDDLE EAST & NORTH AFRICA



1 Israel, UAE, Oman and Turkey are in the top 20 world economies for healthcare efficiency

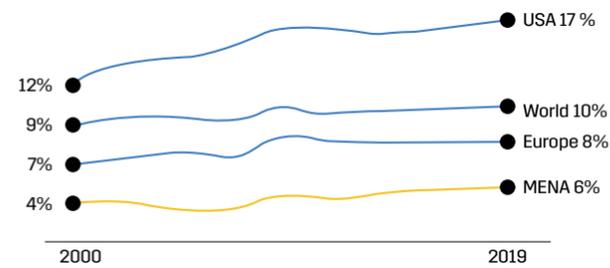
ECONOMIES WITH THE MOST EFFICIENT HEALTHCARE SECTOR
(BLOOMBERG HEALTH-EFFICIENCY INDEX, 2020)



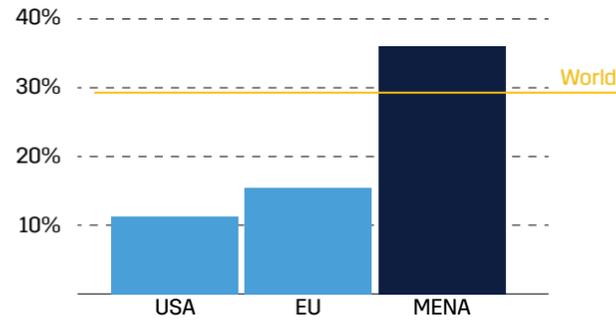
The Bloomberg Health-Efficiency Index, first conducted in 2013, tracks life expectancy and medical spending to determine which healthcare systems have the best outcomes around the world. Asian countries dominate, with Singapore, Hong Kong and Taiwan rounding out the Top 3 most efficient healthcare systems, followed by South Korea and Israel. UAE has the 13th most efficient healthcare system, and Oman and Turkey have the 18th and 19th most efficient healthcare systems in the world.

2 MENA has the lowest healthcare expenditure as % of GDP, but highest out-of-pocket expenses as % of expenditure; possibly in part due to younger demographics.

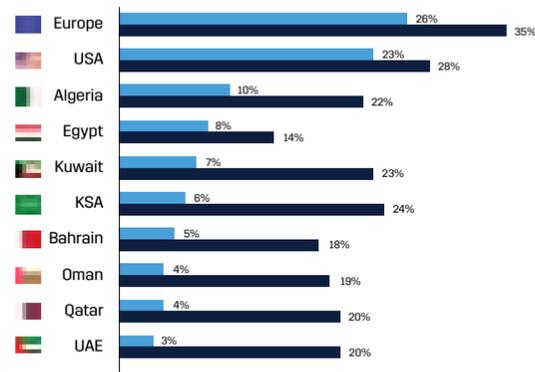
COMPARISON OF HEALTHCARE EXPENDITURE AS % OF GDP



OUT-OF-POCKET EXPENSES AS % OF HEALTH EXPENDITURE



60+ AGE GROUP POPULATION (%), 2020 TO 2050



Country	Population in 2020, Mn	Population Growth, % (2020-2050)
Europe	747.6	1.1%
USA	331	0.5%
Egypt	102.3	1.5%
Algeria	43.9	1.1%
KSA	34.8	0.8%
UAE	9.9	0.2%
Oman	5.1	1.0%
Kuwait	4.3	0.8%
Qatar	2.9	1.0%
Bahrain	1.7	1.0%

Source: United Nations Data, Lucidity Insights Analysis

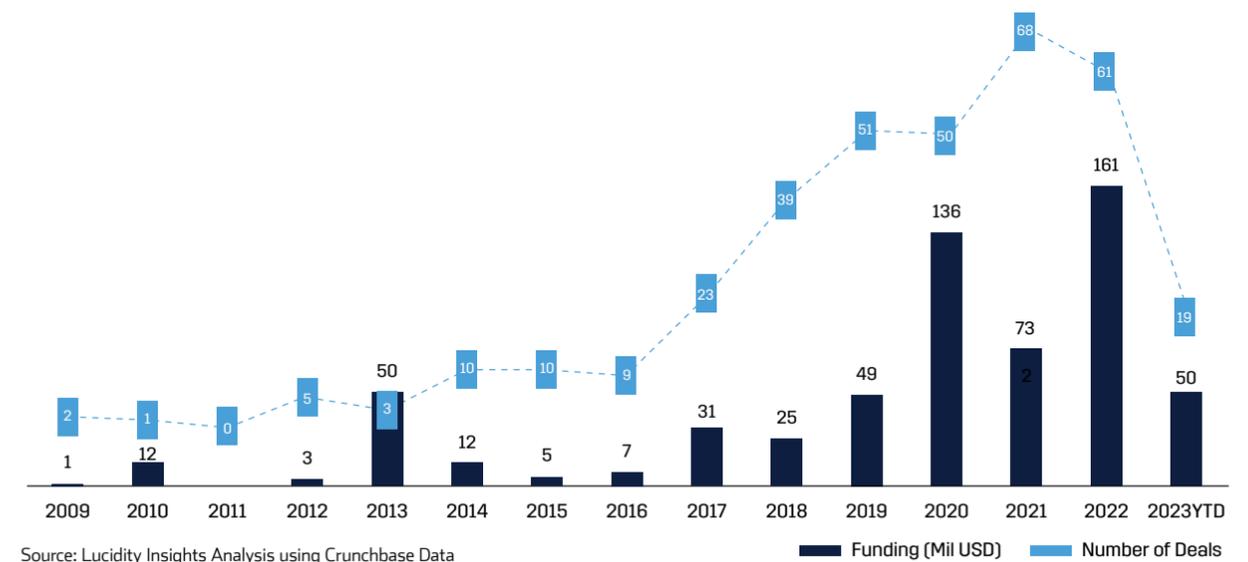


MENA has one of the highest out-of-pocket expenditures in the world. High out-of-pocket expenditures for healthcare is often associated with negative health outcomes. Due to poor habits on consumption spending and cases of impoverishment, prescribed treatment plans are often not complied to when we must pay 30% out-of-pocket for those drugs and treatments. Due to the cost that these treatments, screening and tests incur, individuals may be less likely to go to see a doctor for minor check-ups or for preventative medicine.

Of course, many argue that the MENA region has some of the youngest populations in the world, requiring infrequent access to healthcare services. Country demographics certainly play a role in how much a country spends on healthcare, as well as on their out-of-pocket payment policies. The region is likely to see a shift, particularly in the GCC over the next two decades, as countries like the United Arab Emirates will go from housing a population that is over 60 years old at 3% in 2020 to grow to 20% of the population by 2050.

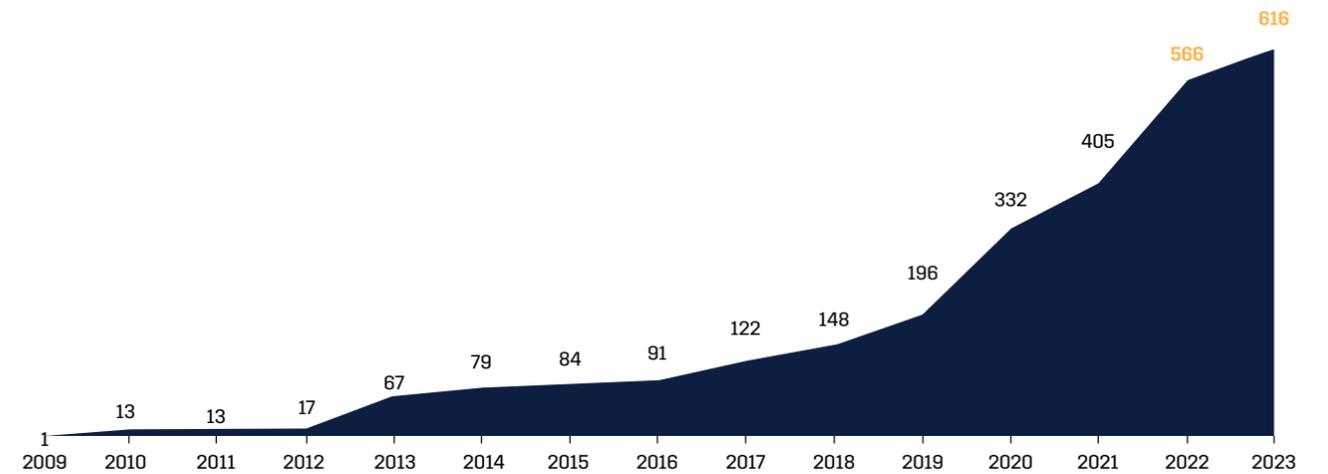
3 Healthtech Funding in MENA (ex. Israel) the past 15 years

MENA HEALTHTECH (EX. ISRAEL) - EQUITY FUNDRAISING & DEALS (2009 - Q3 2023)



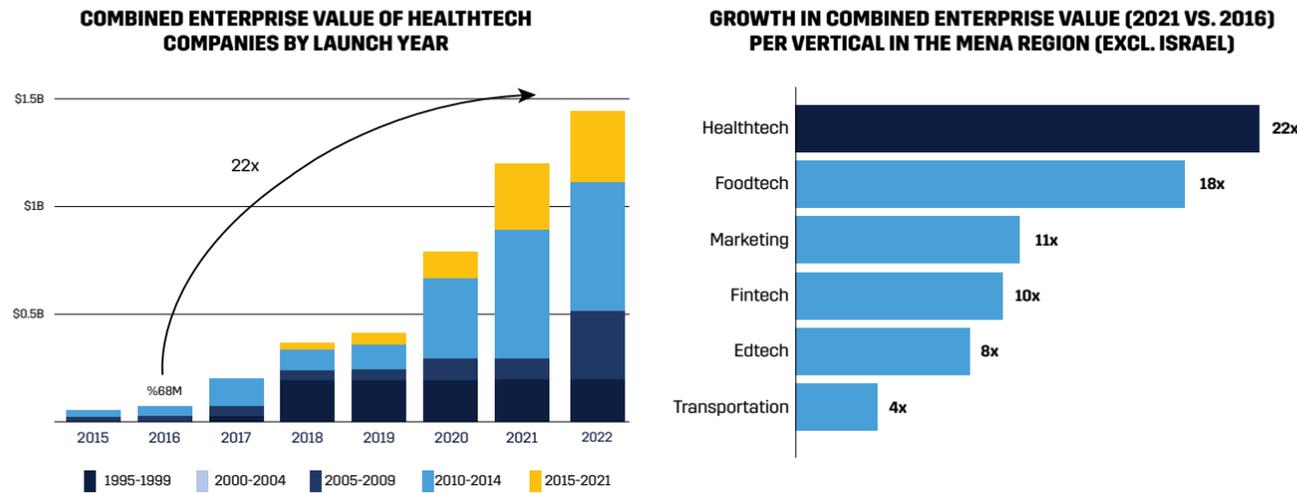
Source: Lucidity Insights Analysis using Crunchbase Data

MENA HEALTHTECH (EX. ISRAEL) CUMULATIVE FUNDING RAISED (USD MILLIONS) (2009 - YTD 2023)



Source: Lucidity Insights Analysis using Crunchbase Data

4 Healthtech companies in MENA (ex. Israel) have reached a combined value of over \$1.5 Billion in 2022, a 22X increase since 2016

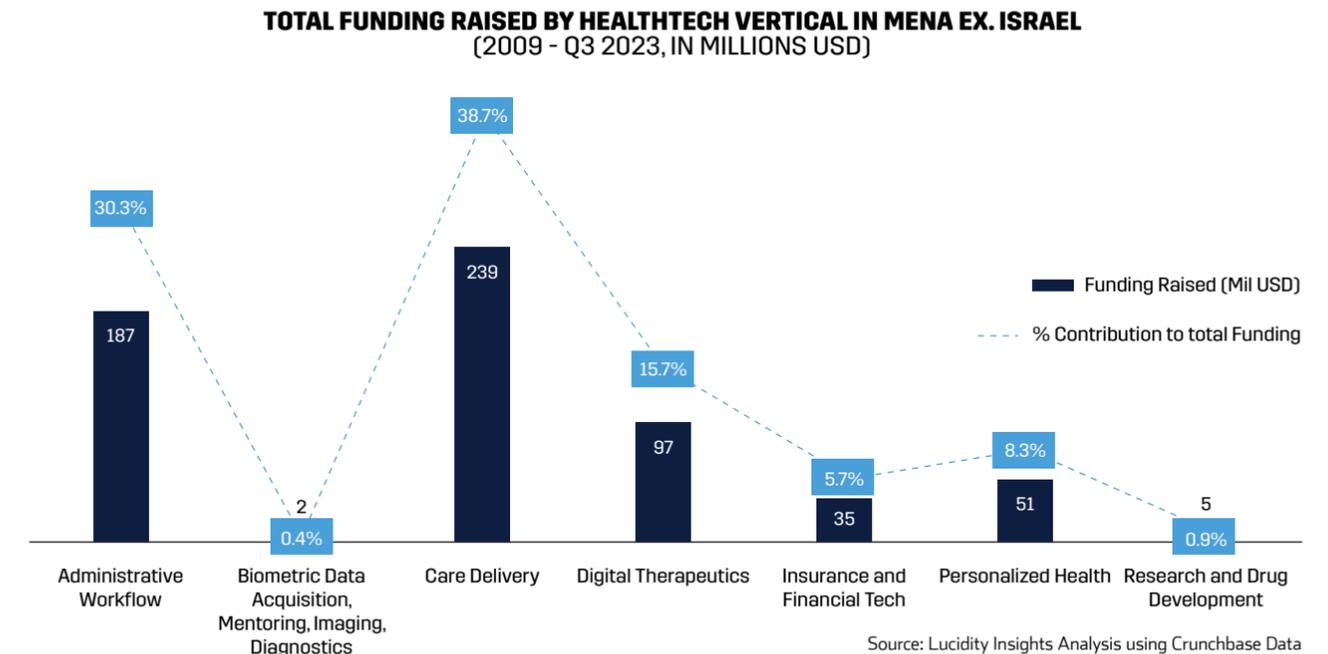


Source: Dealroom

Healthtech has been exploding in the region, with valuations of healthtech startups seeing a significant jump since the COVID-19 pandemic started in 2020. Interestingly, though some startups that were founded in the 1990's and 2000's have also seen an increase in value, it is those companies that have been established since the 2010's that are most highly valued today. When comparing the 5 year growth trends by sector between 2016 and 2021, Healthtech startups saw the highest valuation growth, followed by Foodtech and Marketing (SaaS) companies. This likely speaks to both the drivers presented during the pandemic which quickly educated both consumers and healthcare institutions on the value of technology to increase efficiencies, as well as the new technologies that have come online in the most recent years, which have seen an increase in business models coming to the MENA region that have already proven themselves on the global stage.



5 Following global trends, Care Delivery is the largest healthtech vertical in MENA, by funding raised

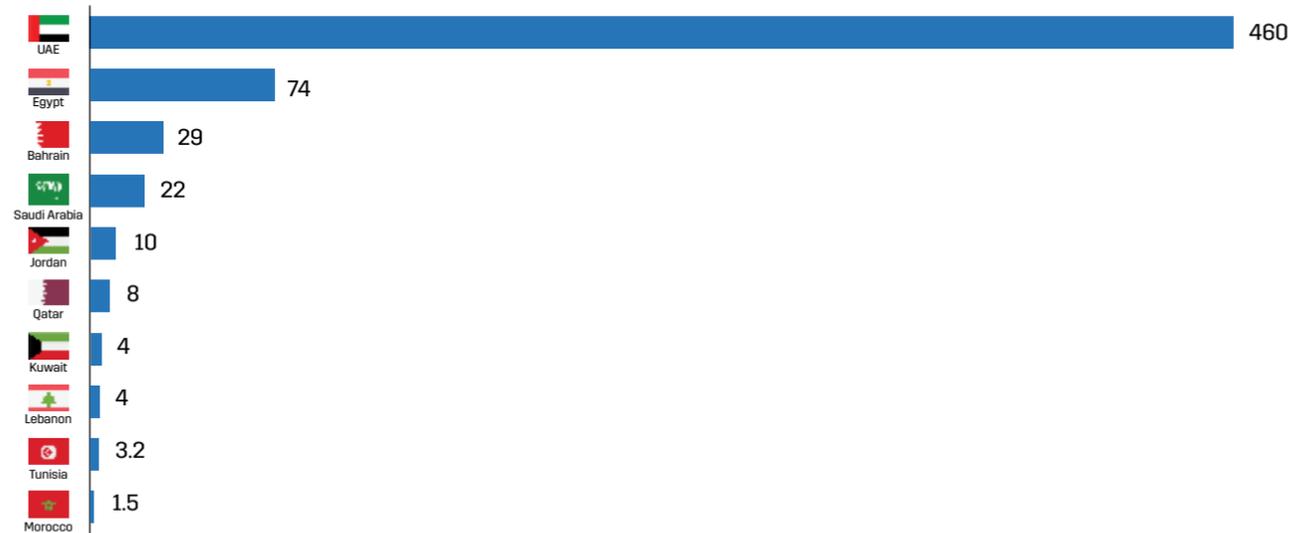


Care Delivery is the most funded healthtech vertical in MENA (ex. Israel), which represent 39% of all funding flows, followed by Administrative Workflow startups that have garnered 30% of VC funding. Digital Therapeutics rounds out the top 3 with \$97 million USD invested, accounting for 16% of all VC funding in the region's healthtech sector.

6

The United Arab Emirates is the Healthtech Startup Capital of the MENA region

TOP 10 MENA COUNTRIES (EX. ISRAEL) BY HEALTHTECH FUNDING RAISED (2009-Q3 2023, IN MILLION USD)



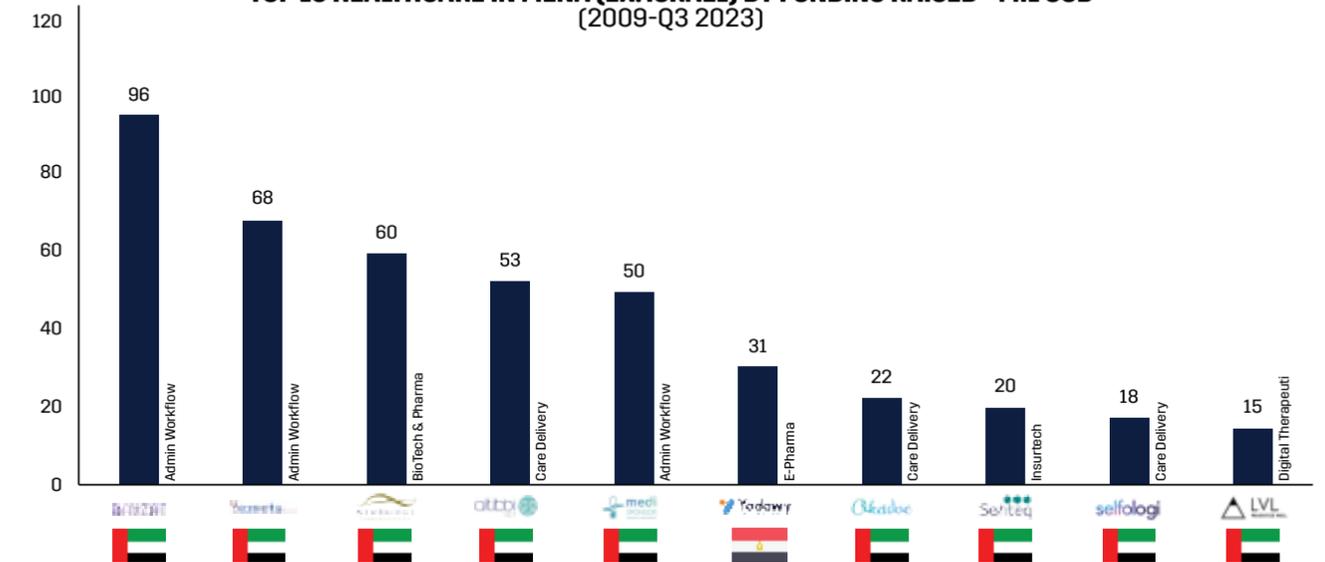
Source: Lucidity Insights Analysis using Crunchbase Data

The UAE is the undisputed healthtech startup capital of the MENA region, when excluding Israel. UAE healthtech startups have fundraised over US \$460 million to date, 6.2X more funding than 2nd place Egypt. That means that 75% of all VC funding going to MENA healthtech are going to UAE startups.

7

Nine out of ten of the most funded Healthtech's in MENA (ex. Israel) are headquartered in the UAE

TOP 10 HEALTHCARE IN MENA (EX. ISRAEL) BY FUNDING RAISED - MIL USD (2009-Q3 2023)



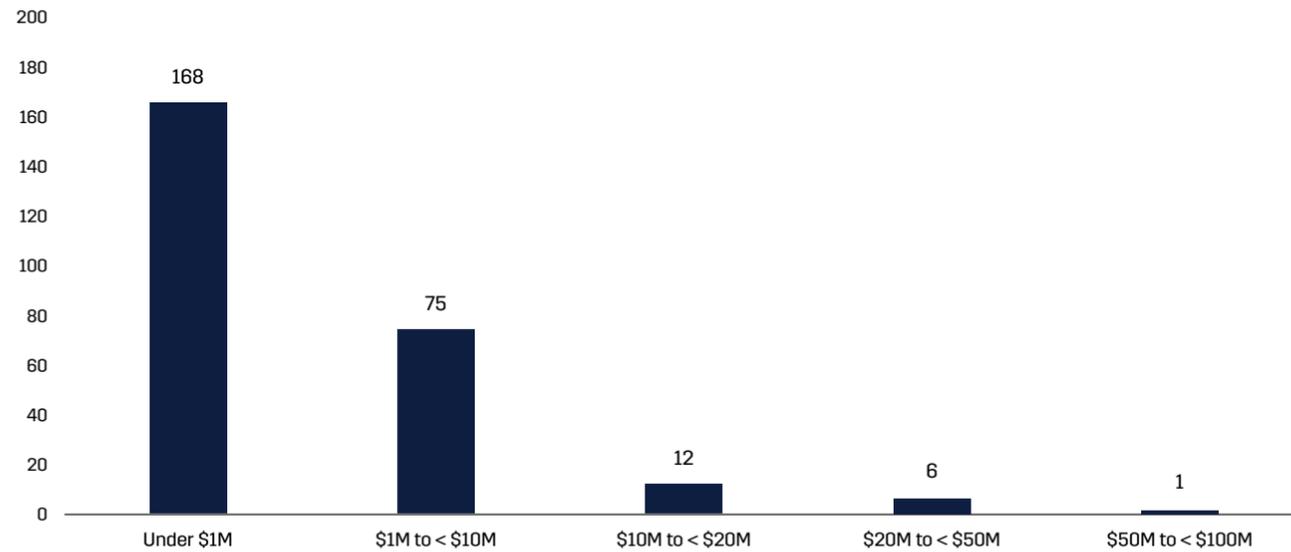
Source: Lucidity Insights Analysis using Crunchbase Data

Nine out of ten of the most funded healthtech startups in MENA (excluding Israel) are headquartered in the UAE. Admin Workflow that help book appointments with Doctors and clinicians online, followed by Care Delivery players that facilitate tele-medicine and online doctor appointments are the most well-funded sub-sectors. Bayzat and Zezeeta are both booking platforms leading the pack in fundraising with \$96 million and \$68 million raised respectively.



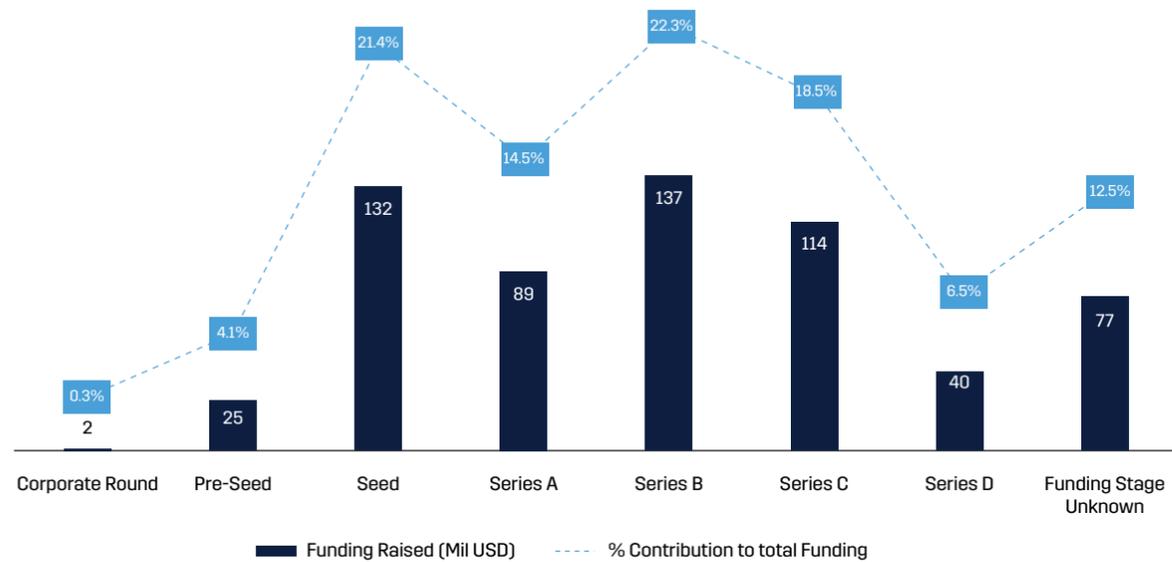
8 93% of Healthtech funding rounds in the MENA region are below \$10 million, with Seed and Series B raising the most funding in total to date

HEALTHTECH ROUND DEAL SIZE ANALYSIS
(2009-Q3 2023)



Source: Lucidity Insights Analysis using Crunchbase Data
Note: MENA data excluding Israel

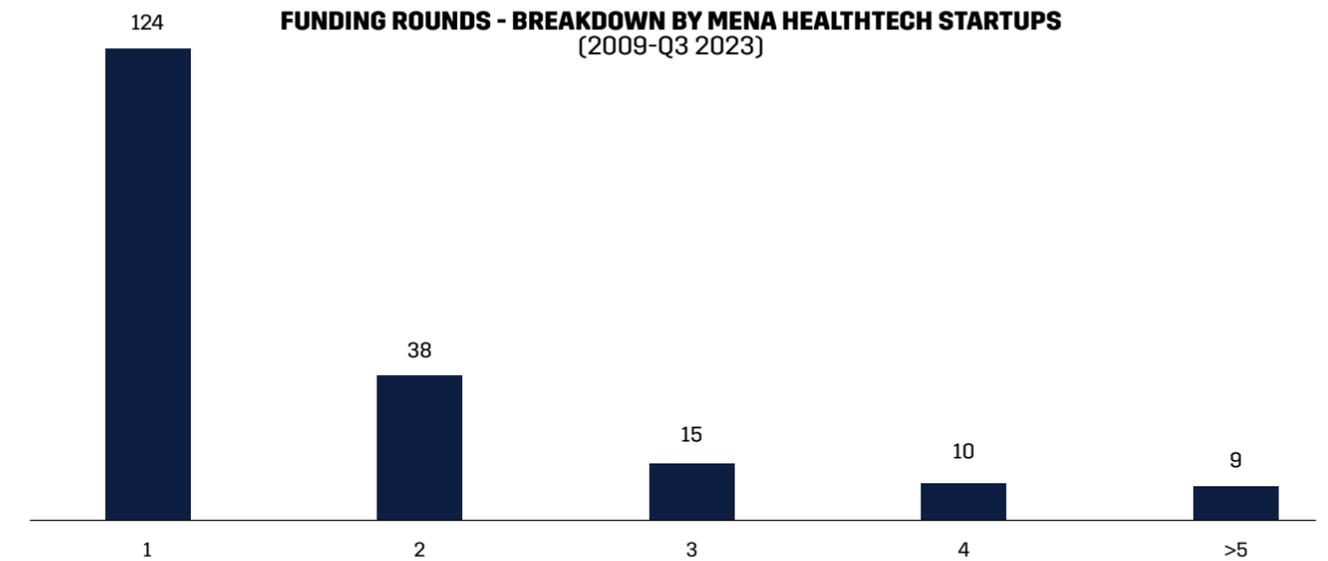
TOTAL FUNDING RAISED BY FUNDING STAGE (MIL USD)
(2009-Q3 2023)



Source: Lucidity Insights Analysis using Crunchbase Data
Note: MENA data excluding Israel

9 38% of Healthtech Startups in MENA (excl. Israel) have successfully raised 2 or more rounds

FUNDING ROUNDS - BREAKDOWN BY MENA HEALTHTECH STARTUPS
(2009-Q3 2023)



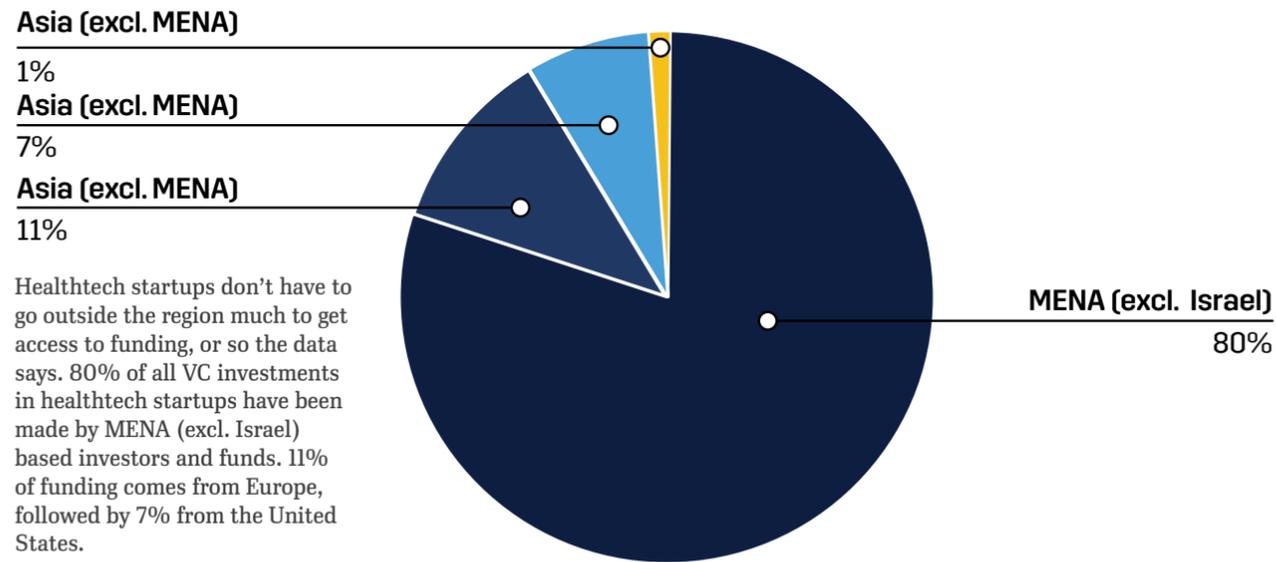
Source: Lucidity Insights Analysis using Crunchbase Data
Note: MENA data excluding Israel

200 healthtech startups in the MENA region (excl. Israel) have successfully raised at least one round of funding. 38% have successfully raised two or more rounds of funding. 17% have successfully raised over three rounds of funding, and 10% have successfully raised 4 or more rounds. This tells us that there is a healthy maturation of healthtech startups in the region, though there is still significant room to grow.



10 93% of Healthtech funding rounds in the MENA region are below \$10 million, with Seed and Series B raising the most funding in total to date

SOURCE OF VC INVESTMENT IN HEALTHTECH (2016 TO 2022 Q1) IN THE MENA REGION BY INVESTOR'S HQ REGION

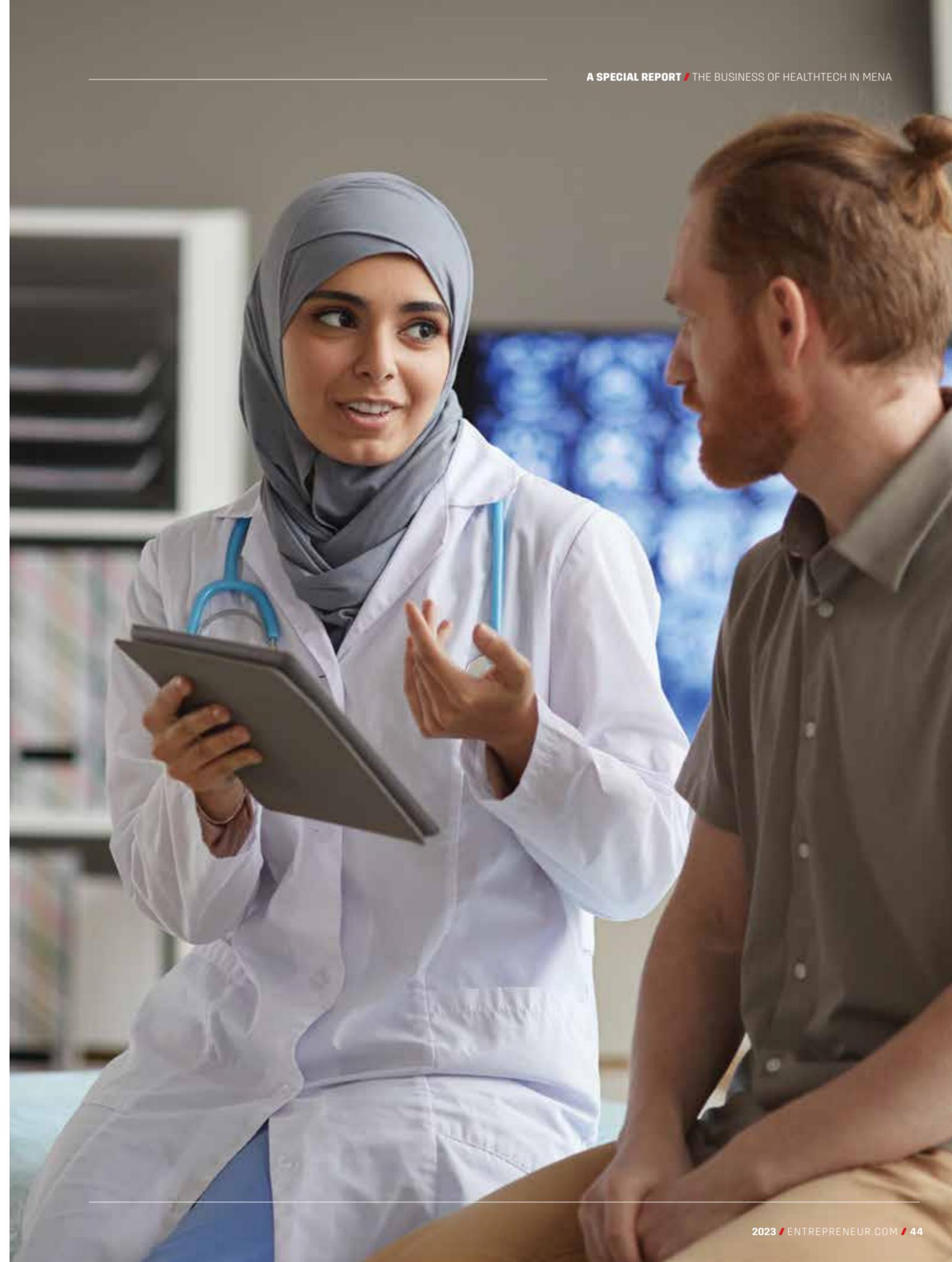


HEALTHTECH DEDICATED FUNDS ARE ON THE RISE IN MENA (NON-EXHAUSTIVE)

Fund Name	Investor(s)	Year Est.	Country of origin	Fund Size
Blue Apple New Frontier Healthcare Fund	Blue Apple Capital, New Frontier Capital	2020	UAE & Hong Kong	\$300 Million
IGan Arabian	IGAN ARABIA	2022	Canada, UAE, KSA	\$250 Million
TVM Capital Healthcare Fund I & II	TVM Capital	2010	Germany & UAE	\$300 Million
Global Ventures Fund II	global ventures	2020	United Arab Emirates	\$100 Million
Oryx Fund	HUMERO PLUS, ORYX FUND	2021	United Arab Emirates	Undisclosed
Foundation Holdings Fund	FOUNDATION HOLDINGS	2016	United Arab Emirates	\$270 Million
Alkhair Capital	Alkhair Capital	2023	United Arab Emirates	\$100 Million
Saudi Healthcare & Education Fund	Amanat, Saudi Fund for Health	2020	Saudi Arabia	\$680 Million

Source: Lucidity Insights Research

Dedicated healthtech funds were largely unheard of prior to the pandemic, but today, there are over 8 funds dedicated to healthcare and healthtech investments, with a combined total of over \$2 billion USD.



MEET SOME OF THE MENA REGION'S MOST INNOVATIVE HEALTHTECH PLAYERS

Healthtech is booming in the Middle East, led by the United Arab Emirates. Startups headquartered in the UAE have raised 75% or \$460 million out of the \$616 million raised by healthtech startups across the MENA region (excluding Israel). Between 2016 and 2022, Healthtech startup valuations grew by 22X, and have only continued to rise. Meet some of the latest healthtech players making waves in the region.

SPOTLIGHT | KLAIM



KLAIM: CLAIMS MANAGEMENT PLATFORM ALLEVIATES CASHFLOW CRUNCH FOR HEALTHCARE PROVIDERS IN THE GCC



Karim Dakki
Co-founder & CEO, Klaim.ai

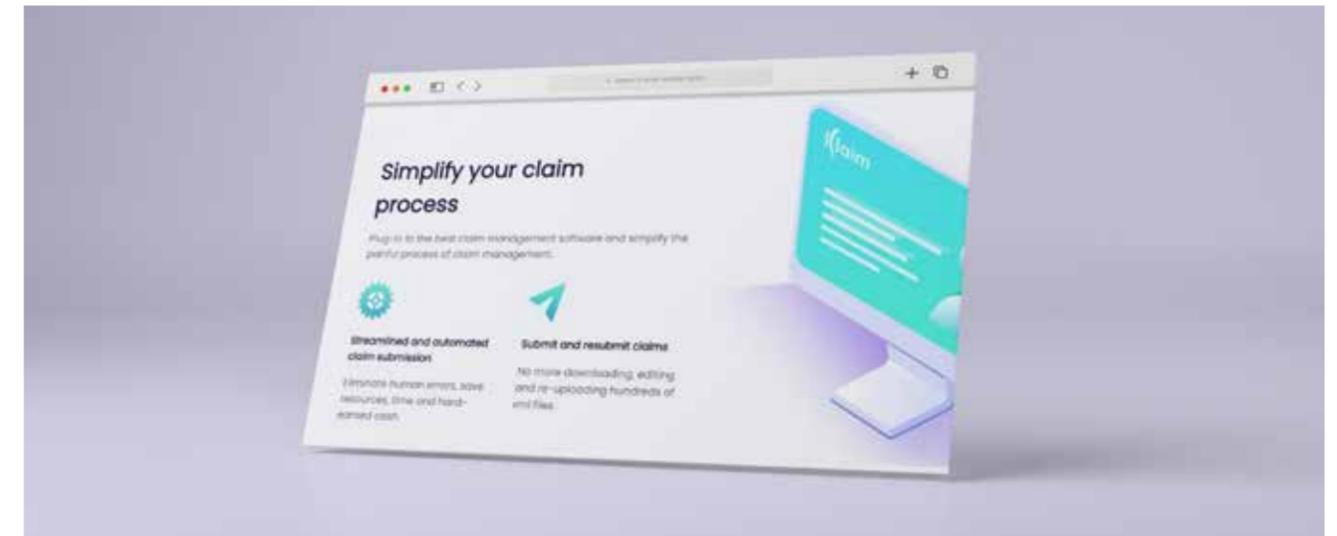
Ghafoor Ahmad
Co-founder & Chief Revenue Officer, Klaim.ai

Amidst the height of global turmoil driven by the pandemic in 2020, two friends found themselves in conversation about the flawed healthcare sector, particularly within MENA. Unnerved by the fact that healthcare providers often wait months to receive payment, Ghafoor Ahmad and Karim Dakki brainstormed a new approach that would become KLAIM. KLAIM was formed with the intention of enhancing the quality of medical care by streamlining the healthcare claims process. KLAIM would soon go on to radically reshape healthcare claims management in the Middle East, ensuring providers are paid swiftly and efficiently. "KLAIM was not about seizing a business opportunity, but a mission born out of personal conviction and shared values," says Karim.

Where AI Meets Insurance Claims

Healthcare is an industry fraught with contradictions: patients seek high-quality, low-cost care; healthcare providers want prompt, accurate payments; and insurance companies try to keep costs down without compromising coverage. This tug-of-war creates a complex billing process that leaves healthcare providers in a constant state of financial unpredictability.

KLAIM offers an AI-powered management system that simplifies traditionally convoluted payment procedures, aligning the interests of all – from patients to providers and



insurance companies. With automation tools for monitoring daily tasks such as operations and insurance claims, KLAIM provides healthcare professionals with instantaneous data analysis, record tracking, form submission, and financial reports to ensure seamless and efficient claim and revenue management.

The Healthcare Cash Crunch

KLAIM's innovation has been particularly resonant in the UAE, where an array of 99 different rejection codes lead to 15% of claims being rejected. This rejection rate is still a reduction from first-time rejection rates, which sits at about 30%. The payment cycle can also then drag from 60 to 90 days, and insurers take an average of 113 days to clear 90% of submitted claims. This also implies that anywhere between 5% and 10% of claims are written off. This leads to cash flow issues and eventual payment issues to staff, which need to be paid on time, invariably leading healthcare providers to consider taking on loans to run their business. This is a very different business reality from how business was conducted a short decade ago, when 70-80% of payments were made directly in cash by patients. However with the UAE's mandatory requirement for healthcare insurance, this has changed.

"Before KLAIM, healthcare providers had limited options to accelerate these drawn-out payment cycles, contributing to unstable cash flows and diminished care quality," Karim tells us. But KLAIM's entry offered an opportunity to healthcare providers, offering faster, more reliable claims payments and bolstering the industry's overall health.

Mission MENA

Insurance companies are also keen to partner with InsurTech companies. In Capgemini's World InsurTech Report, 67% of UAE-based insurers expressed interest in collaborating with insurtechs back in 2020. This is precisely the time when KLAIM started operations in the UAE, with a seamless integration solution for implementers. According to Karim, the UAE's national health exchange, in place for nearly a decade, played a key role in their decision to enter this market first. Next, KLAIM extended its operations to Saudi Arabia at the forefront of the nation's healthcare digitalization wave in 2022, thereby establishing a significant first-mover advantage.

Most recently, KLAIM expanded its presence to Oman, acknowledging the country's emerging focus on healthcare digitization marked by the development of DAMANI,

SPOTLIGHT | KLAIM

KLAIM'S FUNDRAISING JOURNEY



Source: Klaim

Oman's own national health exchange. The two largest markets in the GCC, which are the UAE and Saudi Arabia, contribute 95%, and 5% of KLAIM's revenues, respectively. Since its inception, KLAIM has purchased claims worth over AED 110 million and supported over 150 medical entities.

Fundraising Journey

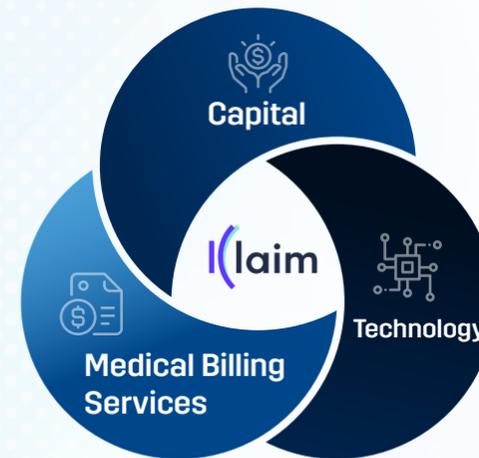
With its goal to streamline the labyrinthine healthcare claims process, KLAIM has raised over \$8 million in equity funding, and \$10 million in debt funding, and has \$40 million in commitments for additional debt funding from various investors. The team are now working to secure a Series

A round of equity financing to bring the solution to more healthcare providers across the Middle East.

First Mover Advantage

We asked Karim, how does KLAIM differentiate itself from other startups in the claims management space? "By leveraging specialized technology and a deep understanding of healthcare ecosystems, we position ourselves strategically in emerging markets to gain first-mover advantages." KLAIM also navigates the myriad of challenges in the healthcare industry to offer solutions that are tailored to the specific needs of each market, giving them that competitive edge.

KLAIM's unique strength lies in its three-pronged approach:



Capital: KLAIM buys claim receivables, pouring instant money into healthcare providers' operations. This capital injection lets healthcare institutions provide top-notch care, without financial difficulties.

Technology: Through advanced, AI-driven revenue cycle automation, KLAIM makes for faster and on-point claims processing, leading to a reliable and smooth payment cycle.

Medical Billing Services: KLAIM goes above and beyond with its comprehensive medical billing services, covering everything from medical coding to denial management. Their team handles the tricky billing process, allowing healthcare providers to dedicate time and resources to patient care.

Future Plans

KLAIM recently partnered with Dubai Healthcare City (DHCC), the emirate's enabling healthcare freezone, which will give DHCC stakeholders and partners preferential subscription rates to KLAIM's propriety platforms. This collaboration aligns with the DHCC's progressive strategy to attract top-tier expertise and expand its array of services and technologies.

"KLAIM technology will be another asset in our enabling ecosystem to allow business to thrive and our ongoing efforts to attract the best in class global and regional healthcare names to Dubai Healthcare City as part of the emirate's goals to become a leading global healthcare destination," said Salim Dahman, Director of Marketing and Communications at Dubai Healthcare City Authority.

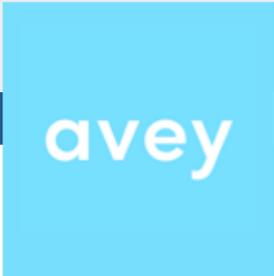
KLAIM's co-founders have also expressed an interest in entering the US market within the next 3-5 years, drawn to its vast and intricate healthcare system, technological readiness, and substantial volume of processed claims. While the healthcare industry is plagued by several challenges, such as regulatory complexity, interoperability, fraud and abuse, existence of manual processes, and ensuring data privacy and security, KLAIM is confident that with the union of capital, advanced technology, and specialized services, it is a game-changer in the industry.

For burgeoning entrepreneurs in the Middle East, KLAIM's founders are a testament to the significant impact of uniting skill, passion, and conviction to usher in transformative change, influencing global standards and empowering both healthcare providers and patients alike. When we ask them for a word of advice? They say: "Understand the cultural landscape. Build strong local networks. Stay resilient and adaptable. Prioritize innovation."



Jaffer Bin Jaffer, Director, DHCC (left) and Karim Dakki, CEO of KLAIM (right)

SPOTLIGHT | AVEY



AVEY: DIGITAL HEALTH SUPPORTING SELF DIAGNOSIS WITH 93% ACCURACY



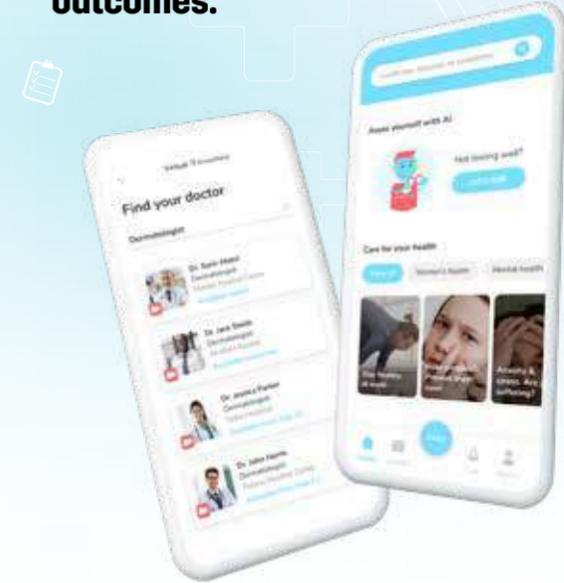
Digital health technologies are designed to empower patients with data-driven insights into their health. The influx of everyday medical monitoring devices and wearables such as smart watches, fitbits and continuous glucose monitors, coupled with the increasing prevalence of chronic diseases and consumer's growing comfort with telemedicine are all significant drivers propelling the demand for

self-diagnosis platforms. These new healthtech platforms and devices are simple and easy to use individuals can easily enter their symptoms and receive potential diagnoses, all backed by robust AI algorithms.

Furthermore, digital health is often more affordable and significantly more scalable than brick-and-mortar healthcare. It can reach more people

than face-to-face care and it often delivers more timely diagnosis due to its ability to be used anytime, anywhere. It also removes the headache of travel times, as well as the resulting environmental impacts. Self-diagnosis tools like Avey are especially a game-changer for patients in remote areas or those with limited access to healthcare.

“Self-diagnosis tools like Avey are especially a game-changer for patients in remote areas of those with limited access to healthcare. It offers immediate feedback, that can lead to early diagnosis – which can often make all the difference in treatment outcomes.”



Understanding Digital Diagnosis

Digital diagnosis systems use artificial intelligence and machine learning (AI/ML) to analyze user's symptoms and compare them against a massive database of medical data and knowledge, which often includes millions of peer-reviewed medical cases. Such a process enables the platform to provide a potential diagnosis that aligns with the information provided by the user from the comfort of their home.

These systems also offer the advantage of immediate feedback, an important feature considering that early diagnosis can often make a significant difference in treatment

outcomes. Moreover, the ability to triage symptoms can alleviate pressure on healthcare systems, particularly in times of crisis such as the COVID-19 pandemic.

The pandemic has also dramatically increased the utilization of self-diagnostics, familiarizing the wider-population with at-home self-diagnostic kits. It's believed that post-pandemic consumers will continue to see diagnostic healthtech products and solutions as an increasingly viable preventative investment for their overall well-being, helping to lead the shift towards personalized preventative healthcare, over treatment-focused healthcare.

According to McKinsey & Company, the potential global market for digital self-diagnosis technologies could reach US \$50 billion by 2025, driven by increasing technological advancements, growing consumer interest in personalized health, and the worldwide increase in smartphone usage. Since 2010, over 200 new enterprises have emerged, each creating innovative applications for healthcare. Around 40% of these applications are designed for direct health interventions or prognostic abilities, which signifies a substantial shift in the landscape of health data applications from when it was primarily concentrated on analyzing past data to managing the analysis of current data.

Avey's AI self-diagnosis platform

Lucidity Insights spoke with Avey's founder, Mohammad Hammoud, "It all began when my son fell ill with a serious chronic illness," he recounts. A true testament to how adversity can fuel innovation, Mohammad's challenges with the healthcare system sparked a radical idea: why not use technology, specifically AI, to eliminate healthcare's shortcomings and inequalities? As an Associate Professor at Carnegie Mellon University with an extensive background in computer science, he recognized that he might be uniquely suited to solve for the current challenges. After all, his current research focuses on designing and building scalable distributed systems for artificial intelligence, information retrieval, and graph mining applications. "Just as smartphones connected millions of people to the internet, a similar transformation could occur in the accessibility and quality of healthcare." And thus, Avey was born on a mission to empower individuals worldwide with a free, anytime-anywhere self-diagnosis tool.

SPOTLIGHT | AVEY

The journey, of course, came with its challenges. For starters, the expert team assembled to create Avey's initial medical diagnostic algorithm took 3.5 years of relentless effort. Yet, every hurdle only reinforced their belief in the mission. "There were moments of doubt and obstacles along the way, but our unwavering belief and conviction to the mission drove our determination," Mohammad shares.

Now, Avey is reshaping how individuals approach their health with a holistic, personalized strategy tailored to each user's unique needs. "In today's healthcare landscape, individuals often face fragmented healthcare experiences," Mohammad says, emphasizing the solution Avey brings to the table. This revolutionary service leverages advanced AI models to address healthcare's inefficiencies, paving the way for a seamless self-diagnosis experience.

Cutting Edge Algorithm

Avey's AI medical diagnostic algorithm replaces the need for self-diagnosis via search engines by offering a reliable, accurate alternative. In fact, the inclination towards self-diagnosis has been deeply ingrained in people for decades, if not centuries and is more popular than video consultations. The algorithm's remarkable precision ensures a dependable health assessment, making the journey of self-diagnosis a well-guided, autonomous one.

Since establishing itself in 2017, Avey's platform has reached 80% coverage of today's most common diseases. Today, the app has been downloaded over 1.1 million times across 175 countries and has a 93% accuracy rate for diagnosis. And the accuracy rate is continuously improving. With a dedicated team working around the clock to update the platform based on user feedback and evolving healthcare trends, Avey stands at the forefront of healthtech as it consistently outperforms the industry standard.

Creating the World's largest digital hospital

Although the AI diagnostic tool is available worldwide, Avey has currently honed its focus on the Qatar market for partnerships with medical institutions, doctors, and pharmacies. The Avey Team says they already have plans to expand their partnerships to the UAE, Kuwait, USA, and Canada.

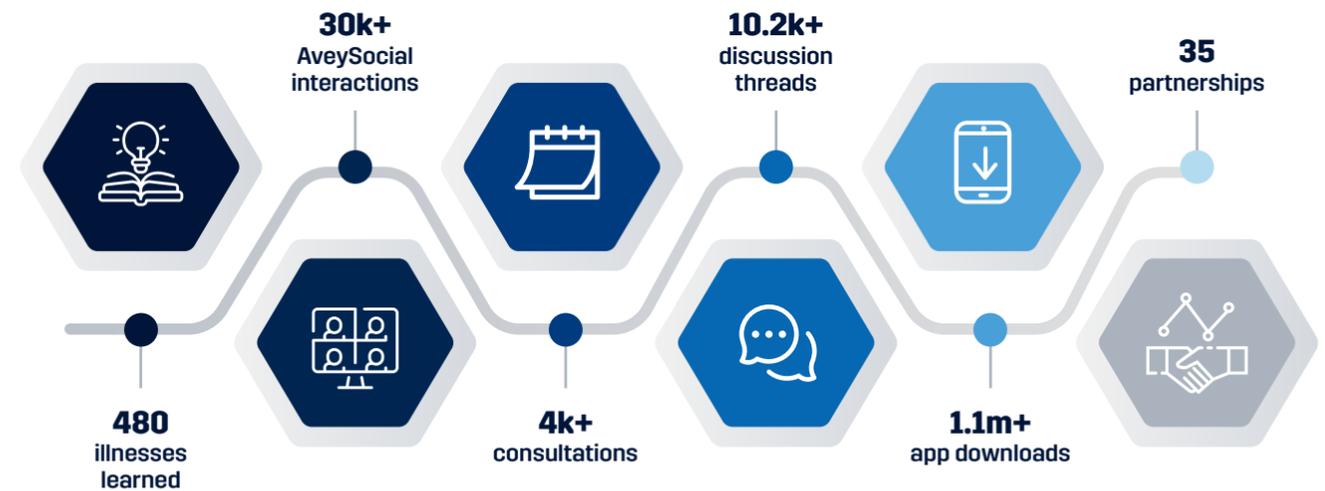
Today, Avey has been successful in diagnosing patients with remarkable accuracy, covering over 480 illnesses learned by the AI. They have successful partnerships with 35 healthcare providers, and over 4,000 telemedicine consultation bookings, showcasing the platform's effectiveness. Avey's entrepreneurial journey has also seen them successfully raise \$4.71 million; comprised of a US \$1.45 million pre-seed and a \$3.26 million seed round. Now, they are setting their sights

“Our aim is to create the world’s largest hospital that transcends geographical boundaries”

Mohammad Hammoud
Founder & CEO, Avey



AVEY'S SUCCESS METRICS



Source: Avey

on their Series A funding round, aiming to attract both local and international investors. After all, a significant part of their future roadmap includes expanding into the US healthcare market and establishing more strategic partnerships globally.

Despite the crowded healthtech space, Avey has still managed to stand out. Mohammad attributes their success to the platform's unparalleled and improving accuracy as well as their strong commitment to create a healthcare ecosystem that transcends geographical boundaries. "We aim to connect users with the best healthcare professionals, regardless of their location," he explains, highlighting their global approach.

However, the healthtech industry as a whole still faces significant challenges, such as limited access to quality healthcare, escalating healthcare costs, and health disparities among different populations. Recognizing these challenges, Avey is committed to leveraging AI technology to enhance access, affordability, and the quality of care, one step and one

algorithm adjustment at a time.

According to Mohammad, he and his team are aiming "to create the world's largest hospital that transcends geographical boundaries" and "our goal is to connect users with the best healthcare professionals, regardless of their location." Mohammed's mantra is to focus on customer-centricity, with other key tips to other budding entrepreneurs in the region being to establish a strong culture, embrace resilience and build a strong network.

The future of digital health tech looks especially promising today as the integration of AI into healthcare is poised to transform patient experience, improve diagnostic accuracy, and create a more efficient health system. As we continue to navigate the global health landscape, digital health tech's role will undoubtedly become more integral, proving to be more than just a wave but rather, a seismic shift in how we perceive and manage our health.

SPOTLIGHT | WEBOPS



NAVIGATING THE FUTURE: AXIS HEALTH AND WEBOPS REDEFINING HEALTHCARE INVENTORY MANAGEMENT AND LOGISTICS IN THE MIDDLE EAST



region-specific solutions that solve for the unique complexities inherent in the healthcare industry.

Navigating the Challenges: Revolutionizing the Medical Device Supply Chain

In the dynamic landscape of the GCC healthcare industry, particularly within the healthcare sector, the spotlight is on supply chain management more than ever. Recent years have seen an amplified emphasis on navigating the intricacies of this complex field, notably illuminated by disruptions brought forth by the pandemic. The ripple effect of these disruptions underscores the paramount importance of precision, especially in the globally connected and multi-tiered med-tech supply chains that meticulously adhere to stringent regulatory standards. In the GCC, clinical providers and healthcare executives grapple with substantial disruptions, impacting an overwhelming 93% of executives in the past year alone. Frontline heroes, including nurses and physicians, find themselves diverting almost 40% of their precious time from patient care to administrative tasks. This urgency is further accentuated by the surge in healthcare costs. Governments, recognizing the pivotal role of supply chain optimization, acknowledge that up to 50% of healthcare expenditures in some countries are earmarked for supplies. This underscores the pressing need for streamlined solutions that not only alleviate the burdens on clinical providers but also enhance overall efficiency, aligning with the dynamic landscape of GCC healthcare.

Remarkably, despite being a significant asset base and involving substantial investments, numerous medtech companies persist in utilizing outdated inventory management methods. As we step into 2023, manual, labor-intensive, error-prone, and inefficient methods endure, with some entities clinging to outdated tools like fax machines, Excel spreadsheets, and whiteboards. While a handful of manufacturers have crafted in-house solutions, traditional ERP systems fall short when it comes to managing external stock. This lingering reliance on antiquated inventory practices serves as a compelling

Introduction: Pioneering a New Dawn in Healthcare Inventory Management and Logistics

In the rapidly evolving landscape of healthcare and medical technology, a transformative journey is unfolding in the Middle East. Axis Health and WebOps have not just formed a strategic partnership; they are architects of change. This alliance and shared purpose accelerates healthcare transformation and improves patient care by optimizing the healthcare supply chain, starting from when a medical product leaves a manufacturing plant or distribution warehouse through the hospital setting and ultimately until it reaches the very moment and place it is needed most - in the clinician's hand for ready use on the patient in medical need.

Beyond their shared sense of purpose to enhance the healthcare supply chain, each organization has integrated relevant components of their portfolio of capabilities, technologies, and people in a unique and complementary way that will deliver

Since their founding, WebOps have had great impact

17 Countries	100+ Tailor-made product enhancements	10 Million Lives touched
13k Daily users across globe	6700+ Inventory Sites	
120k Surgeries coordinated per month	\$1b+ Billion USD Worth of inventory managed each day	
Translated to 7 Languages		

Source: WebOps

call for urgent and innovative solutions to reshape the medtech supply chain landscape.

WebOps: Revolutionizing the Tapestry of Medical Device Logistics

In the healthcare and medical device sector, bespoke solutions addressing specific challenges are a reality. Founded in 2006, WebOps has emerged as a pioneering force in healthcare supply chain solutions. Established by a team of seasoned industry professionals with profound expertise in medical device sales, distribution, logistics, and software development, WebOps was conceived with a collective understanding of the inherent challenges within the healthcare sector. At the core of WebOps' offerings is its flagship product, WebOps Logistics, a comprehensive inventory management system finely tuned to navigate the complexities faced by medical device and biologic companies, along with their distributors. This transformative solution integrates a customized SaaS Web Suite, a GMP-compliant Receiver Manager, and an

...with great partners

...and amazing clients

intuitive Mobile Application, delivering real-time visibility into each field inventory transaction and fostering heightened sales efficiency, operational excellence, and substantial cost reductions.

Axis Health: Delivering the Future of Care, Today

Guided by its mission to enhance access to care through cutting-edge technologies, collaborative teams, and strategic partnerships, Axis Health is ushering in a new era of healthcare solutions.

Axis Health operates across three dimensions, seamlessly integrating expertise in medical device distribution, supply chain advisory services, and managed services. As leaders in medical device distribution, they have excelled in "delivery" of state-of-the-art and next-gen technology products to healthcare providers. Their unwavering commitment to supply chain optimization ensures the efficient "delivery"

SPOTLIGHT | WEBOPS

of medical products, creating a streamlined and cost-effective healthcare ecosystem. In the realm of managed services, they have successfully redefined care accessibility through the innovative business models and partnerships that "deliver" healthcare closer to workplaces or homes, providing a personalized and convenient healthcare experience.

Their vision at Axis Health goes beyond delivering services and products; it aims to orchestrate a transformative healthcare experience where precision meets innovation, shaping a future where Axis Health delivers excellence today.

WebOps and Axis Health: A Collaborative Approach.

WebOps global expansion from the US into the UAE market strengthens as it gains strategic support from Axis Health and its CEO Hamid Dean Refai. The partnership is based on complementing one another's strengths such as wrapping Axis Health's advisory expertise around WebOps portfolio of digital software to digitally transform how inventory is managed for clients, but more importantly to ensure that automated and digitized workflows are redesigned to be streamlined and optimized first.

The ultimate intention is simply to deliver best-in-class solutions that ensure clients achieve their desired operational and financial outcomes, while ensuring patient care and healthcare services are elevated with a healthy supply chain that successfully delivers the right product to

the right place, at the right time. Together, they are stronger in partnership and the impact will be greater as they forge a path towards a more connected and efficient healthcare future.

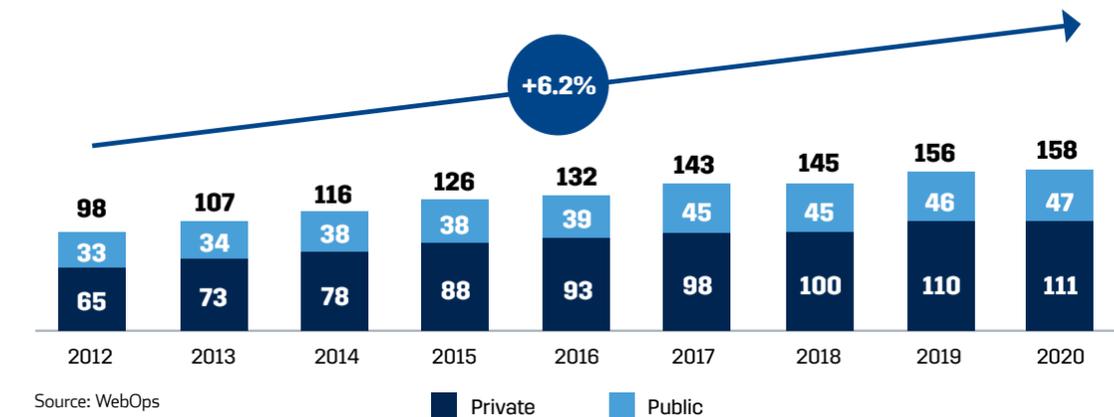
The GCC region has experienced significant growth in its healthcare sector over the past two decades. Investments in hospitals, healthcare professionals, and equipment have been on the rise. Today, the healthcare industry faces a pivotal moment, where advanced technology can play a crucial role in addressing the challenges and ensuring the industry's continued growth and improvement.

WebOps Logistics Functions and Benefits

WebOps Logistics is the cornerstone of this transformational solution. Its functions and benefits are far-reaching and integral to healthcare supply chain in the GCC region. Here are some of the key areas where WebOps Logistics excels:

- Total Inventory Control:** Full traceability and oversight, ensuring vital medical devices are where they need to be when they need to be there, the platform's advanced system brings clarity and control to the forefront of inventory management to help manage product expiry and quality alerts while optimizing front and backend processes.
- Sales Enablement:** The platform empowers healthcare providers to make informed decisions about device usage and procurement. It enhances sales and operational efficiency, contributing to improved cash flow for medical device and biotech companies.

NUMBER OF HOSPITALS IN UAE (2012-2020)

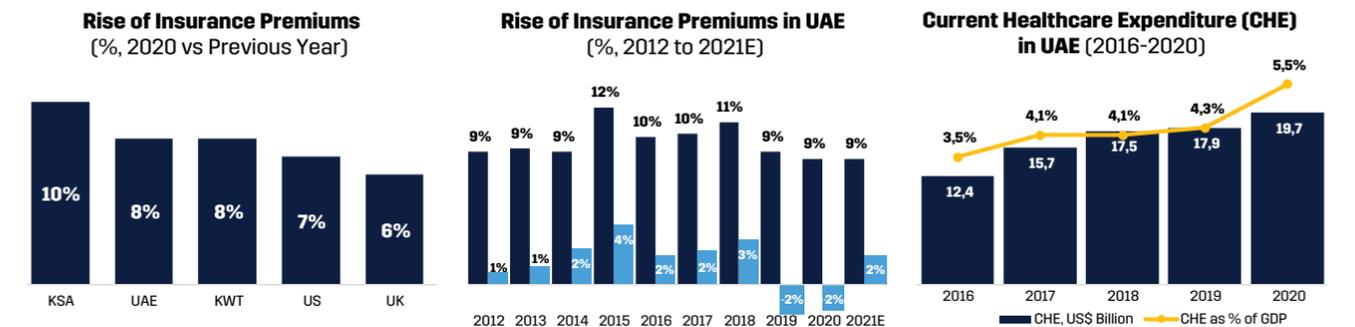


- Integration and Automation:** WebOps Logistics excels in integration and automation, extending its capabilities far beyond standard enterprise ERPs. It connects with top-tier software in various domains, including sales force automation, hospital integrators, and shipping providers, alongside integration with essential hospital EHRs (Electronic Health Records) and Warehouse Management Systems (WMS). The result is a seamless, efficient, and technologically advanced system, integral to modernize the care delivery.
- User-Centric Design:** The software's clean, modern, and easy-to-use mobile and web interfaces have contributed to an industry-high 98% user adoption rate. This user-centric approach features specific intuitive customizations designed for the various functional roles and types of organizations involved along the supply chain.
- Tissue Tracking Solution:** In addition to medical device management, WebOps Logistics offers the innovative Tissue Tracking solution. This feature ensures real-time visibility into tissue inventory levels, facilitating the tracking and maintenance of human tissues used in surgeries. It enhances patient safety, regulatory compliance, and operational efficiency.
- Global Reach with Scalable Architecture:** With a demonstrated capability to adapt and grow, WebOps' 100+ enhancements fueled geoeconomic expansion across multiple continents and is available in 7 languages, ready to support all sizes of organizations or from local clinics or distributors to international health systems and multinational medtech manufacturers.



"At Axis Health, backed by our global partnerships, we are well-positioned to drive healthcare transformation through strategic alliances with industry leaders. Our focus is on integrating advanced technology, human expertise, and deep knowledge seamlessly. Alongside WebOps, we eagerly anticipate contributing to regional healthcare progress by orchestrating the convergence of top-tier technologies and industry insights. Our collective aim is to optimize the healthcare supply chain through efficient automation, unlocking value that transcends conventional standards, and elevates patient care."

Hamid Dean Refai,
Founder, Axis Health (WebOps Channel Partner)



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A Glimpse into Tomorrow: Paving the Path for Patient-Centric Healthcare Logistics

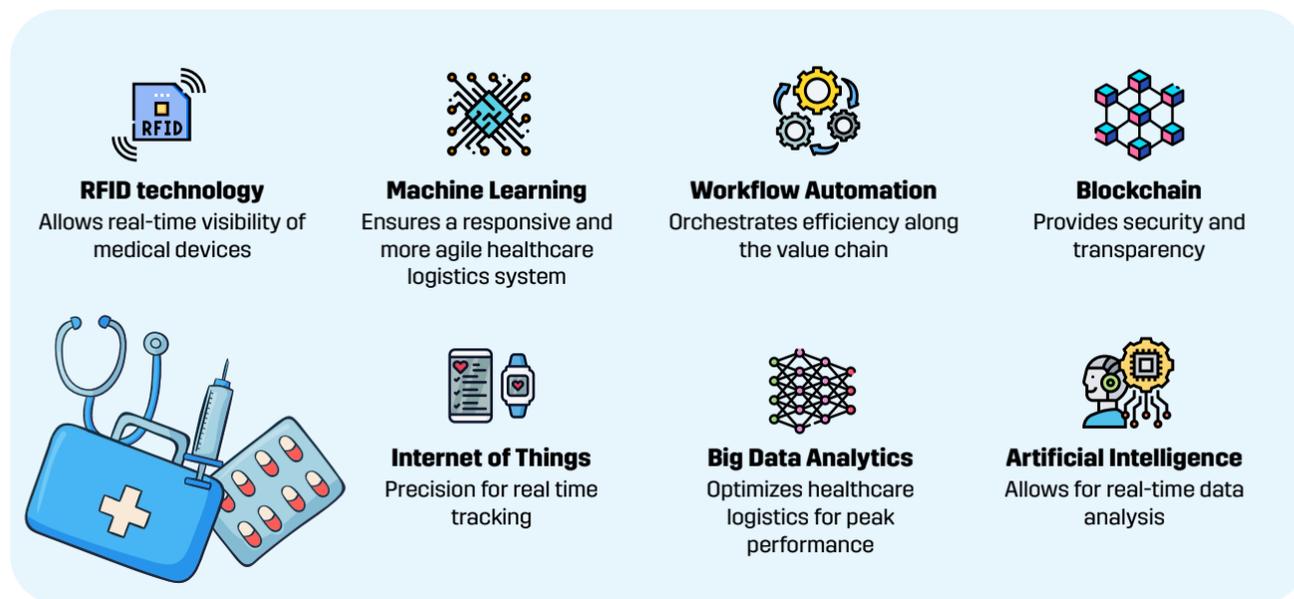
In the realm of healthcare within the Middle East, we're witnessing a paradigm shift, influenced significantly by escalating healthcare expenditures, a surge in demand for advanced medical apparatus, trends in patient consumerism, and stringent regulatory mandates. This shift isn't just about logistics; it's a comprehensive overhaul encompassing medical device management and the intricacies of supply chain operations, all rooted in the principle of patient-first care. Investments in hospitals, healthcare professionals, and equipment have been on the rise. Today, the healthcare industry faces a pivotal moment, where advanced technology can play a crucial role in addressing the challenges and ensuring the industry's continued growth and improvement.

At this juncture, entities like Axis Health and WebOps become not just participants but crucial catalysts. Their combined expertise in the nuances of healthcare logistics and medical device management is key to transforming the region's healthcare system into an archetype of efficiency, compliance, and patient-centered care.

Now, let's talk about the linchpins of this transformation. First, we have the medical device and healthcare supply chain management. Here, embracing innovative technologies like RFID in platforms akin to WebOps is pivotal. These technologies and systems, with their real-time tracking and streamlined processes, are indispensable in managing the intricate dance of medical device logistics. They ensure the availability and optimal utilization of medical equipment, directly impacting patient outcomes.

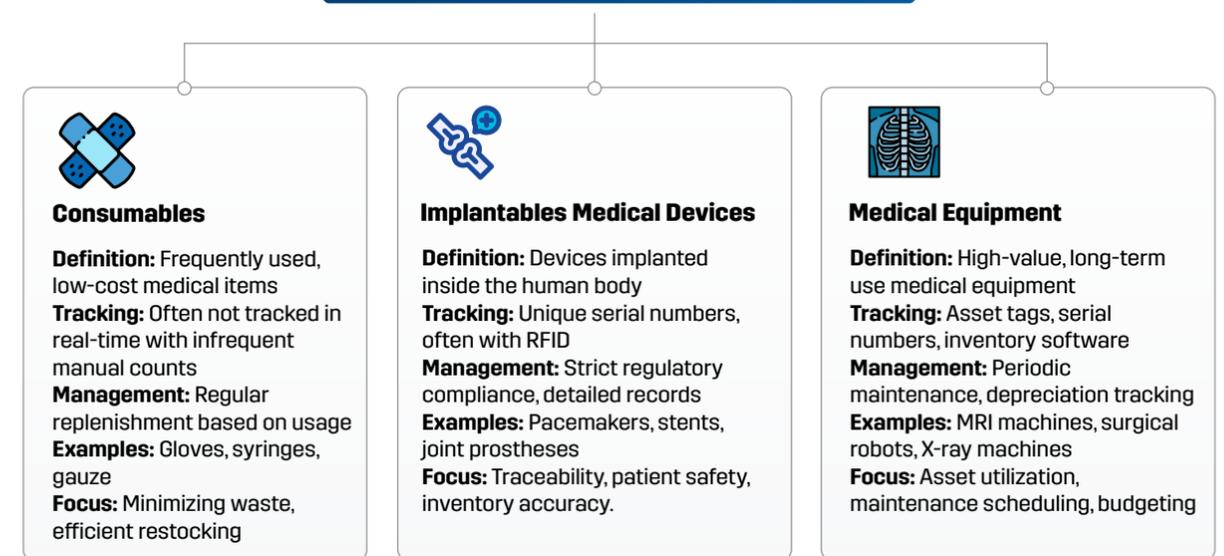
Digital transformation is another frontier. It's not just about technology for technology's sake but automating processes to enhance operational efficacy. Consider cloud-based inventory management systems - these aren't just tools but strategic

ROLE OF CUTTING EDGE TECHNOLOGIES IN HEALTHCARE LOGISTICS



WEBOPS EXPERTISE IS ON IMPLANTABLE MEDICAL DEVICES, INCLUDING BOTH BIOLOGIC AND NON-BIOLOGICS

Ensuring that the right medical devices are available at the right time and place



assets offering real-time insights for sharper forecasting and decision-making. Moreover, they align with the governmental policymakers to drive towards stringent regulatory compliance, particularly crucial in the medical device sector.

The leadership role of Axis Health and WebOps in this revolution is about fostering a proactive, rather than reactive, approach in supply chain management. It's about enhancing visibility, honing forecasting accuracy, and maintaining adaptability to the ebb and flow of the industry. It's about ensuring patient safety and meeting regulatory demands with tailored

tracking and compliance mechanisms. Let's also look at the shift towards value-based care, which underscores efficient management of medical supplies and devices. The adoption of systems like WebOps, that can integrate with bar codes or RFID technology in hospitals, exemplifies a move towards streamlined and error-free inventory management, whether it's for a knee implant or for tracking human organs and tissues, thereby enhancing patient care and staff efficiency.

In essence, the future we're looking at in the GCC's healthcare sector is not merely about technological integration but transforming these sectors into a

unified, patient-focused ecosystem. With the strategic foresight of industry leaders and regional footprint of Axis Health and WebOps, we're setting new benchmarks in efficiency, compliance, and, most importantly, patient care.

As we move forward, the GCC is not just adapting but setting a global standard in healthcare logistics, medical device management, and supply chain efficiency. The journey, though laden with challenges, is well-charted with visionary leadership that are tried and tested, ensuring a healthcare system that is responsive, resilient, and ready to cater to the ever-evolving needs of its populace.

CONCLUSION

Healthtech is booming. The pandemic managed to put rocket-packs on the industry's innovation and digitization journey. And despite the "VC winter" causing a cash crunch for startups across industries around the world – 2023 data shows that digital health is the most resilient sector, having stabilized dealflow and funding sizes in the early part of this year.

Healthtech is the 3rd most unicorn-producing sector globally, but there is yet to be a healthtech unicorn in this region. In fact, there is yet to be a healthtech startup in MENA (excl. Israel) that has managed to raise a mega-round above \$100 million, and cumulative funding going into healthtech startups in MENA (excl. Israel) sits at just over \$616 million. Despite these relatively low amounts of funding going into the sector (compared to Fintech, for example – which raised \$2 billion in the Middle East between 2021 and 2023, alone), we are seeing some of the fastest growing valuations of startups in healthtech, over any other – and for relatively lower ticket-sizes. The United Arab Emirates holds its position as the MENA region's hottest healthtech startup ecosystem, with 75% of all healthtech funding going to startups headquartered in the country. Nine out of ten of the most well-funded healthtech startups in MENA also call the UAE home.

Whether we're talking about tele-health and other forms of optimized healthcare delivery, digital therapeutics, drug discovery, personalized medicine – such as those geared towards DNA and blood testing for reproductive health or personalized care – insurtech or admin workflow SaaS companies that help optimize booking doctor appointments, there is a vast playground to launch the next best healthtech startup. Who knows, perhaps the next healthtech startup will be crowned the region's first healthtech unicorn.



Entrepreneur

MIDDLE/EAST

CEO Wissam Younane
wissam@bncpublishing.net

DIRECTOR Rabih Najm
rabih@bncpublishing.net

CHIEF CONTENT OFFICER
Erika Masako Welch erika@lucidityinsights.com

DIGITAL SOLUTIONS DIRECTOR
Mahdi Hashemi mahdi@bncpublishing.net

EDITORIAL TEAM
Hamza Ibrahim
Hind ElGharib
Nazmia Nassereddine

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PO BOX 502511 DUBAI, UAE
P +971 4 4200 506



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THE BUSINESS OF HEALTHTECH IN MENA