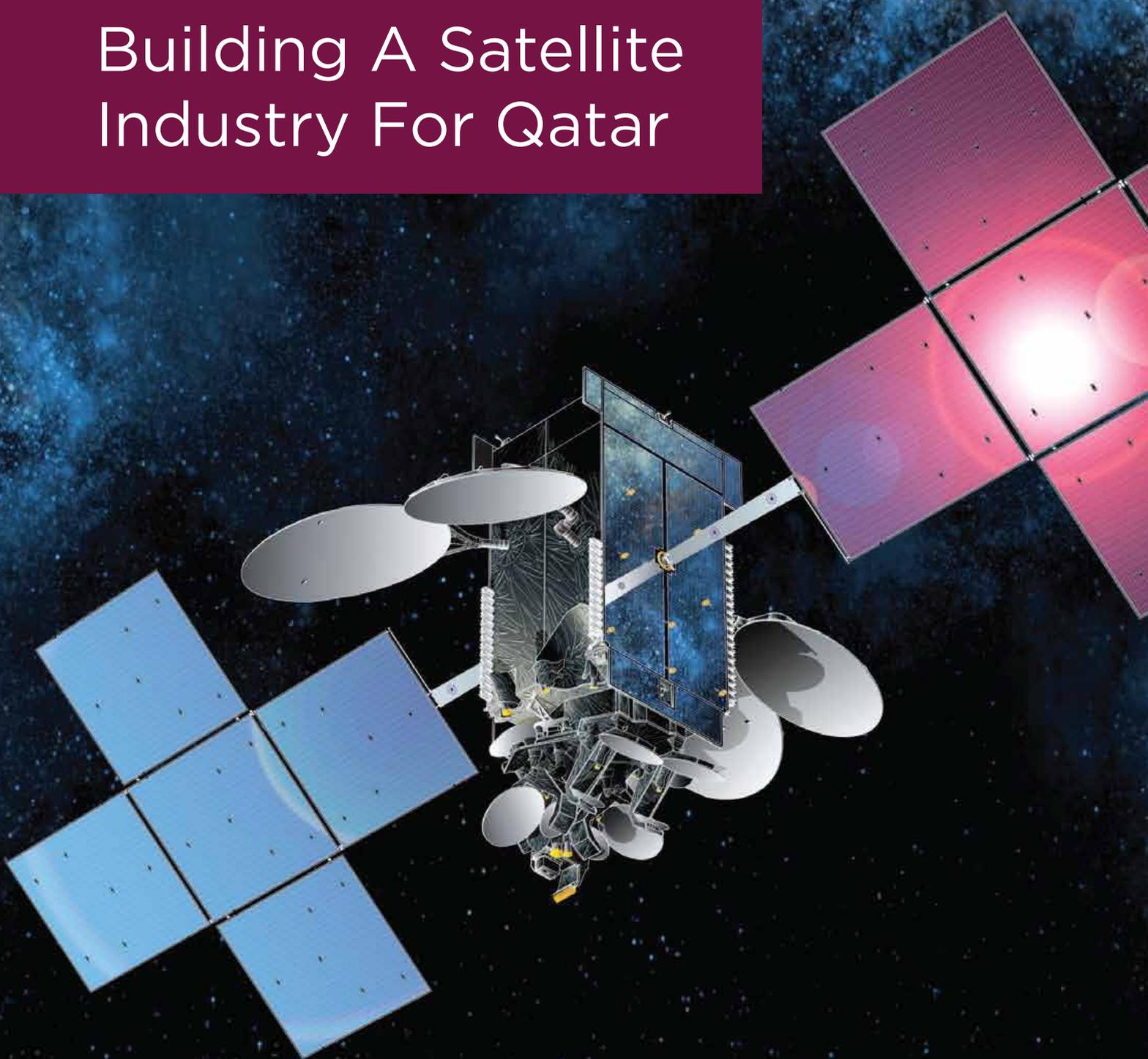


# Building A Satellite Industry For Qatar



 **سهيل سات EshailSat**  
الشركة القطرية للأقمار الصناعية Qatar Satellite Company

# Building A Satellite Industry For Qatar

## The Story of Es'hailSat and Qatar's First Satellite

Es'hailSat, the Qatar Satellite Company was established in 2010 to manage and develop Qatar's presence in space. The company owns and operates satellites which serve broadcasters, businesses and governments with television, voice, internet and government services across the Middle East.

### The Vision

The decision of the Father Emir His Highness Sheikh Hamad bin Khalifa al Thani and the vision and wise leadership of the Emir, His Highness Sheikh Tamim bin Hamad al Thani, laid the foundations for the Es'hailSat satellite program. Es'hailSat plays an important part in Qatar's 2030 Vision to provide the country with an advanced communications infrastructure and a solid foundation in satellite technology for the future.

### The Mission

Es'hailSat's mission is to be a world-class satellite company and center of excellence in the Middle East. Es'hail 1, Qatar's first satellite was launched on August 29th 2013 and started transmitting services on 18th December 2013, Qatar National Day

### What does Es'hail 1 do?

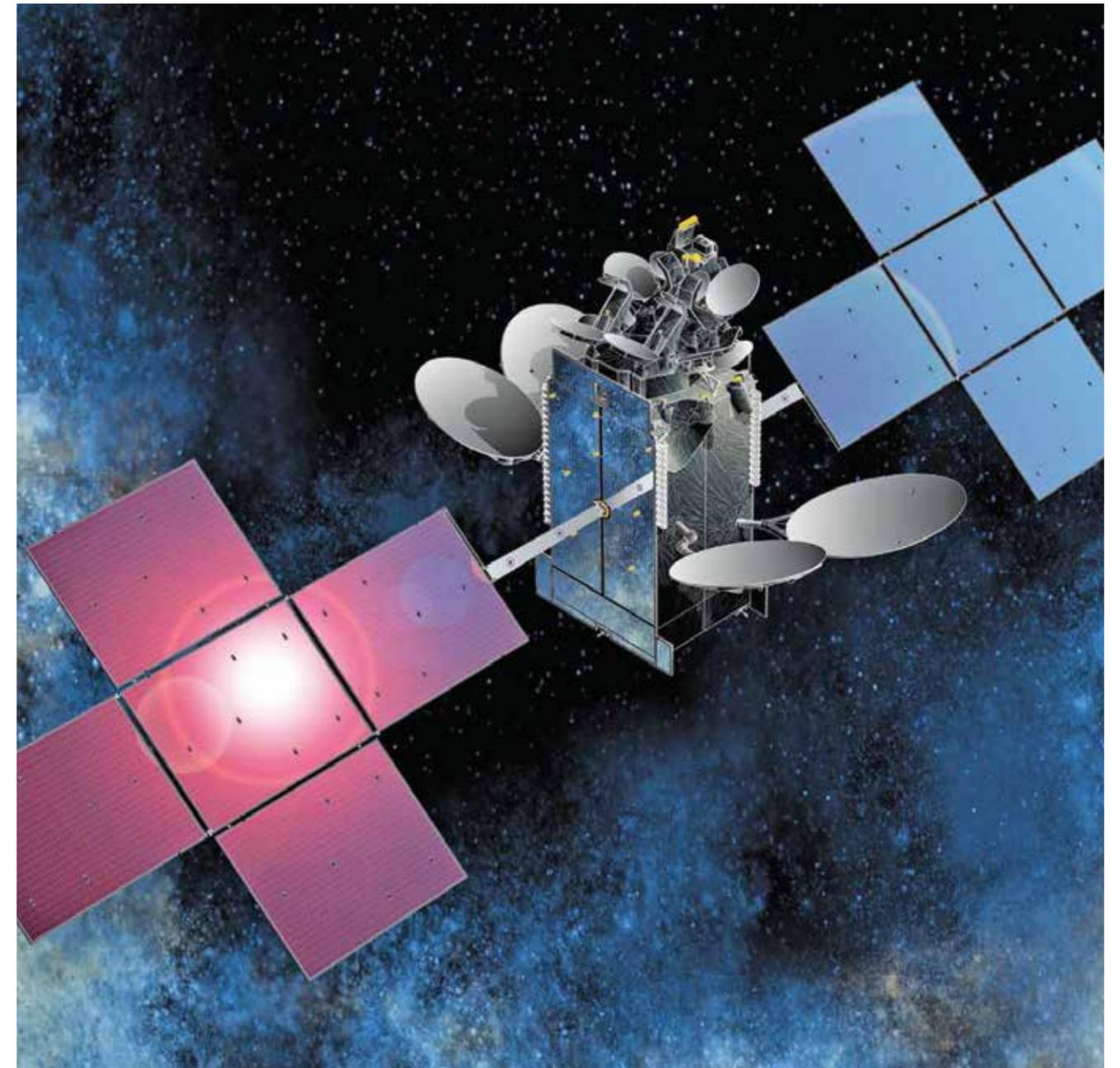
We cannot see satellites in the sky, however they do provide

us with a number of important services in our daily lives! When you watch the news on Al Jazeera or your favourite sports team on beIN SPORTS, then you are getting these TV channels in your home or on your mobile devices thanks to Es'hail 1.

Our satellites enable **TV channels** to broadcast their programmes to the whole of Qatar and across countries in the Middle East and North Africa. They are also used to provide coverage of **breaking news** and **special events** such as the FIFA 2014 World Cup.

Es'hail 1 also contributes to the booming use of **broadband services!** With the highest **Internet** penetration in the Middle East and the largest Facebook and Twitter penetration in the region, Qatar is a sophisticated user of new media.

Satellites are also used for **telecommunications** and help keep business and government users connected with low-cost communications that can be established quickly and securely.



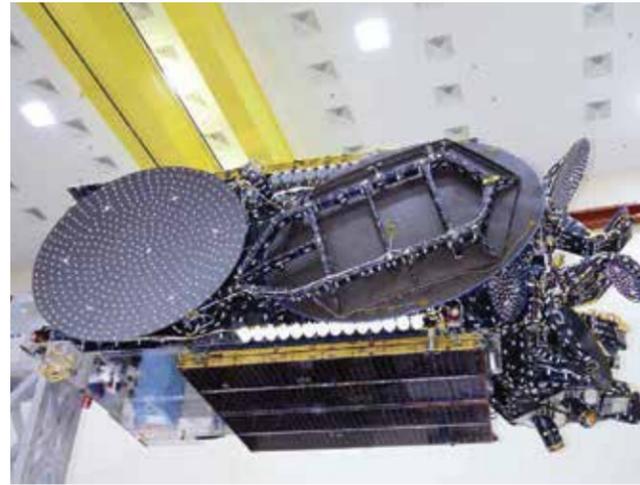
**EshailSat** سهيل سات  
Qatar Satellite Company الشركة القطرية للأقمار الصناعية

The name "Es'hail" is derived from the name of a star which becomes visible in the night sky in the Middle East when summer turns to autumn. Traditionally, the sighting of Es'hail brings happiness, as it means that winter is coming and good weather will soon be with us.



**ALI AL KUWARI**  
CEO of Es'hailSat

"At Es'hailSat, we aim to bring a new dimension to Qatar by building a world-class satellite company and center of excellence in the region. As well as providing the Es'hail 1 and Es'hail 2 satellites, we are training the young people of Qatar in satellite technology so that we have a solid foundation for the future"



Mohammed Al Delaimi, Thani Ali Al Malki, Ibrahim Abdulla Alhaj and Mohammed Al Sayed were selected to participate in the prestigious Es'hailSat training program facilitated by satellite manufacturer Space Systems/Loral to develop knowledge and skills necessary to oversee the manufacture, launch and operation of commercial communication satellites.



#### Es'hail 1 Satellite Capacity Management Center (CMC)

- Es'hail 1 is an SSL 1300 satellite
- 15-year design life
- Launched on 29 August 2013
- Started transmission on 18 December 2014
- TV channels Al Jazeera, beIN SPORTS, Al Bidaa, Al Araby
- Satellite covers Middle East & North Africa (from Morocco eastwards across to North Africa and down the Red Sea and back up the Gulf)

The intensive 26-month satellite engineering internship allowed the engineers to follow the Es'hail 1 satellite through design, manufacture, test and launch, giving them hands-on experience and expertise.

The prestigious training programme was set up to develop knowledgeable engineering staff and will assist Qatar in the development of its own space capabilities in the future.

# Building A Satellite - A Qatari Star In The Making

## Es'hail 1

Qatar's first satellite, Es'hail 1, was designed and built by US company Space Systems/Loral (SSL) in Palo Alto, California. The satellite build program took just over two years to complete and four young graduate Qatari engineers were lucky enough to follow the program through initial design to final delivery.

### Es'hailSat Graduate Engineers

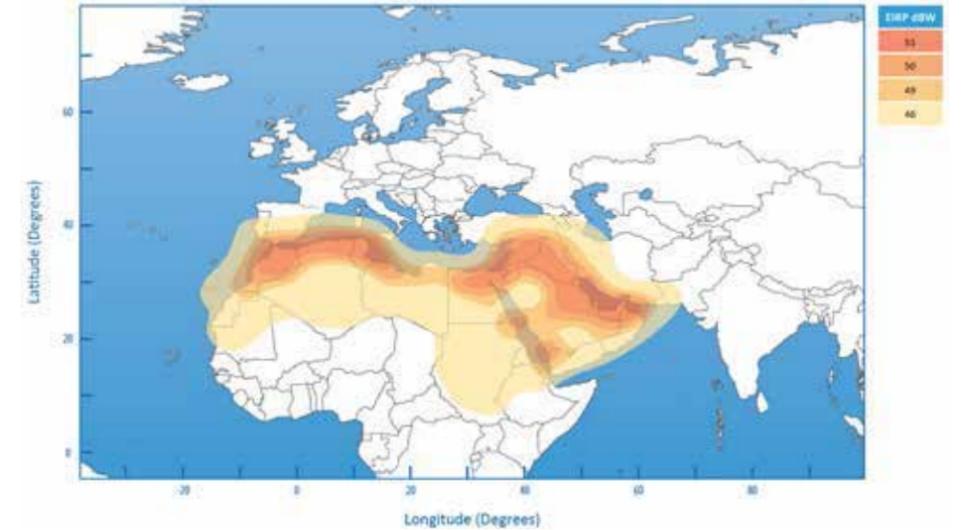
"Working with a satellite manufacturer and seeing every part of the satellite being assembled gives me an amazing insight in the knowledge and dedication that allowed humans to conquer space".

— Mohammed Al Delaimi

"I think this experience is a once-in-a-lifetime opportunity. The chance to learn about new technology such as the latest on-board satellite processors which provide advanced accuracy and optimized satellite coverage was invaluable".

— Thani Ali Al Malki

Es'hail 1 satellite coverage of the Middle East & North Africa



## Es'hail 2

With the success of Es'hail 1, we went ahead with the design and manufacture of a second high-performance satellite, Es'hail 2, which is currently under construction in Japan by the Mitsubishi Electric Corporation. The Es'hail 2 satellite will be launched at the end of 2016 by SpaceX from Cape Canaveral in the US. And Es'hailSat is continuing the satellite training program for Qatari engineers at the Mitsubishi Electric Corporation in Japan.

### Satellite Control Centre

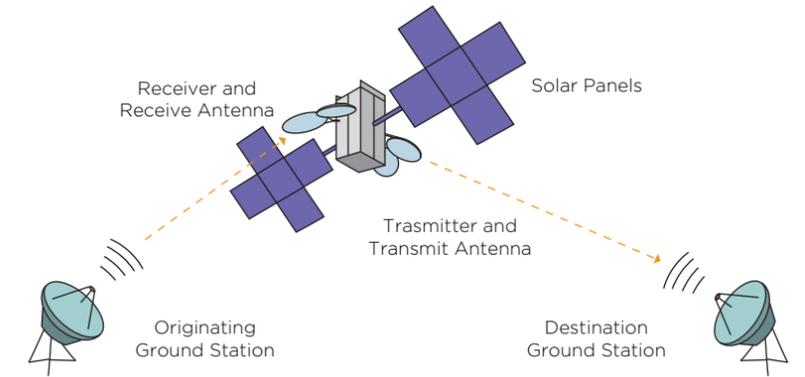
We manage the services of our customers on the Es'hail 1 satellite from our Capacity Management Centre (CMC) here in Doha. As we develop further satellites, we are building our own teleport facility at a new site outside Doha which will have three roles - we will control our satellites from there, we will provide up-linking and teleport services from there, and we will build our new CMC there. The current CMC at our offices will then become our back-up / disaster recovery facility.



### The Ariane 5 Rocket

The Ariane 5 rocket launches satellites into space. It consists of the Main Cryogenic Stage, two Solid Boosters and an Upper Stage. Check out how rockets launch into space at [www.arianespace.com](http://www.arianespace.com)

Following the successful launch of Qatar's first satellite, Es'hail 1 went through a 3-month period of in-orbit testing. Es'hail 1 then entered commercial service on 18th December, 2013, Qatar National Day, broadcasting premium content for beIN SPORTS and Al Jazeera Media Networks. **The vision has become a reality.**



# Qatar Enters The Space Age!

## Launching the Es'hail 1 satellite

In the summer of 2013 the manufacture of Es'hail 1 by SSL was completed and it was then shipped from California to South America on a very large cargo plane!

Es'hail 1 was launched into space from French Guiana in South America on an Ariane 5 rocket on 29th August 2013. Watching the historic achievement for the State of Qatar as it joined the elite club of nations owning their own satellites, was a delegation of VIPs including the Minister of Communication and Information Technology H.E. Dr Hessa Al Jaber.



# Space to deliver your vision

Es'hailSat is a new satellite operator based in Doha, which owns and operates satellites to provide television, internet and business communications services across the Middle East, North Africa and beyond.



Qatar's first satellite, Es'hail 1 was launched on August 29th 2013 and started transmitting services for TV channels - Al Jazeera and beIN SPORTS on 18th December 2013, Qatar National Day. We will launch a second satellite, Es'hail 2 at the end of 2016.

For more information,  
[www.eshailsat.qa](http://www.eshailsat.qa)

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