

# The Future of Space

A proposed presentation by **KSF Space** 



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www.ksf.space



### About KSF

A not for profit foundation registered in the U.K # 10176163, the KSF Space Foundation or (KSF) was initially founded to enable cost-efficient access to low earth orbit (LEO) with zero-environmental impact flying solutions.

- The foundation encourage universities to develop R&D missions using small satellites and micro-satellites, where small satellites become one of the most important role in developing future scientific space missions.
- ✓ The foundation steered by officers and members from major space agencies and industries like NASA, ESA, JAXA, SpaceX...etc.

More about KSF activities <u>www.ksf.space</u>





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## About KSF

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#### **Small Satellite Fabrication Consulting Service**

The international, technical committee at KSF Space Foundation (KSF), comprising of experienced professional engineers, researchers, scientists and subject matter experts, can assist and work with you on your next space mission (see members page).

KSF currently holds numerous, signed agreements with key industry and academic stakeholders from across the nano-satellite community. KSF can assist your next space mission by matching the most suitable services in the market with your mission's needs. Contact us and let us know what your next space mission is all about, and we'll we provide you with exemplar technical expertise.





#### KSF Space Foundation Experimentation Opportunity Program

Some institutions cannot easily afford the costs of developing, manufacturing, and launching their own space mission, particularly in developing countries.

Here at KSF we have developed a special program entitled 'Experimentation Opportunity Program'. This program is dedicated to enabling institutions in developing countries realise their own space mission aspirations. The scope of the program allows institutions from developing countries to collaborate and participate with other institutions that are currently working and developing their own missions.

Our funding committee is happy to discuss with you potential opportunities and likely costs, with our advice tailored to your research and mission needs



#### Launch Service

At the KSF Space Foundation, we can source and manage ride share opportunities with a network of international launch providers. We can help institutions launch their own experiments; with affordable pricing below normal market rates from LEO 160 KM, 310 KM, 550 KM, 600 KM & 700 KM to 2000 KM above ISS and to GEO





KSF Space Reachable to ISS for R&D Experimentation

ISS

#### MEO + 2000 KM





LEO from 160 KM





#### Affordable Services for Academic R&D Projects

✓ Building, integration, zero gravity testing environment and launch opportunities for Nanosatellite "CubeSat"

✓ Support your academic activities on building your own Ground Station for R&D and receive live signals & images from active on orbit weather and climate major satellites

✓ Provide support and training on building Ground Station to track current Nanosatellites or Cubesats on LEO orbit



#### Affordable Services for Academic R&D Projects

✓ We send your biological scientific experiments to Space on ISS

✓ Broadcasting chances with the International Space Station (ISS) on orbit crew for universities & colleges students world-wide "through KSF Space's partner"

 ✓ Training Courses available on GPS, GS, Building NanoSat...etc (Training Catalog available)



#### Experiments

KSF is currently offering access to near-space and LEO to GEO for research and scientific experiments in the fields of:

Earth or Space observation
Biological testing
Satellite positioning detection
Earth magnetic field measurement
Radio Transmissions
Atmospheric Science
Technology experiment
Ecological Sciences
Testing of hardware and software of micro and nano-technology

Civil Government

Historically, civil engineers have used inefficient surveying methods and out-of-date maps, resulting in unanticipated mistakes.





Damaged Roads

Undamaged Roads

Crowdsourced Damage

Damaged Bridges

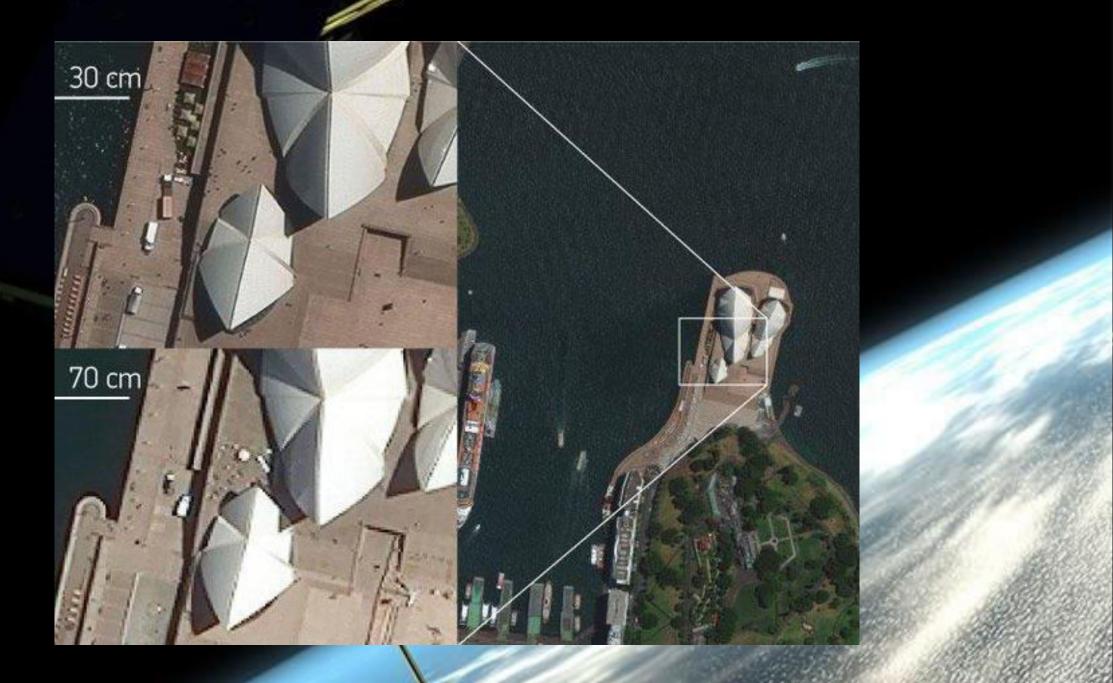




## **Commercial Mapping Applications** Ability to reach historic maps from 15 years In your hands, ANY TIME



1.0



Energy, Oil & Gas

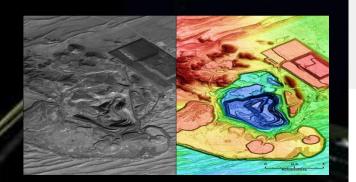
## Drilling projects need to be well planned.

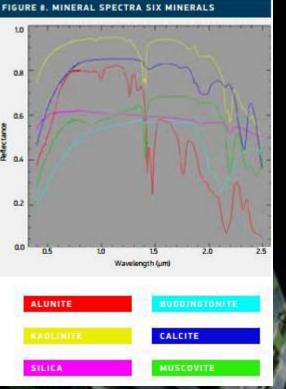
Restoring the right-of-way along the 800-km TransSakhalin Pipeline, one of the world's largest oil and gas projects

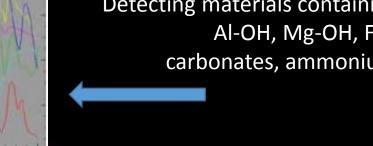
insight into energy infrastructure projects



Mining









Detecting materials containing anion groups such as Al-OH, Mg-OH, Fe-OH, Si-OH, carbonates, ammonium, and sulphates







#### Defense & Intelligence

Border monitoring is essential for maintaining national security.

#### Sana'a Airport attack in Yemen on March 27, 2015. up to 30 cm resolution



Image within Smoke

#### Marine services: Find more fish faster

#### Track LIVE Vessels



**Illegal Fishing** 





A tuna purse seiner goes to sea with sister vessels reporting poor catches. The ship leverages intelligence to zero in on the richest fishing grounds.



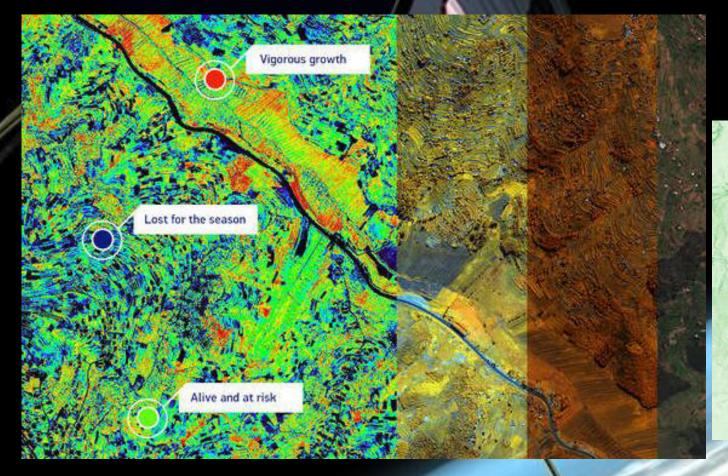
#### Agriculture

A farmer finds his corn production ranges from 75 bushels to nearly 200 bushels, often in the same field. Remote sensing identifies localized nutrient deficiencies and enables crop inputs by zone management.



#### Land Planning & Disease mitigation

How much water a crop is using, which conserves water and cuts costs.



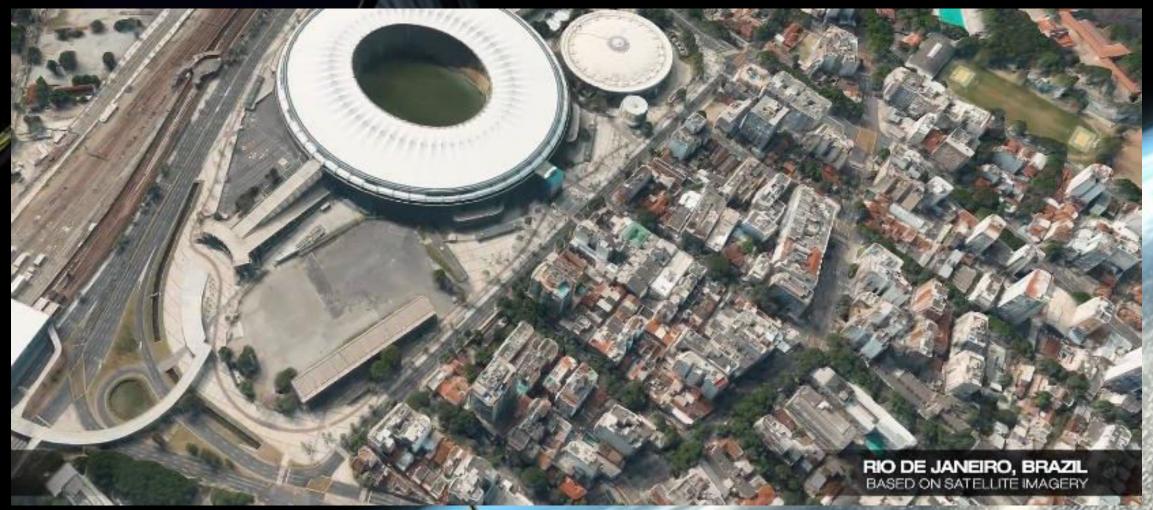
#### **Other Applications for:**

Archaeology
Environmental-services
Health & Safety
Real-estate
Telecommunications
Urban-planning
Training-and-simulation



#### Construct 3D based on REAL Satellite Imagery







High-accuracy 3D data for decision makers. Data is provided globally, based on your areas of interest.



#### Extracting Earth Insight

Big Data & Machine Learning







#### Delivery

Deliverables Standard Imagery can be acquired directly from the archive or you can submit a new collection request. Standard Imagery is ordered by area, with a minimum purchase of 25 sq km for archive or 100 sq km tasking orders, up to a maximum of 10,000 sq km per order. If your order crosses more than one strip, one standard imagery product per scene is delivered. Products are delivered on your choice of standard digital media with Image Support Data files including image metadata.

#### **Delivery methods**



Media delivery: DVD



Media delivery: external HD



Web-based delivery: FTP



#### "NEP" Nanosatellite Engineering Professional Certification

The NEP Certification pathway will address aerospace engineers and experts and will be recognized by major space companies, organizations, foundations and agencies. Some of the industries will work with KSF Space to review the content of the course material and accredit the certificate by recognizing NEP Certification as world's first and only nanosatellite engineering professional course.





#### RanoSatellite Engineering Professional

This is to certify that

JOHN MCLAREN

Has successfully completed all prescribed requirement and is herby designated as

#### NanoSatellite Engineering Professional

In testimony whereof, we have subscribed our signature under the seal of the Foundation

OARD OF DIRECTORS

March 201 Registration No. 367228



NEWS!

ppROV

PPR



#### Big Q, Initiative

The mission Objectives of the Big-Q initiative was founded to encourage world's universities and institutions to develop and construct technical approaches towards big data and the uses of future NanoSat (CubeSat) space research & industries, and to include technical approaches for data mining algorithms, VLSI, embedded systems, software application & finally construct cubesat model.

World wide universities and industries are involve in Big Q.



Worldwide Satellite Magazine - February 2017



The World of Smallsats Special SmallSat Symposium Issue

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# **NEP** Certification

from KSF Space

SmallSat Symposium Info **Do Smallsats Have a Future in Video?** Electrospray Ground Segment Considerations **Optical Comms for Smallsats** The Fast, Evolving Smallsats Climate Taking the "Search" Out of "Search & Rescue" Life Imitates Art **Cybersecurity Best Practices for Smallsats Delivering the Globe** "NEP Certification." Now What? **Behind the Scenes New Interconnection Tools** Estimating the Income Generated The Challenges of New Space **Busting Down the Barriers** Fake Weather News Extraterrestrial Intelligence InfoBeam



ATELL **Evolution Group**  Ball Aerospace provides accurate. actionable weather data to civilian and military forecasters - with spacecraft, instrumentation and expertise that Go Beyond."

satnews

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profit, UK-based Kayyali Space Foundation (KSF Space) The NEP Certification pathway will address aerospace engineers and expe

More berospace companies and organizations are currently working on NEP recognition with KSP Nore aerospace companies and organizations are currently working on NEP recognition with K3 Space. NEP certification will come to market early 2017 and will be totally concentrated on the space. NEP Certification will come to market early 2017 and will be to mailizat market sector. The benefits of being NEP Certified include... necognizes space engineering skils across the globe: an NEP credential is a perfect Necrognities space engineering soliti across the goole, an edu or warman in a per rest addendam for all announce engineers Noting smallast AULIS in Internetioned employers; an edu create and will became globally recognized and required-becaming NBP entrifyed heps the aerospace engineering companies

recognition and required-decoming new enryter respirate any stree devapped engineering unspecies world recognite needed skill sets America the akility to handle challenging complex satel(the projects: The new example)(b)(b) Reveals the ability to handle chattenging complex satellite projects: The hEP exam elsibility criteria are based on a space engineering education and experience. An orderin and proves these solids and experience by accessfully completing chatteringing and cradial undustry-based accessing and analisat projects.

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a U.K. registered non-profit organization



**Time Business News** 





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