

Life Science in the United Arab Emirates

Teaser: December 2021



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Key Takeaways

Disclaimer

Introduction

This analytical case study reveals **key developments in the Life Science Industry in the United Arab Emirates**. This is accomplished by highlighting major UAE players in the field of Life Science, covering technological trends and advances, analyzing existing and projected governmental policies, and providing an overview of underlying economic and financial data.

By utilizing a variety of infographic mindmaps, the report first enables to quickly identify its core analytical findings and conclusions. Its subsequent chapters then introduce readers to **specific areas of the Life Science Industry in the United Arab Emirates**.

This analytical case study presents an unified industry framework based on a vast industry database: **420+ companies, 90+ investors, 6 government organizations, and 15+ R&D centers** that operate, interact with, or are involved in any other way in the Life Science Industry. The key purpose of this report is to support all industry entities and stakeholders in strategic decision-making to gain maximum value.

Approach of the Report

Database and Sources

420+
Companies

90+
Investors

6
Governmental
Organizations

15+
R&D Centers

Applied Research and Analytics Methods

**Descriptive
Analysis**

**Mixed Data
Research**

**Data
Triangulation**

**Comparative
Analysis**

**Qualitative Data
Collection**

**Data
Filtering**

Data Sources

**Media Overview
(Articles and Specialised Blogs)**

**International Institutions
Databases**

**Publicly Available Sources
(Websites)**

**Scientific Papers and
Publications**

Containing a comprehensive overview of the the Life Science Industry, the report relies on various research methods and analytics techniques. The report was compiled to give a detailed systematic description of the leading companies, investors, R&D centers, and other organizations related to the Life Science Industry in United Arab Emirates. The UAE's life science sector is filled with opportunities for innovation and has the tools to become a global center of innovation for the life science sector through a unique blend of positive attributes. The combination of innovative science and technology solutions brings together pre-eminent researchers and creates prominent prospects for future development.

Executive Summary

Life Science Industry in the United Arab Emirates started some 25 years ago. The locomotives of growth became **Pharmaceutical and Healthcare industries**. The UAE sets the precedent for the region's life sciences sector, due to the national vision of achieving world-class, internationally recognized **healthcare infrastructure**. The local government is committed to continuously strategizing and improving the quality of **healthcare and laboratory testing** services in the country.

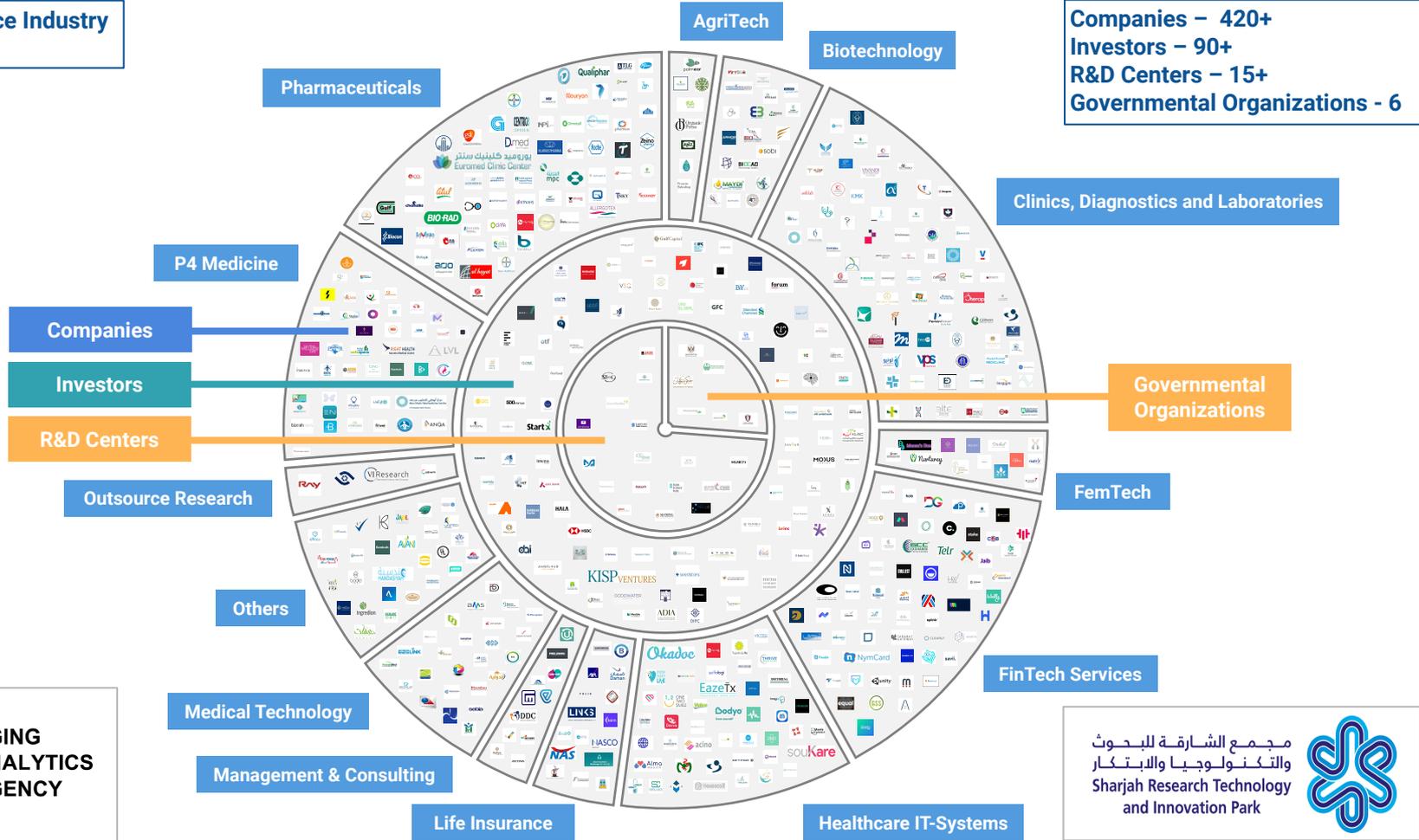
The UAE government is enacting policies and **programs** to help it become a hub for pharmaceuticals and is establishing medical research and development centers across the country. The UAE is also focusing on drawing **international pharmaceutical companies** to establish and expand their presence in the country. In addition to its **growing domestic market**, the UAE boasts a strategic location and sophisticated **logistics infrastructure**. The UAE has also created several **free zones** that have become hubs for the pharmaceutical industry.

The 420+ Life Science companies in the UAE were classified into **13 broad categories**, each of which has a unique approach to contribute to the Life Science ecosystem.

The UAE's Life Science Ecosystem 2021



**Life Science Industry
in the UAE**



Life Sciences Industry Outlook

Growth Drivers

Populations are aging

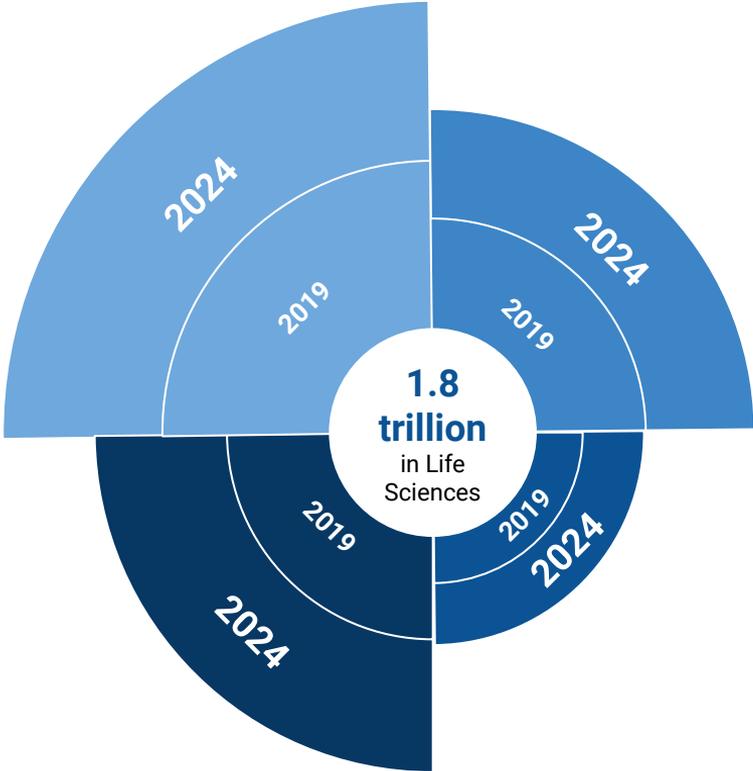
There is no shortage of need for medical services as the world population keeps growing older.

New machines and drugs

New treatments addressing previously unmet health needs are seeing the light of day, spurring further innovation in technology and development of new drugs.

Patient centricity

A shift to personalized healthcare is happening, and there is a need for platforms delivering it to patients (literally) on their doorstep.



Pharmaceuticals

\$ 871 → 1200



Medical devices

\$ 475 → 595



CROs*

\$ 37 → 55



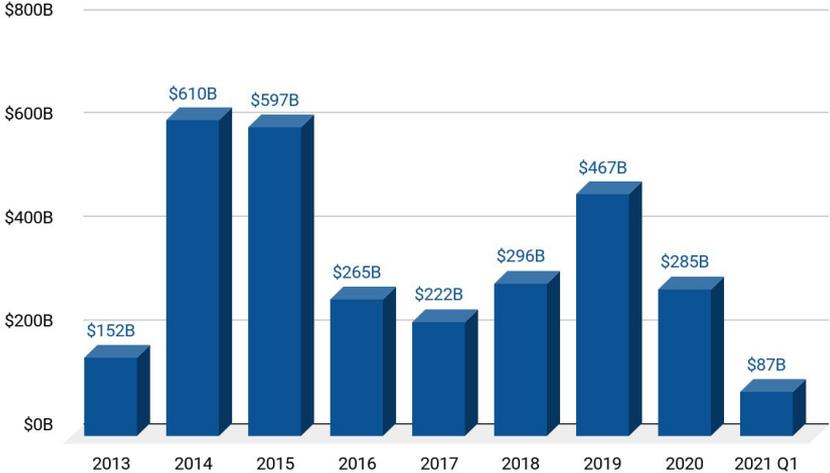
Biotechnology

\$ 453 → 656

*Note: CRO is a company that provides support to the pharmaceutical, biotechnology, and medical device industries in the form of research services outsourced on a contract basis.

Global Life Sciences Industry

Total Value of Deals in the Life Sciences Industry Worldwide from 2013 to 2021



In **2020**, global deals made in the life sciences industry accounted for a **total value of 285 billion U.S. dollars**. This statistic displays the total value of deals made in the life sciences sector worldwide from 2013 to the first quarter of 2021.

Global Funding For Life Science-Related Rounds, Series A and Beyond



In the first half of 2020, investors globally put **\$16.55 billion** to work across over 450 deals in biotech and life science sectors. That's up considerably from the same period in **2019**, when investors put **\$13.4 billion** to work across nearly 600 known funding rounds.

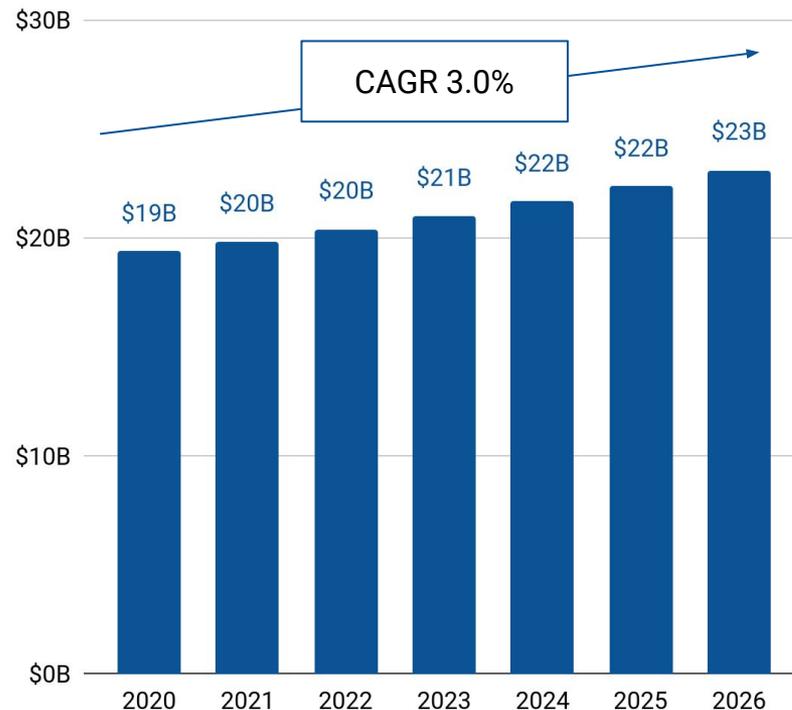
Gray Sky UAE Longevity Market Size Projection Scenario

In 2020 market size of the Longevity sector in the UAE was more than **\$19B**. It is projected to grow at least with a **CAGR** of the UAE economy (**3.0%**) to reach **\$23B in 2026**. The main growth drivers would be plumping **domestic demand**, **increasing export** and string **government support** of all market players: from big Pharma corporations to small BioTech startups.

With the full fallout of the global coronavirus pandemic still unknown as of April 2020, the UAE nevertheless seems set to remain a highly sought-after investment destination for the foreseeable future. A raft of **multinational pharma companies** is basing management for vast regions from the UAE thanks to its stability and openness compared to that of its neighbours, well-developed infrastructure, and attractiveness to top talent.

The UAE sets a precedent for the region's Longevity sector due to the national vision of achieving world-class, internationally recognized **health care infrastructure**. The UAE plans to become a significant global **hub for pharmaceuticals**, with the key factors contributing to this growth being a patent cliff allowing for mass production of **generic medicines** and an increasing population of **skilled expatriate workers** returning for work opportunities.

UAE Longevity Market Forecasted Growth, 2020-2026



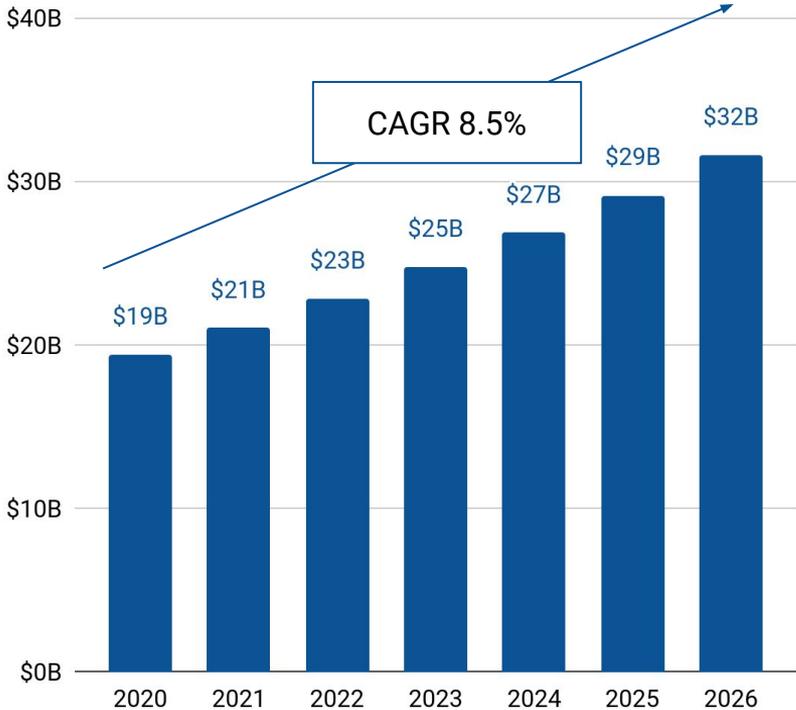
Blue Sky UAE Longevity Market Size Projection Scenario

In 2020 market size of the Longevity sector in the UAE was more than **\$19B**. It is projected to grow with a **CAGR of 8.5%** to reach **\$32B in 2026**. Besides the main drivers of growth from the baseline scenario, overall expected **boosting Pharma and BioTech growth** were considered.

To achieve **sustainable growth for the Pharma** industry in the UAE, government entities have adopted a series of long-term plans. **The Dubai Industrial Strategy 2030** and **the Abu Dhabi vision 2030**, for instance, consider the pharmaceutical industry as one of the main priority sub-sectors to develop due to its future growth prospects, export potential and mid-term to long-term economic impact.

The UAE is also focusing on drawing **international pharmaceutical companies** to establish and expand their presence in the country. In addition to its **growing domestic market**, the UAE boasts a strategic location and sophisticated **logistics infrastructure**, especially with the recent approval of the Dubai Silk Road, which makes it an ideal hub to access growing regional markets in Africa, Asia, and the Middle East. The UAE has also created several **free zones** that have become hubs for the pharmaceutical industry.

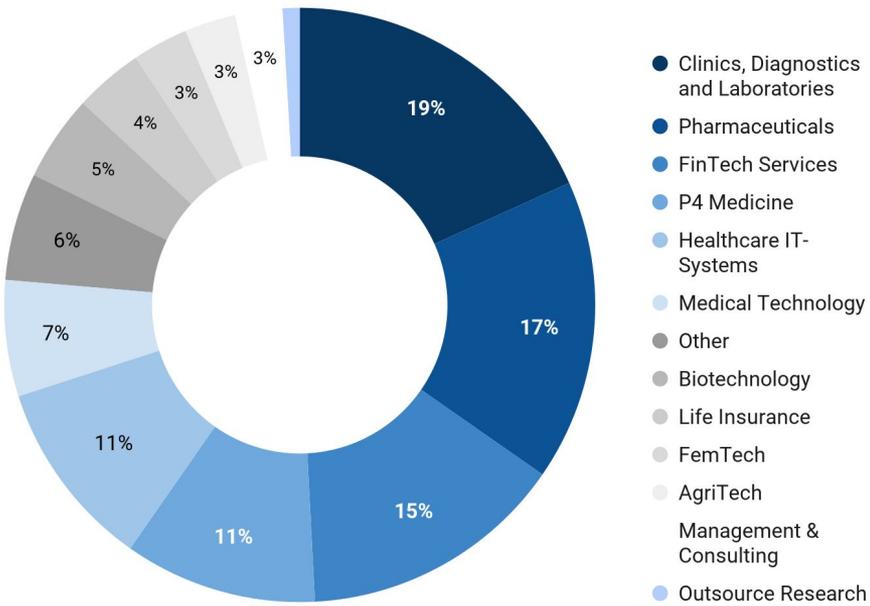
UAE Longevity Market Forecasted Growth, 2020-2026



Life Science Industry in the UAE: At a Glance

The 420+ **Life Science** companies in the UAE were classified into **13 broad categories**, each of which has a unique approach to contribute to the Life Science ecosystem. Companies in the **Clinics, Diagnostics and Laboratories (19%)** category offer innovative treatment and deep diagnostics services. **Pharmaceuticals (17%)** firms are those that deal with pharmaceuticals, drug manufacturing, and distribution. Companies in the **FinTech Services (15%)** sector offer financial solutions, business finance, and solutions to fund lifestyle and social care. Companies in the **Healthcare IT-System (11%)** offer AI-based healthcare solutions including remote diagnosis and treatments. Companies in the **P4 Medicine (11%)** category provide precise diagnostics and treatment services. The **Other (6%)** category includes Wellness & Fitness companies, Mental health, EdTech, NeuroTech companies. **Medical Technology (6%)** category play a critical role in developing medical therapies and innovations to improve outcomes and healthcare delivery. **Biotechnology (5%)** company whose products or services primarily use biotechnology methods for their production, design or delivery. **Life Insurance (4%)** is the focus of InsurTech companies. Companies in the **FemTech (3%)** category develop a software, diagnostics, products, and services that use technology often to focus on women's health. **AgriTech (3%)** category united all providers of innovation in the agricultural sector. **Management and Consulting (3%)** companies assist healthcare companies with managing their data, constructing strategy and solving specific cases. **Outsource Research (1%)** companies do for the client non-core services, in which clients are not specialized.

Distribution Life Science Companies by Categories in UAE



Life Science Industry in the UAE: At a Glance

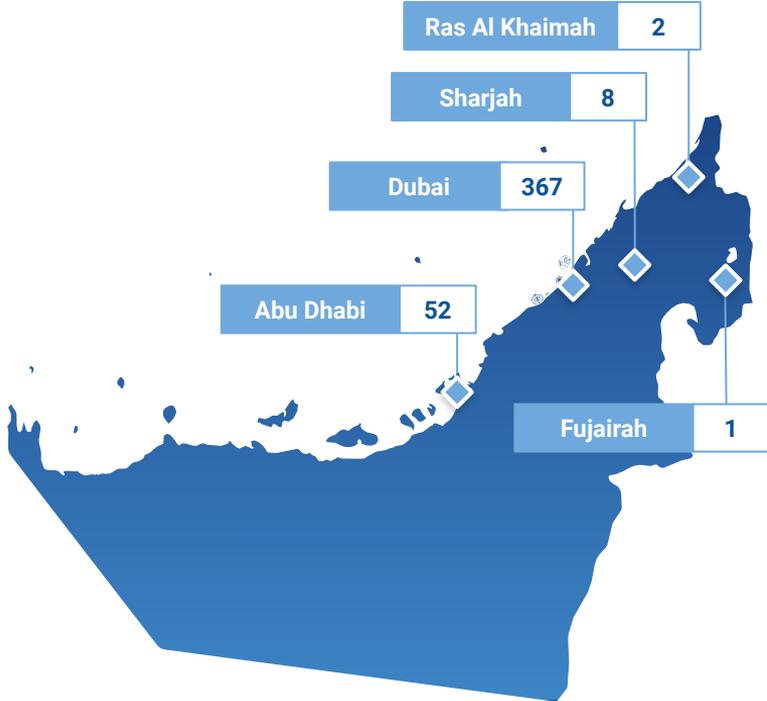
Absolute majority of the Life Science companies are allocated in the Dubai. Dubai is the heart of business processes in UAE and the waste majority of Life Science Industry players are located there.

The government of Dubai supports innovations and establishes new Life Science initiatives. One of them is **Dubai Life Science Park** – creative environment that fosters development in the medical, wellness and pharma sectors, with medicine, perfumery and F&B labs manufacturing products locally.

Creation of a robust and resilient healthcare industry is a key priority for the UAE. One of the big opportunities to achieve this is by increasing research and development (R&D).

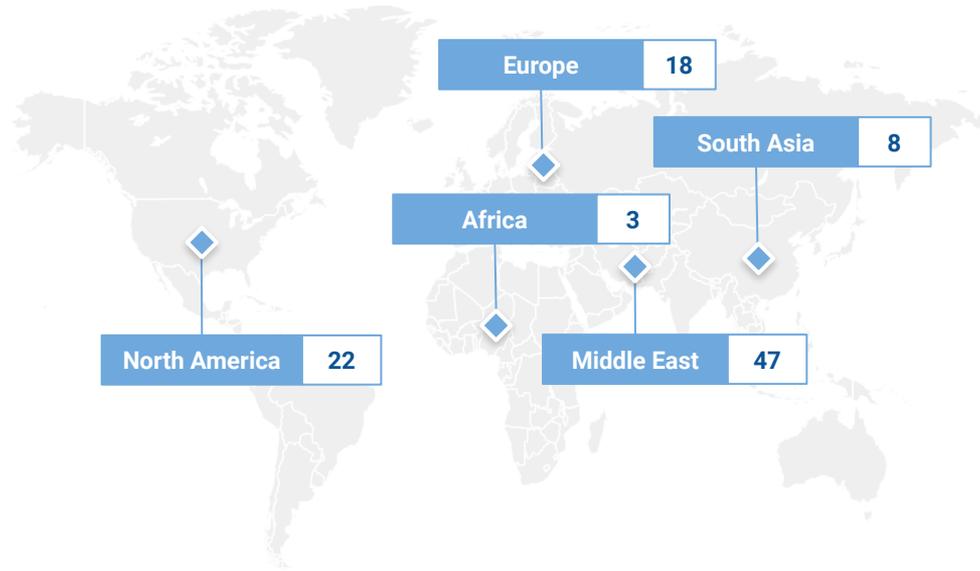
Dubai welcomes many next-gen medicine and healthcare companies to business district which provides an ecosystem for medical innovation. **As the region's healthtech industry grows, so will the community of science-backed startups.** It will consolidate Dubai's position as a global hub for biotechnology and life sciences.

Distribution of Life Science-Focused Companies by Emirates

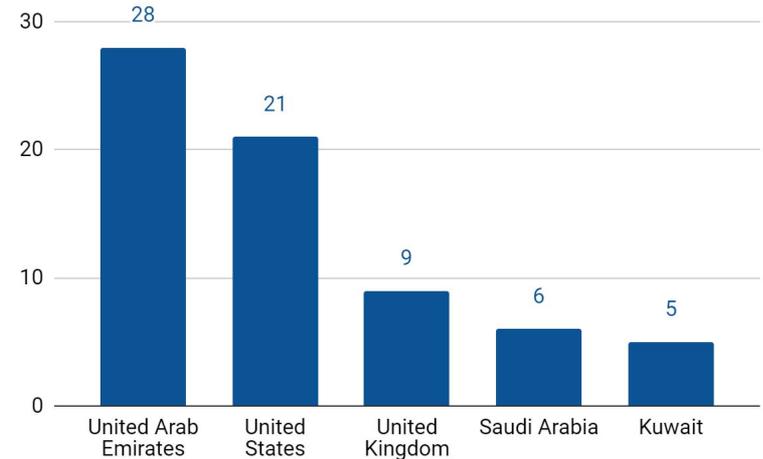


Life Science Industry in the UAE: At a Glance

Distribution Investors by Region



Top 5 Countries by Number of Investors



Most of the investors are from **Middle East region - 47 investors**. Moreover, more than a half of them are domestic investors, **originated from the UAE**. Country - partners by Gulf Cooperation Council (GCC) - Saudi Arabia and Kuwait are also among top 5 investors in the Life Science in the UAE. **The second country** by number of investment is **the US**. **The third region** by number of investment is **Europe**, with more the half of the investors form **the UK**.

Government Initiatives on UAE Life Science Development



The Sharjah Research, Technology and Innovation Park (SRTI Park) is envisaged as a home to knowledge intensive businesses. By leveraging the intellectual, academic and business capabilities of the local ecosystem the Park hopes to attract leading companies.

The Park will also provide a platform for **research into water technologies, renewable energy, environmental technology, digitisation, production design and architecture, and transport and logistics**. By providing this platform for innovative startups and established companies to enter or expand in the region, the Park has the potential to position Sharjah as a regional and global leader in innovation and job creation. **The SRTI Park is helping Sharjah make a big contribution to, and align with, the UAE Vision 2021.**

Innovation forms a key part of the pillar 'United in Knowledge' of UAE Vision 2021 which focuses on building the UAE into a competitive economy. One of the Key Performance Indicators (KPIs) of this pillar is the Global Innovation Index (GII), an annual ranking of countries by their capacity for and success in innovation. The UAE progressed by six ranks in the 2017 GI, ranking 35th globally and leading among all Arab countries, cementing its status as a leading innovative country.

Focus Sectors of The SRTI Park



Water
Technology



Transport
& Logistics



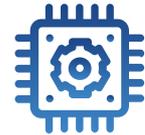
Production, Design
& Architecture



Renewable
Energy



Environmental
Technology



Digitisation

The **SRTIP Acceleration Program** aimed at supporting startups and growth-driven companies in the region. The SRTIP Acceleration Program is an industry-specific program **aimed at bringing companies across the MENA region towards the 4th Industrial Revolution**. It enables local and regional entrepreneurs as well as global start-ups to scale up their businesses through education, mentorship, and financing provided by the SRTI Park ecosystem and network.

SRTIP Acceleration Program



Sponsors



MINISTRY OF HUMAN RESOURCES
& EMIRATISATION



UNITED ARAB EMIRATES
MINISTRY OF EDUCATION



مركز الشارقة لريادة الأعمال
Sharjah Entrepreneurship Center

Ministry of Industry and Advanced Technology



وزارة الصناعة
والتكنولوجيا المتقدمة
MINISTRY OF INDUSTRY
& ADVANCED TECHNOLOGY

Established in July 2020, **the Ministry of Industry and Advanced Technology (MoIAT)** aims to boost the UAE's industrial sector and increase its contribution to the GDP. MoIAT develops laws and policies to establish a world-class industrial development framework to attract FDI and bright minds, enhance in-country value (ICV), foster entrepreneurship, create jobs, upskill local talent and boost exports of 'Made in the Emirates.' products. The strategy of the Ministry of Industry and Advanced Technology (MoIAT) is the largest and most comprehensive plan for developing the UAE's industrial sector and enhancing its role in stimulating the national economy. The strategy bears the name Operation 300Bn, based on its ultimate goal of raising the industrial sector's contribution to the GDP from AED 133 billion to AED 300 billion by 2031.

The ministry specializes in 11 vital industries, among which there are :

- Food, beverage and agricultural technology
- Pharmaceuticals
- Electrical equipment and electronics
- Advanced manufacturing
- Medical technology
- Space technology

Projects



The National In-Country Value Program (ICV) aims to enable the Ministry of Industry and Advanced Technology to improve the performance and sustainability of the industrial sector.



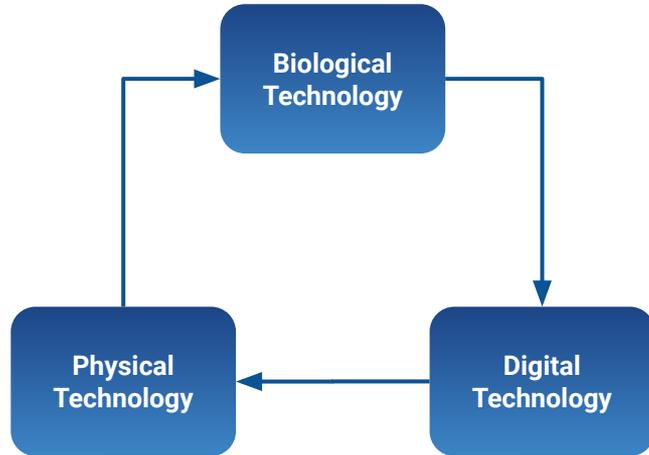
'Make it in the Emirates' is an open invitation to investors, innovators and developers to contribute to the UAE's industry and advanced technology strategy Operation 300Bn.



The 4th Industrial Revolution Program aims to transform UAE's industrial base into a globally competitive, productive and sustainable sector at the cutting-edge of the Fourth Industrial Revolution.

The UAE's Fourth Industrial Revolution

Fourth Industrial Revolution



The **Fourth Industrial Revolution** marks a significant and impactful milestone in the future of the United Arab Emirates. It offers both unprecedented opportunities and several challenges that should be addressed and utilized efficiently. Therefore, the UAE is stepping up its efforts at an accelerated rate in order to become a **hub and the world's first open lab** for experimenting and adopting the Fourth Industrial Revolution's technologies.

The UAE's Fourth Industrial Revolution Strategy, the first of its kind globally, was designed to provide a practical framework for policy makers and **support national efforts in adopting advanced technologies and transforming future challenges into opportunities that better serve the country.**

A technological revolution that merges the physical, digital and biological technologies in order to deliver unprecedented products and services in new and emerging sectors.

Fourth Industrial Revolution Characteristics

1

Speed: Exponential and unprecedented advancements

2

Impact: A large-scale and Comprehensive transformation in all systems

3

Scope: The Fourth Industrial Revolution will affect all current and future sectors

Dubai Industrial Strategy 2030

Dubai Industrial Strategy as Dubai Plan 2021 enters its implementation phase, the Government of Dubai developed an Industrial Strategy for the Emirate as one of the targeted strategic sectors alongside the traditional ones such as Trade, Logistics, Financial Services and Tourism. The strategy aims at **making Dubai “an international hub for knowledge-based, innovation and sustainable Industrial activities”**, through enhancing industrial coherence and integration with other economic sectors particularly strategic ones, and to create an attractive investment environment through a set of initiatives and incentives. These will develop and improve existing targeted industries and attract new ones with competitive capabilities.

Six industrial sub sectors will be targeted:

- Aerospace
- Maritime
- **Pharmaceuticals & Medical Equipment**
- Aluminum & Fabricated Metals
- Fast Moving Consumable Goods (FMCG)
- Machinery & Equipment

Strategic Objectives

Growth Engine



Increase total GDP and value-added of manufacturing

Innovation Based



Enhance depth of knowledge and innovation

Home for Global Business



Become the preferred manufacturing platform for global business

Environmentally Sustainable



Promote eco-friendly and energy efficient manufacturing

Adopting Islamic Standards



Become a center for the global Islamic products market

Abu Dhabi Economic Vision 2030

The Government of Abu Dhabi announced a long-term plan for the transformation of the emirate's economy, including a reduced reliance on the oil sector as a source of economic activity over time and a greater focus on knowledge-based industries in the future. Entitled 'Abu Dhabi Economic Vision 2030', it identifies the following as the Government's immediate economic priorities:



Building an open, efficient, effective and globally integrated business environment;



Adopting a disciplined fiscal policy that is responsive to economic cycles;



Establishing a resilient monetary and financial market environment with manageable levels of inflation;



Driving significant improvement in the efficiency of the labour market;



Developing a sufficient and resilient infrastructure capable of supporting anticipated economic growth;



Developing a highly skilled, highly productive workforce;



Enabling financial markets to become the key financiers of economic sectors and projects.

These sectors are expected to form the Emirate's engines of economic growth and diversification:

- Energy – Oil & Gas;
- Petrochemicals;
- Metals;
- Aviation, Aerospace, & Defence;
- **Pharmaceuticals, Biotechnology, & Life Sciences;**
- Tourism;
- **Healthcare Equipment & Services;**
- Transportation, Trade, & Logistics;
- Education;
- Media;
- Financial Services;
- Telecommunication Services;

UAE Initiatives on Public Health Advancement



Department of Health - Abu Dhabi is the regulative body of the Healthcare Sector in the Emirate of Abu Dhabi and ensures excellence in Healthcare for the community by monitoring the health status of the population. DoH drives programs to increase awareness and adoption of healthy living standards among the residents of the Emirate of Abu Dhabi in addition to regulating scope of services, premiums and reimbursement rates of the health system in the Emirate of Abu Dhabi.

AI Lab by the DoH

The AI Lab is a safe space for co-creation, allowing the people of Abu Dhabi to develop and test innovative ideas infused with the latest technologies and aligned with Abu Dhabi's technology and innovation agenda.

AI and Innovation Strategic Lab Pillars:

Wellness and prevention	Chronic diseases management
Clinical care	Regulatory management

Research And Innovation Center

Department of Health has strategized key priorities that underpin the goal of improving the well-being of Abu Dhabi residents through prevention and access to integrated, innovative, high-quality and cost-effective healthcare. A healthier Abu Dhabi community will not be achieved expediently unless innovation and research are at the core of its daily business.

Core activities:

Medical Research And Development	Innovation Services	Drug And Medical Products
----------------------------------	---------------------	---------------------------

Research Hero

Organizations and researchers who are interested in conducting human **subject research in the some streams**, are welcomed to apply directly to DOH Medical Research Team:

Clinical Trials	Multi-centers
Genomics	Processing of medical data outside UAE
Pharmaceutical companies sponsored research	Academic sponsored research

The Artificial Intelligence (AI) Lab by the DoH aims to foster a new culture, mindset and ways of working for innovators in healthcare. It provides a medium for fueling innovation and coaching idea-owners and innovation teams in bringing their ideas to fruition. It is a collaborative initiative realized through a partnership between academic institutions, technology leaders, innovation-driven enterprises and government entities.

My Health Coach

My Health Coach is a UAE-specific wellness platform that leverages the power of AI to drive improved standards in preventative care. This first-of-its-kind health and wellness app is designed in Arabic and specifically tailored to the needs of the people of Abu Dhabi – at any level of fitness.

Cognitive virtual assistant

The DoH was looking to enhance its online presence and response for users seeking information on the licensing process. The proposed AI-based solution is designed to handle the customer queries, requests and inquiries via a virtual assistant (according to DoH standards and processes) that will guide them through the process, handing over to a human agent only when necessary.

Working Principles



Adaptability:
Inspection and
Feedback



Sustainability



Responsibility



Simplicity



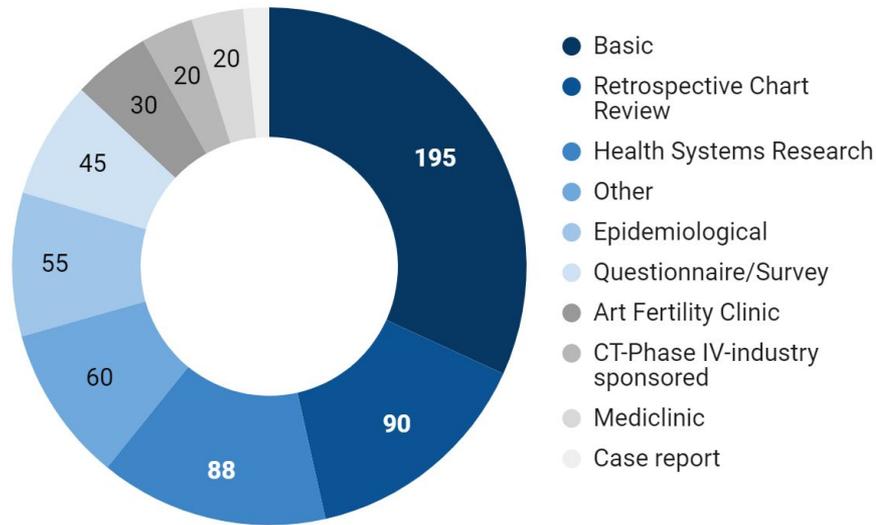
Transparency



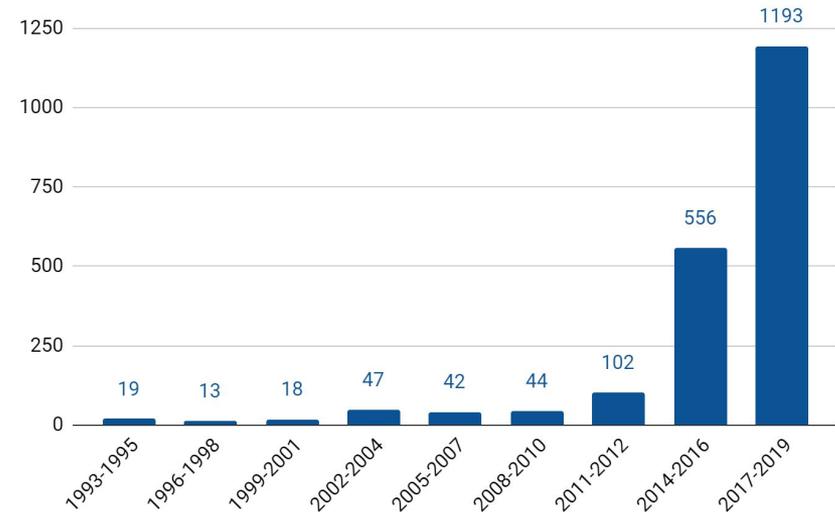
Relentlessly
innovate

Department of Health has strategized key priorities that underpin the goal of improving the well-being of Abu Dhabi residents through prevention and access to integrated, innovative, high-quality and cost-effective healthcare. Genomic medicine is a ground-breaking genomics initiative that involves using genomic information about an individual to understand genetics bases, provide accurate diagnosis and treatment and implement precision medicine.

Research Activities by Research Type in UAE, 2020



Medical Research Publication in Abu Dhabi



Abu Dhabi Genome Project

In 2019 the Department of Health - Abu Dhabi announced the launch of the **Genome Program**, a national project set to use large-scale genomic data to improve health and well-being.

This ground-breaking program aims to be the **first of its kind worldwide to provide citizens with their own high quality genome** as a baseline and incorporate genomic data into healthcare management. This will be achieved by using advanced sequencing technology to generate the highest quality, most comprehensive genome data. **One of the world's top supercomputers, Group 42's Artemis, located in Abu Dhabi, will be used to analyse the massive amount of data and generate new insights.**

The understanding of genetic variation in the Arab population is a challenge due to the lack of a high-quality Emirati reference genome. This program will enrich the current data by producing a reference genome specific to UAE citizens and drive large scale scientific discovery. The objective of the Genome Program is to advance health management and position Abu Dhabi as an omics-driven research and innovation hub.

Objectives of Emirati Genome Program

Advanced prevention

Predicting susceptibility to certain diseases through complete genome analysis and development of treatment and preventive plan for the community based on the results of the genetic tests.

Educational progress

Creating the reference genetic map for UAE citizens and identifying hereditary diseases and genetic mutation among citizens

Advanced diagnostics

Develop diagnostics, treatment and preventive plans based on the results of complete genome analysis and reach disease-free society.

Better Healthcare Plans

Provide treatment plans to healthcare professionals based on the results of genome analysis

Clinical Research Promotion and Development

The clinical research sector in UAE is currently going well within the country, with many pharmaceutical companies investing in studies, with the patient pool consisting of the population in the Middle East. The studies most popular in UAE are Phase III and Phase IV, as well as - most definitely - observational studies. Although clinical research is not new in UAE, it is still a questionable topic for many people, and hence observational studies are considered less challenging to perform in this region.

Dubai Health Authority

Medical Research Committee (MRC) acts as an institutional review board at Dubai Health Authority. The primary objective of the MRC is to protect the mental and physical welfare, rights, dignity and safety of participants in research, to facilitate ethical research through efficient and effective review processes, to promote ethical standards of human research, and to review research in accordance with the DHA code of ethics and the ICHGCP guidelines.

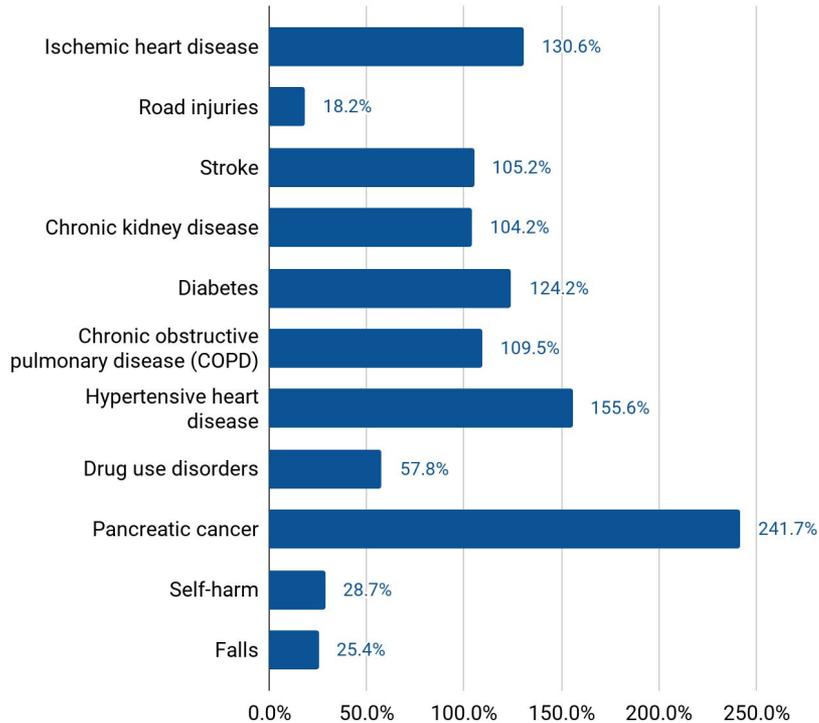
Health Authority Abu Dhabi

The Medical Research Section helps to develop the Abu Dhabi Health Research Strategy, define research ethics policies and standards, create research funding. Clinical Research in the United Arab Emirates promotes world-class research that improves health and quality of life for all people in the Emirate of Abu Dhabi, while ensuring ethical research conduct and protection of human subjects is the mission of HAAD's Medical Research Section.

Clinical research will soon make its mark in the industry in this region, with many pharmaceutical companies, institutions and sponsors already looking at this region, as they are aware of the extensive patient pool and systematic regulatory submissions.

Dubai Health Authorities Investment Strategy

Top 10 Causes of Death and Disability (DALYs) in 2019 and Percent Change 2009–2019, All Ages Combined



Overview of Proposed PPP projects in Service Enhancement and Improvement

Cardiology

The Cardiology Centre of Excellence (CoE) is the first healthcare PPP project to be implemented in the Emirate of Dubai and aims to bring world-class cardiology services in partnership with private sector;

Imaging Diagnostics

DHA is keen to improve utilization of equipment, quality and efficiency of services and training of staff;

Dialysis

Operating Agreement for managed services model to manage dialysis services for patients in Dubai;

Spine

Operating Agreement for managed services model to manage spine services in Dubai Hospital for patients in Dubai;

Diabetes

Service enhancement and clinical affiliation for Dubai patients in diabetes care;

Long Term Care

Concession Model or Operator Agreement for managed services model to manage LTC services for patients in Dubai;

The Cardiology Centre of Excellence (CCoE)

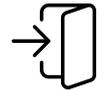
Objectives of the Cardiology CoE



Evidence based international best practice with focus on screening and early detection



One-stop-shop approach with integrated care continuum



Physician access to clinical affiliation, research & technology innovation



Focus on physician training, development and education in Dubai



Flexible and adaptable to support remote patient monitoring



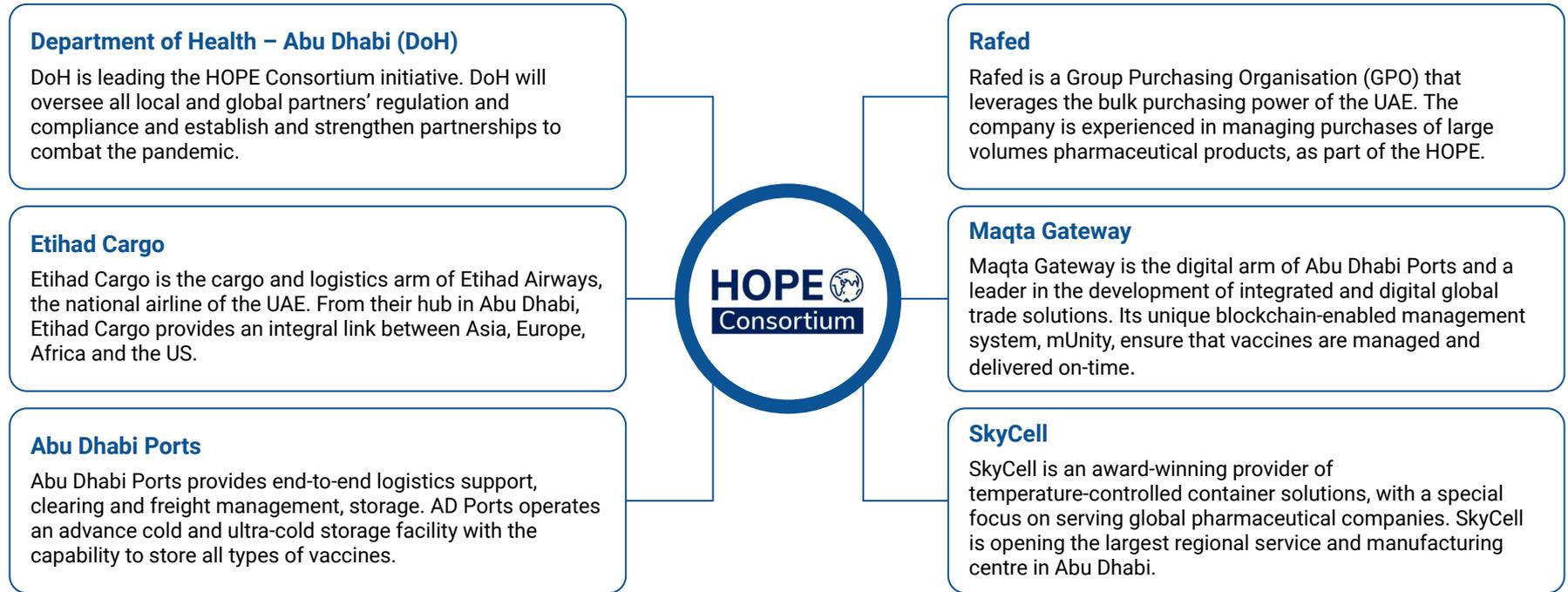
Sustainable and predictable costs with access to financially vulnerable segments



Highlights of CCoE and PPP Model

Responsibility	Selected PPP Model - DBFM (Design-Build-Finance-and Maintain)
Revenues	DHA
Capex	Private Sector
Opex	Private Sector (excl. Clinical Salaries paid by DHA)
Clinical Staff	Selected medical and nursing positions by DHA (40-50% of clinical staff), Clinical Affiliation partner to support recruitment & development
Non-Clinical Staff	Private Sector is free to recruit and deploy staff for the suited positions
Availability Payment	Reflects capex and opex incurred by PPP Co, along with cost of funding (debt & equity)

The Hope Consortium and COVID-19 Vaccines Distribution



Spearheaded by the Department of Health – Abu Dhabi, who has led the formation of the emirate-wide consortium, the HOPE Consortium brings together leading brands to deliver an end-to-end solution to distribute COVID-19 vaccines globally.

Dubai Health Strategy 2021

Dubai Health Strategy has been designed to be consistent and compatible with Dubai plan 2021, aimed to become a global leader in the delivery of healthcare, and providing a world-class level of healthcare. The strategy development process involved a broad range of stakeholders from the Dubai health ecosystem including both the public and private sectors.

Additionally, it has been informed by the views of a number of different community sectors, 10000+ from DHA employees voiced their opinions and ideas relating to the local health sector in Dubai.

The Developed Strategy includes 15 strategic programs and more than 100 strategic initiatives to be applied until 2021.

15

Strategic
Programmes

100+

Strategic
Initiatives

Main Approaches



Health and
lifestyle



Smart healthcare
and governance



Excellence in
providing service

Strategic Objectives:

1 Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high quality service delivery system

2 Direct resources to ensure healthy and safe environment for Dubai population

3 Promote Public and Private collaboration in Healthcare

4 Foster innovation across the continuum of care

5 Revamp the governance structure of DHA

6 Establish efficient Decision Support System by ensuring an integrated data platforms

UAE Healthy Future Study

The United Arab Emirates (UAE) is faced with a rapidly increasing burden of non-communicable diseases including obesity, diabetes, and cardiovascular disease. The UAE Healthy Future study is a prospective cohort designed to identify associations between risk factors and these diseases amongst Emiratis.

Scope:

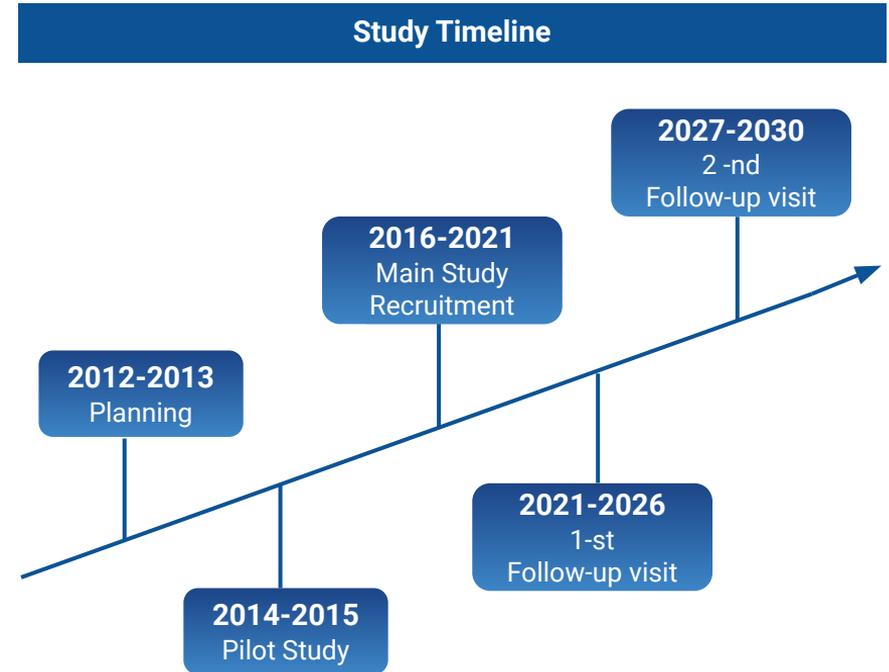
- Primarily interested in risk factors for Obesity, Diabetes and CVD in the first instance
- Both proximal (e.g. smoking, obesity, hypertension) and distal (i.e socioeconomic) determinants
- Genetics, epigenetics and microbiome

Sample:

- Population based recruitment of healthy volunteers
- 20,000 participants, aged 18 - 40
- 5000 participants recruited to date
- Link to electronic health records for key outcomes agreed
- Follow-up visits every 4 years.

Approach:

- Questionnaire, anthropometric measures and biological samples
- More accurate measures of diet and physical activity using new technologies

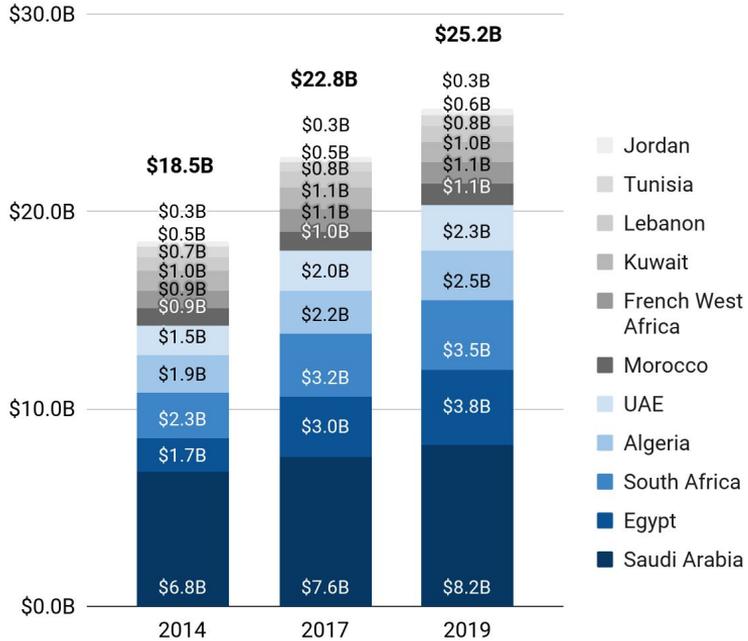


Pharmaceutical Industry in the UAE

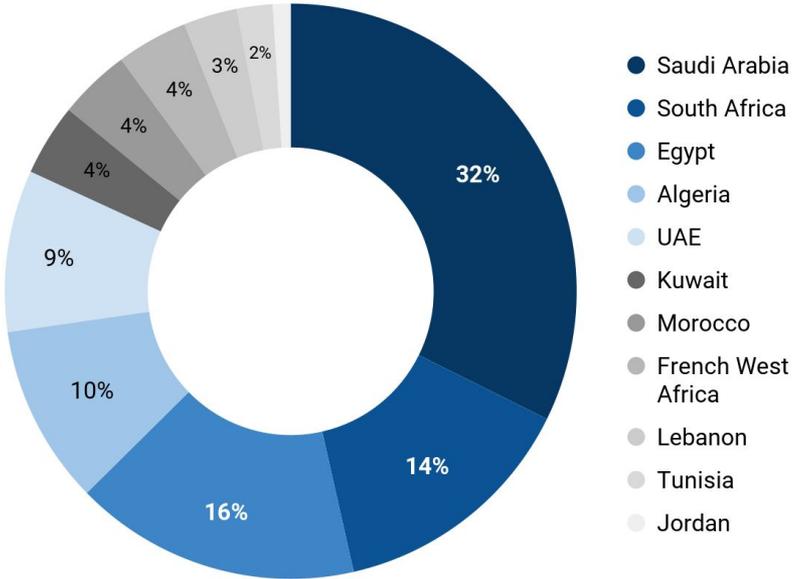


Middle East & Africa Pharmaceutical Market

The MEA Market Size by Country



Share of Market by Country, Q1 2019



Since 2014 the MAE pharmaceutical market size has increased by 36.2% and in 2019 was \$25.2B. The CAGR of the total market is +5.3% per year. Meanwhile, the UAE market has grown faster, with CAGR 6.3%, and in 2019 constituted 9% of the market.

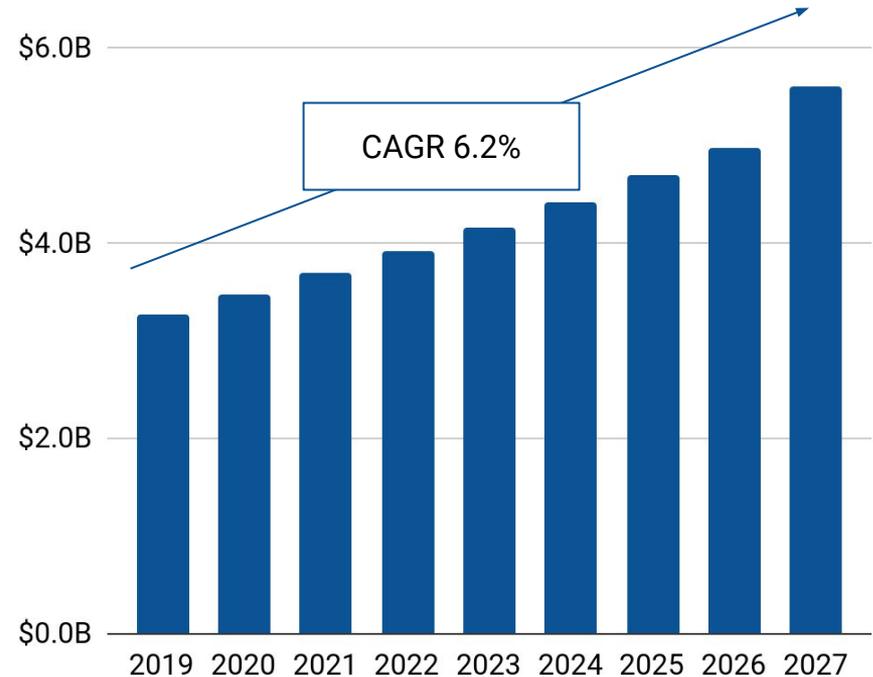
UAE Pharmaceutical Industry Outlook

Pharmaceutical Market in the UAE is projected to grow with CAGR 6.2% and reach \$5.6B in 2027. In total market could grow by 82.3% for nine years. Main drivers of growth will become **localisation of production** and **increasing demand** on the **generic drugs**.

As is the case with many Middle Eastern pharmaceutical markets, the UAE government will increasingly promote the local production of generic drugs as part of a strategy to decrease costs of medicines and improve supply and distribution. While **generic substitution policies** have been implemented **in the UAE since 2018**, the country will increasingly look to foreign investment and partnerships in order to meet growing local demand and secure its position as a regional manufacturing and distribution hub.

Progressive reforms will increase drugmaker access in the long term. Contrary to Ministerial Decree 404, in 2017, the Ministry of Health and Prevention began registering generic products for sale in the UAE that appeared to infringe the patents on innovative medicines. However, in September 2020, the UAE issued Decree 321 to address these deficiencies. Accordingly, the data exclusivity period is set to eight years from the date of marketing approval inside the UAE, while generic drug companies can apply for marketing approval within the last two years from the end of the data exclusivity period. Until Decree 321 is fully realised throughout 2021, **the UAE has been placed on the Pharmaceutical Research And Manufacturers Of America's Out-Of-Cycle Review** 2021.

UAE Pharma Market Forecasted Growth, 2019-2027

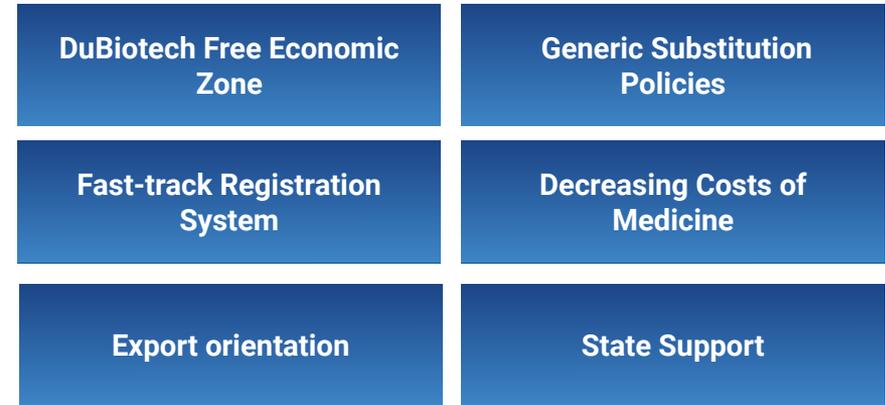


Establishing UAE Pharma Hub

UAE Pharma Export and Import, 2017-2022



Steps of Establishing UAE Pharma Hub



The UAE pharmaceutical sector appears to be following a path similar to that seen at a regional levels. It is expanding rapidly to meet primarily the evolving needs of a growing population which is expected to reach almost **11.1 million by 2030** according to the world bank projects. To achieve sustainable growth for this industry the UAE government entities have adopted a series of long-term plans. The Dubai Industrial Strategy 2030 and the Abu Dhabi vision 2030, for instance, consider the pharmaceutical industry as one of the main priority sub sectors to develop due to its future growth prospects, export potential and mid-term to long-term economic impact. The UAE governments are also focused on minimising their reliance on imported pharmaceuticals. In 2019, a new era of drug manufacturing began when Dubai company Life Pharma signed a 10-year contract to produce billions of tablets in Jebel Ali to export to Canada.

Dubai Biotechnology and Research Park



Dubai Biotechnology and Research Park is the region's first science-focused business community, created to position the United Arab Emirates as destination for research and development, prototyping, creativity and innovation in areas of human, plant, material, environmental and energy sciences.

Dubai Biotechnology and Research Park is an enabling environment that fosters development in the medical, wellness and pharma sectors, with medicine, perfumery and F&B labs manufacturing products locally. The community's robust infrastructure and collaborative environment enable success, in addition to a vibrant community, which provides a supportive ecosystem for its residents.

3600+
Business
professionals

350
Partners

Dubai Biotechnology and Research Park is a vibrant business district home to leading local and international institutions including:



Many of these companies played **a critical role in the UAE's efforts to mitigate the impact of Covid-19**, with companies such as Alliance Global supplying hundreds of thousands of PCR test kits across Africa, the Middle East, and Central Asia.

Fast-track Registration System

Expedited registration

In January 2018 the Ministry of Health and Prevention of the United Arab Emirates (MOHAP) announced a resolution that would allow fast-track registration of innovative and orphan drugs. Innovative drugs are defined as 'drugs that contain an entirely or partially new active ingredient and whose owner holds a patent' and orphan drugs are defined as 'drugs that are used for treatment, diagnosis or prevention of rare diseases.'

In the fast-track process, the so-called Drug Registration Committee evaluates an application for a new drug within 15 working days of submission and makes the decision to approve or reject the application within 10 working days from the date of evaluation.

Fast Registration of Innovative Drugs

The Ministry of Health and Prevention has urged drug companies to offer medicine to the UAE before they are approved in the countries that made them.

It has asked pharmaceutical companies to seek marketing approval for drugs to give the Emirates' health sector access to more medicine than at present, to improve patient care, while also boosting medical tourism.

"Local factories can start manufacturing procedures and apply for marketing approval for similar products during the two years preceding the end of the protection period for the innovative product," said Dr Amin Al Amiri, assistant undersecretary for Public Health Policy and Licensing.

Opportunities for Clinical Trials

The Department of Health – Abu Dhabi (DoH), the regulator of the healthcare sector in the Emirate of Abu Dhabi highlighted the advantageous aspects of Abu Dhabi as a locale for clinical research trials including the facilities provided to pharmaceutical companies and the highly accelerated review timelines that take place within just 8 to 15 days. These timelines are among the fastest in the world today. Additionally, the Emirate has been dedicated to providing world-class research facilities and protecting distinguished intellectual property.

Innovative drugs that were invented recently and already used in the UAE:

Sotrovimab (2021) - monoclonal antibody with activity against SARS-CoV-2

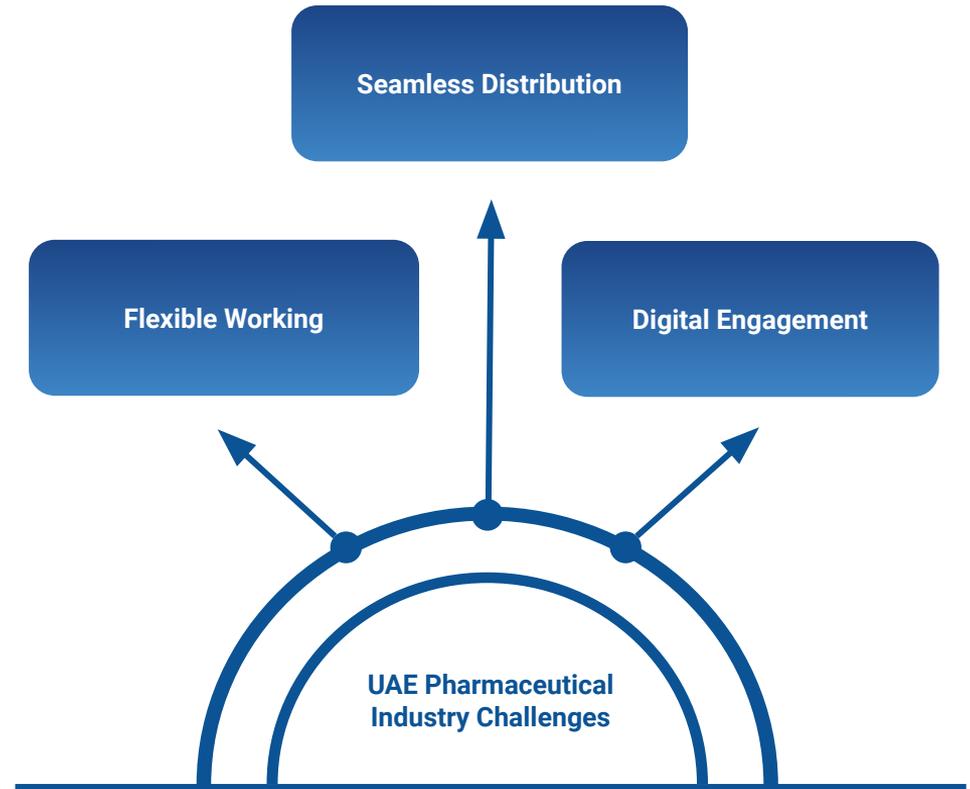
Sotorasib (2020) - is an anti-cancer medication used to treat non-small-cell lung cancer

UAE Pharmaceutical Industry and Covid-19

Last year was the most transformational year that ever experienced in the pharmaceutical industry. In mere months, to adjust to the uncertainties of Covid-19, the global sector was forced to review, rethink and reshape operations.

In the UAE – **the Middle East's leading pharmaceutical hub** – a raft of new opportunities emerged. **Dubai's International Humanitarian City facilitated the distribution of more than 80 per cent of the World Health Organization's global medical Covid response**, sparking a huge increase in pharma exports and re-exports from the emirate in 2020. Likewise, in March 2021, Abu Dhabi announced that China's Sinopharm vaccine would be produced in the UAE, providing a welcome boost to local manufacturing.

But while the pandemic has created new commercial avenues, it has also presented a **number of challenges**. First, how to **digitalise** and continue serving customers and key stakeholders amid extensive travel disruption. Second, how to **distribute medication** when international supply chains are severely interrupted. And, third, how to increase **flexible working** to accommodate the dramatically changing needs of industry workers around the world.



Key Takeaways



In 2020 market size of the Longevity sector in the UAE was **more than \$19B**. By the grey sky scenario, it is projected to grow at least with a CAGR of the UAE economy (3.0%) to reach \$23B in 2026. The main growth drivers would be plumping **domestic demand, increasing export** and **string government support** of all market players: from big Pharma corporations to small BioTech startups. In the blue sky scenario CAGR **of 8.5%** is estimated. Thus Longevity market size in UAE will reach **\$32B in 2026**. Besides the main drivers of growth from the baseline scenario, overall expected **boosting Pharma and BioTech growth** were considered.



The Fourth Industrial Revolution marks a significant and impactful milestone in the future of the United Arab Emirates. It offers both unprecedented **opportunities** and several **challenges** that should be addressed and utilized efficiently. Therefore, the UAE is stepping up its efforts at an accelerated rate in order **to become a hub** and the world's **first open lab for experimenting** and adopting the Fourth Industrial Revolution's technologies.



The 420+ Life Science companies in the UAE were classified into **11 broad categories**: Clinics, Diagnostics and Laboratories, Pharmaceuticals, FinTech Services, Healthcare IT-Systems, P4 Medicine, Medical Technology, Biotechnology, Life Insurance, FemTech, Management & Consulting, and Other. Others category include Geroscience companies, Gene Therapy companies, Geroscience companies, Space Medicine companies, Biomarkers for Longevity companies.



The locomotive of Life Science industry growth are **Clinics and Pharmaceuticals subsectors**. The UAE is focusing on drawing **international pharmaceutical companies** to establish and expand their presence in the country. In addition to its **growing domestic market**, the UAE boasts a strategic location and sophisticated **logistics infrastructure** especially with the recent approval of the Dubai Silk Road, which makes it an ideal hub to access growing regional markets in Africa, Asia, and the Middle East. The UAE has also created several **free zones** across the country that have become hubs for the pharmaceutical industry.

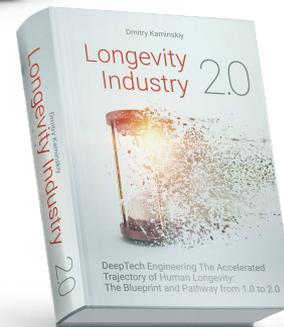
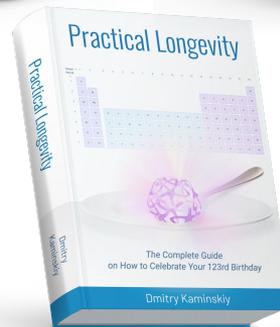
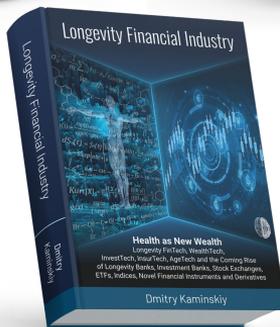
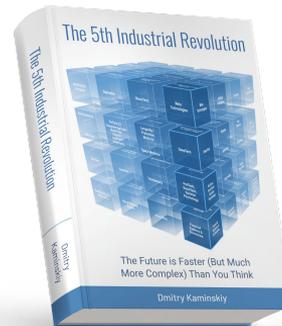
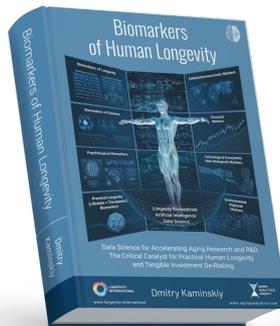
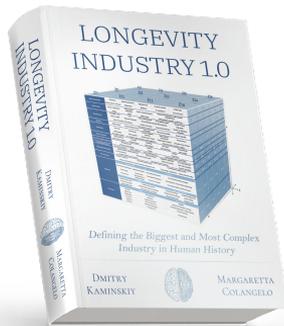


To achieve sustainable growth in the UAE, government entities have adopted a series of **long-term plans**. **Dubai Health Strategy** has been designed to become a **global leader in the delivery of healthcare**, and providing a world-class level care. **Dubai Industrial Strategy** aims at making Dubai “an **international hub for knowledge-based**, innovation and sustainable Industrial **activities**”. The Government of Abu Dhabi announced a long-term plan ‘**Abu Dhabi Economic Vision 2030**’ for the transformation of the emirate's economy, including a reduced reliance on the oil sector as a source of economic activity over time and a greater focus on knowledge-based industries in the future.

Upcoming Longevity Events in the UAE

Date	Name	Location	Description
Dec 8 - 9, 2021	Annual Nephrologists Summit 2021	Dubai	The Annual Nephrologists Summit 2021 is dedicated to nephrology-possibilities from concepts to clinical practice.
Feb 15 - 16, 2022	International Conference on Life Sciences	Dubai	Life Sciences-2022 includes international attendee workshops, lectures and symposia, including a designated registration area, a refreshment break and gala lunch.
Feb 22 - 23, 2022	International Conference on Life Science and Technology	Dubai	The International Research Conference is a federated organization dedicated to bringing together a significant number of diverse scholarly events for presentation within the conference program.
Mar 22 - 23, 2022	International Conference on Biomedical and Biological Engineering	Dubai	International Conference on Biomedical and Biological Engineering aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Life Science, Biomedical and Biological Engineering.

Longevity Industry Books



www.longevity-book.com



About Aging Analytics Agency

Aging Analytics Agency is the world's premier provider of industry analytics on Longevity, Precision Preventive Medicine, the Economics of Aging, and the convergence of technologies such as AI, Blockchain, Digital Health and their impact on the healthcare industry.

About Deep Knowledge Analytics

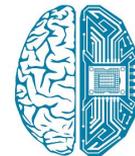
Deep Knowledge Analytics is a DeepTech focused agency, an analytical subsidiary of **Deep Knowledge Group**, that produces advanced analytics on DeepTech and frontier-technology industries using sophisticated multi-dimensional frameworks and algorithmic methods that combine hundreds of specially designed and specifically weighted metrics and parameters to deliver sophisticated market intelligence and pragmatic forecasting and tangible industry benchmarking.

About Sharjah Research, Technology and Innovation Park

Established in 2016 by royal decree of H.H. Sheikh Sultan Bin Muhammad Al Qasimi, Ruler of Sharjah, United Arab Emirates, **Sharjah Research, Technology and Innovation Park Free Zone (SRTIP)** aims to develop and manage an innovation ecosystem that promotes Research and Development and supports enterprise activities and the triple helix collaboration of industry, government and academia.



AGING
ANALYTICS
AGENCY



DEEP
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والتكنولوجيا والابتكار
Sharjah Research Technology
and Innovation Park



Aging Analytics Agency: Value Proposition

Visit Website



Aging Analytics Agency is the only specialised analytics agency in the world that focuses exclusively on the emerging Longevity Industry. They are recognised internationally as the premier analytics agency for advanced data analysis, industry reports and next-generation infographics on the topics of Aging and Longevity.

Aging Analytics Agency is focusing on three key activities:

Providing Commercial Services

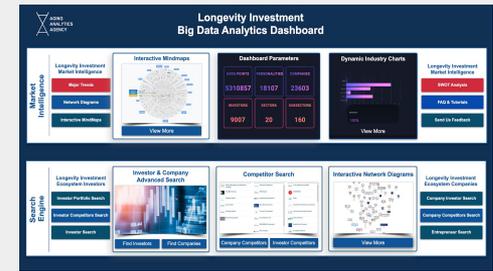
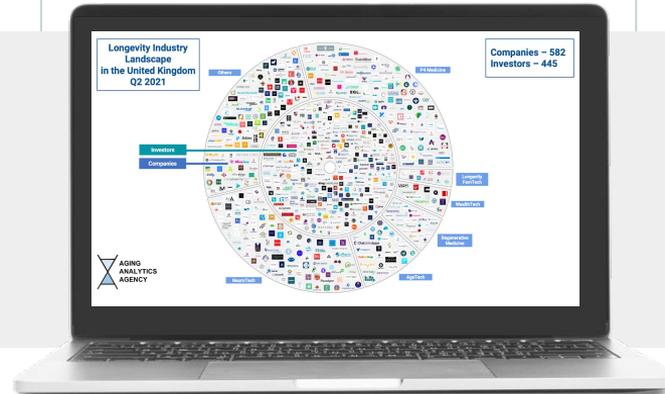
Conducting customized case studies, research, and analytics for internal (organizational) use, tailored to the precise needs of specific clients.

Preparing Open Access Reports

Producing regular open access and proprietary analytical case studies on the emerging topics and trends in the Longevity Industry.

Building Big Data Analytics Platforms

Offering customized analysis using specialized interactive industry and technology databases, IT-platforms, and Big Data Analytics Dashboards.





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