

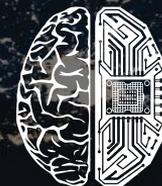


SpaceTech in the GCC Region Q3 2022

Teaser

September 2022

www.spacetechnology.com



SpaceTech
Analytics

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The ‘**SpaceTech Activity in GCC Region Q3 2022**’ report summarises vital observations in the SpaceTech ecosystem, a rapidly evolving and exponentially growing industry within the Gulf Cooperation Council (GCC) region. In it, we have assembled information about **key industry trends** and created a local **database** of **40** SpaceTech companies, **14** leading investors, and **11** R&D centres and hubs, including top space agencies.

With a few major GCC countries achieving **noteworthy advances** in the space sector in recent years, there are **significant opportunities for further development** of SpaceTech in the region. These countries have already achieved **major progress** in developing and expanding the SpaceTech sector, providing the industry with heightened levels of technological progress and hosting numerous SpaceTech companies, events, and activities within its borders.

However, the **potential** of GCC countries in the space race is **poised for major advancement**. Therefore, this study pays special attention to prospective space **programmes and top deals**, which can further stimulate space activities. SpaceTech in the GCC region has a huge **economic potential** and has already given rise to a plethora of companies and initiatives that promise to bring billion-dollar investment into the region.

Executive Summary

This project includes an extended overview of the GCC region's SpaceTech activities, including the market overview along with top deals, events, and initiatives. In this report, all major trends and space policies are covered, along with insights on the prospects of SpaceTech development in the following countries:

The United Arab Emirates

Qatar

Saudi Arabia

Kuwait

Bahrain

Oman

The '**SpaceTech Activity in GCC Region Q3 2022**' report is based on a comprehensive business and scientific overview of the global SpaceTech economy, which is constantly growing. GCC countries, in turn, are trying to be actively involved in this field, considering the pace of the whole industry development. They are to become competitive and reliable partners in the space sector, both within Europe and across the globe.

SpaceTech Analytics (STA) is a leading strategic and analytical agency focused on the emerging markets in Satellite Technology, Advanced Start-ups, Space Law, and Economics. It concentrates its efforts on actively gaining expertise in the Space Medicine sphere and other industries related to SpaceTech.

STA produces **regular analytical reports** on major areas of high potential in the space industry; maintains ratings of companies and governments based on their innovation potential and business activity in the SpaceTech sphere; and provides **strategic consulting and investment intelligence services** to top-tier clients, including major investment funds and banks, family offices, insurance companies, government organisations, large companies, and other organisations.

SpaceTech in GCC Region
Q3 2022

Companies – 40
Investors – 14
R&Ds and Hubs – 11

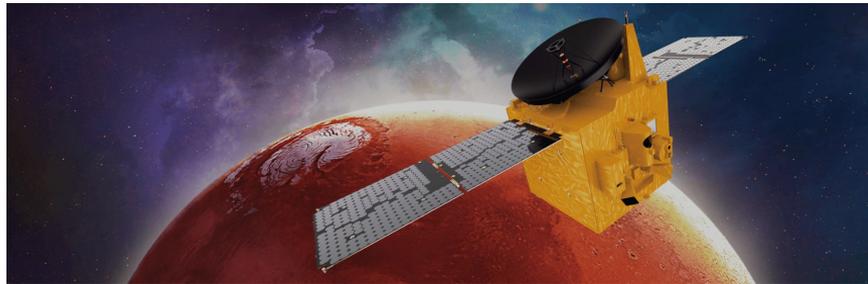
- Companies
- Investors
- R&D Hubs



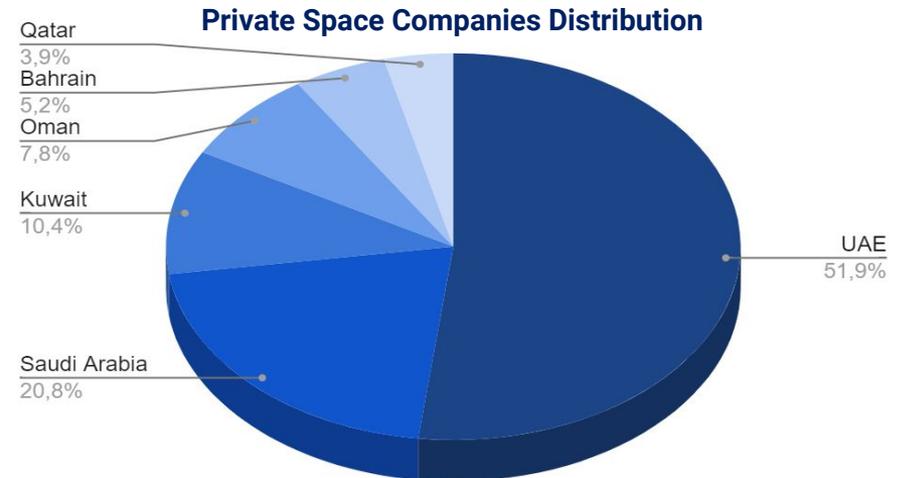
General Overview

Space has long been a point of interest in the Middle Eastern countries. The observatory built in Baghdad in 9th century A.D. is said to be one the first in the world. However, nowadays, GCC countries are only at the beginning of their journey to the stars. Although their agencies are quite young (compared to NASA and ESA), it is not that they lack progress, but quite the opposite. The Gulf countries, the United Arab Emirates especially, have shown tremendous rates of growth.

All six countries have been initiating space-related endeavours throughout the past decade. The United Arab Emirates, Saudi Arabia, Bahrain, and Qatar have already established their space agencies, starting with Qatar Aeronautics and Space Agency (QASA) in 2010.



The programmes mainly focus on domestic solutions, such as weather and atmosphere composition monitoring. Also, agencies seek to generate profit as well as scientific output from space missions. The UAE Space Agency even announced a collaboration with a private company in order to provide space tourism services. However, it is unclear if the countries plan to develop space technologies for military purposes: e.g., Saudi Arabia has launched two satellites with military observation capabilities not long ago.



Arab Satellite Communications Organisation

| Country | Satellites Launched | Satellites Planned |
|---|---------------------|--------------------|
|  The United Arab Emirates | 16 | 1+1* |
|  Saudi Arabia | 17 | 1 |
|  Kuwait | 1 | 0 |
|  Oman | 0 | 1 |
|  Bahrain | 1 | 0 |
|  Qatar | 2 | N/A |

* - one satellite and one constellation of small radar satellites

The market for commercial satellite imaging generated \$5.2 billion in 2021 and is anticipated to grow at 11.5% year over year to reach \$5.8 billion in 2022. The industry's market size is expected to reach \$12.4 billion by 2032 as a result of the increasing assistance from various governmental organisations. During the forecast period, the trade is expected to grow at a 7.9% CAGR during 2022.

Commercial Satellites Serve Sustainability

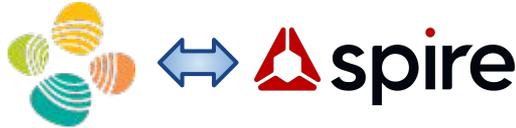


'Commercial satellite imagery involves capturing visuals of Earth, known as earth observation and using these visuals for a variety of commercial reasons and sustainability purposes such as mapping, disaster management, energy and natural resource management, urban planning and development, and, in some cases, security and surveillance.

'The rising demand for commercial satellite imagery globally is partly driven by a growing concern about climate change, environmental degradation, and disaster monitoring'.

Alex Cresniov, Director of SpaceTech Analytics

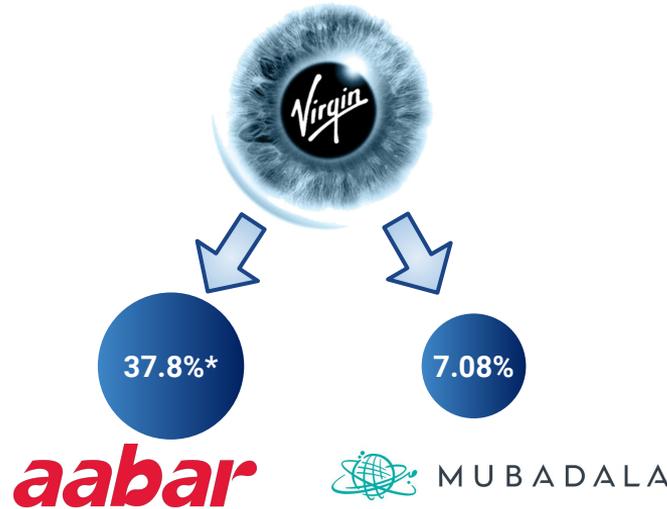
The Largest Deals



King Abdullah University of Science and Technology (KAUST) and Spire Global have established a long-term collaboration in order to launch nanosatellites and improve their remote sensing data technologies.

In April 2022, the UAE Space Agency terminated the agreement with Virgin Galactic to establish a space port near Abu-Dhabi and decided to work with Blue Origin instead. It is rumoured to have been caused by Richard Branson's questioning the Emirati journalist murder case.

In May 2022 AstroAgency, a space marketing firm from Scotland, announced it will work together AzurX, space investment company from the UAE, in order to enrich the space market of both countries by supporting local space businesses.



Aabar Investments, which is headquartered in Abu Dhabi, has the rights to launch tourism and research flights with Virgin.

Mubadala, a UAE governmental company, reported a stake in Virgin Galactic after absorbing IPIC operations in 2017.

* - according to 2016 report

Sources: [Parabolic Arc](#), [Times Aerospace](#)

National Space Fund



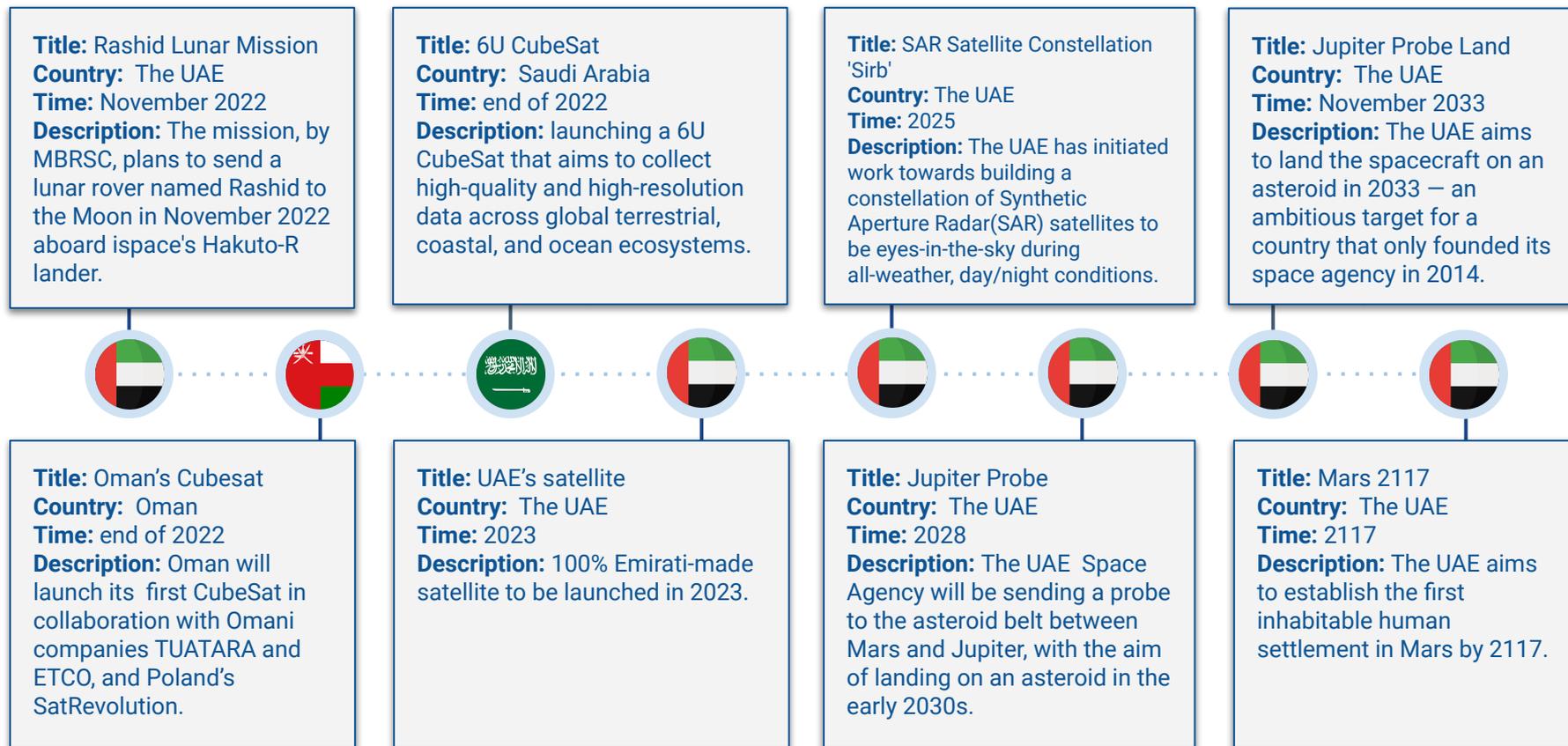
In July 2022, the UAE Space Agency announced a National Space Fund committing to spend three billion dirhams or

\$817M

'The National Space Fund will encourage global partnerships to establish themselves here in the Emirates, providing new and vital technology platforms and development to answer the needs of the UAE Space Programme and other global customers for vital innovation and technologies that answer the needs and possibilities of today's world'

Salem Al Qubaisi
Director general of the UAE Space Agency.

Future Events Timeline



Leading SpaceTech Companies in GCC Region*

| | | | |
|----|---|----|--|
| 1 | ABS Network | 11 | Global Space & Technology Company |
| 2 | Al Yah Satellite Communications Company PJSC (Yahsat) | 12 | Golden Shield |
| 3 | Alef Technology | 13 | Gulfsat Communications Co. |
| 4 | Almisehal Group | 14 | HorizonSat |
| 5 | Cubesat Arabia | 15 | International emerging technology company (ETCO) |
| 6 | Cygnus Telecom | 16 | Joint Venture (OneWeb / Neom Tech & Digital) |
| 7 | EPI | 17 | Kuwait Space Rocket |
| 8 | Es'hailSat | 18 | Location Solutions |
| 9 | Etisalat | 19 | Master Technovision LLC |
| 10 | Firnas Aero | 20 | Middle East Broadcasting Centre |

*in alphabetical order

GCC Region Space Agencies Have Great Potential for Growth



الهيئة السعودية للفضاء
SAUDI SPACE COMMISSION

Saudi Space Commission



الهيئة الوطنية لعلوم الفضاء
National Space Science Agency

**National Space Sciences
Agency of Bahrain**



United Arab Emirates

وكالة الإمارات للفضاء
UAE SPACE AGENCY

**The United Arab
Emirates Space
Agency**



**Qatar Aeronautics and
Space Agency**

At present, of all the GCC countries, only Saudi Arabia, the Arab Emirates, Bahrain, and Qatar have their own fully fledged and well-functioning space agencies. These countries are the most progressive in terms of governmental initiatives, which makes them the locomotives of the space industry in the Middle East, within the Persian Gulf region under consideration. Given that the oldest agency of all (namely, Qatar Aeronautics and Space Agency) was founded only in 2010, we can confidently predict immediate growth commensurate with the growth of the entire industry, as well as the potential of relatively young organisations.

The United Arab Emirates Space Agency

وكالة الإمارات للفضاء UAE SPACE AGENCY



| | |
|---------------------|-------------------------------------|
| Formed | 2014 |
| Type | Space Agency |
| Headquarters | Abu Dhabi, The United Arab Emirates |
| Chairperson | Sarah Al Amiri |

\$5.2

 billion of funding from government

The UAE has launched prior, to the existence of the Agency, commercial satellites constructed by EADS, Boeing, and MBRSC DubaiSat-1 and DubaiSat-2, developed as part of a technology transfer programme with South Korea's Satrec Initiative.

The UAE Space Agency Initiatives



Key Trends Shaping SpaceTech Activity in GCC Region

The GCC nations set an excellent example of brand-new spacefaring nations that are trying to succeed. These nations cannot currently be compared to their contenders in Europe, due to their varying levels of development, but they nevertheless have a promising future ahead of them. The following are the main trends that will aid in future space developments:

Small satellite systems, including microsattellites, nanosatellites, and cube satellite systems being designed and manufactured using new technology

Enhancing ground operations for broadband, high-speed internet, and mobile satellite services

Increasing financial support for space tourism and suborbital missions

The development of tiny satellite systems that can transmit high-resolution photos with low-cost investments

Increased use of LEO-operated small satellite systems for communication and earth observation

Increased use of Ku-band satellites, which aid in the delivery of affordable services

Small satellites usage to enable a constellation of many satellites

Start of funding the space programmes so that more new military satellites and weapons may be developed. New military satellites employed to monitor borders

Improving the capacity of military satellites to monitor borders in real time

A rapid growth of government involvement in space missions

Government funding for the development of new satellite launches and services supports research universities

Space exploration missions as a long-term impetus for upcoming space projects

Kuwait's Space Industry Successful Development

Kuwait's space activities have recently regained momentum, albeit this time through bottom-up initiatives rather than top-down, government-led ones.

1960

When the USA and the USSR were vigorously vying for dominance in the space race, Kuwait first started to get involved in the industry.

The government built the Um Alaish, the region's first ground satellite station.

1969

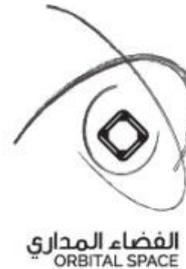
The government continued to encourage satellite communication services and the space industry, the station later underwent an expansion that included the addition of three satellite dishes by 1981.

1981

When the Um Alaish was ruined during the Iraqi invasion, the state's interest in the space sector waned. Over the next two decades, the wreckage and the remaining equipment was cleaned up or sold.

1990

Orbital Space, the organisation behind the QMR-KWT, satellite was founded as a result of the lack of state interest and the flourishing space programmes among the GCC states, mainly the UAE.



With a focus on involving Arab youth through research and teaching, it was established as a private firm in 2018 to rekindle Kuwait's interest in space and showcase the nation's technological prowess in that area. It is the first privately owned CubeSat technology firm in the area.



Another unique project is the Kuwait Space Rocket, initiated and led by a group of young Kuwaitis who are developing a rocket – specifically, the first GCC suborbital liquid bipropellant rocket that will travel up to 100 km into the atmosphere.

The goal of the initiative is creating a local smallsat launch service and 'establishing a Kuwaiti Space Program'.

Key Takeaways



SpaceTech in the GCC region has a huge economic potential and has already resulted in the emergence of companies and initiatives that have the potential to bring billion-dollar investment into the region. Despite the amount of money the GCC region accumulated, its full potential has yet to be reached.



Space has always been a point of interest in Middle Eastern countries. The observatory built in Baghdad in the 9th century is said to be one of the first ones in the world. However, nowadays GCC countries are only at the beginning of their way to the stars. Although their agencies are quite young (compared to NASA and ESA), they have made impressive progress. The Gulf countries, The United Arab Emirates especially, have shown tremendous rates of growth.



All six countries have been initiating space-related endeavours throughout the past decade. The United Arab Emirates, Saudi Arabia, Bahrain, and Qatar have already established their own space agencies, starting with Qatar Aeronautics and Space Agency (QASA) in 2010. The programmes mainly focus on domestic solutions such as weather and atmosphere composition monitoring. Agencies also seek to generate profit through space tourism services and gain scientific output from space missions.

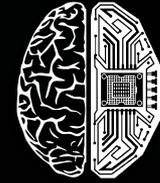


At present, of all the GCC countries, only Saudi Arabia, the Arab Emirates, Bahrain, and Qatar have their own full-fledged and well-functioning space agencies. These countries are the most progressive in terms of governmental initiatives, which makes them the locomotives of the space industry in the Middle East within the Persian Gulf region. Given that the oldest agency of all (namely, Qatar Aeronautics and Space Agency) was only founded in 2010, we can confidently predict immediate growth commensurate with the development of the entire industry and expanding potential of relatively young organisations.

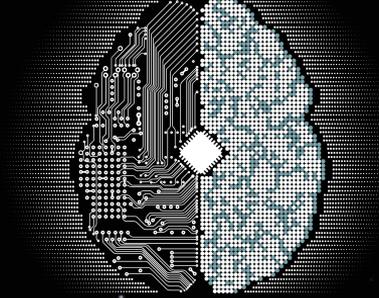


The GCC nations are an excellent example of brand-new spacefaring nations trying to succeed. These nations cannot currently be compared to their contenders in Europe due to their varying levels of development, but they, nevertheless, have a promising future ahead. Nevertheless, the world trends towards small satellite systems, including microsatellites, nanosatellites, and cube satellite, as well as launching of missions aimed at space exploration, are reflected in the GCC region.

DISCLAIMER



**SpaceTech
Analytics**



Link to the Report: <https://platform.dkv.global/dashboards/spacetech-big-data/dashboard>

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