# 2020
# IMPACT REPORT

## For A Better World

**MAXAR**

# ABOUT MAXAR

Maxar is a trusted partner and innovator in Earth Intelligence and Space Infrastructure. We offer disruptive value to government and commercial customers to help them monitor, understand and navigate our changing planet; deliver global broadband communications; and explore and advance the use of space. Our unique approach combines decades of deep mission understanding and a proven commercial and defense foundation to deploy solutions and deliver insights with unrivaled speed, scale and cost-effectiveness. Maxar's more than 4,300 team members in more than 20 global locations are inspired to harness the potential of space to help our customers create a better world. Maxar trades on the New York Stock Exchange and Toronto Stock Exchange as MAXR. For more information, visit www.maxar.com.

Maxar's 2020 Impact Report includes projects worked on or completed between January 1, 2020, and December 31, 2020. The projects are representative of Maxar's work, but not exhaustive.

Cover image shows Maxar and Arianespace team members preparing BSAT-4b for launch. Image © 2020 ESA-CNES-ARIANESPACE / Optique vidéo du CSG – P PIRON

Disclaimer: Neither the U.S. Department of Defense nor any of its components endorse this report. NGA approved for public release #21-188.
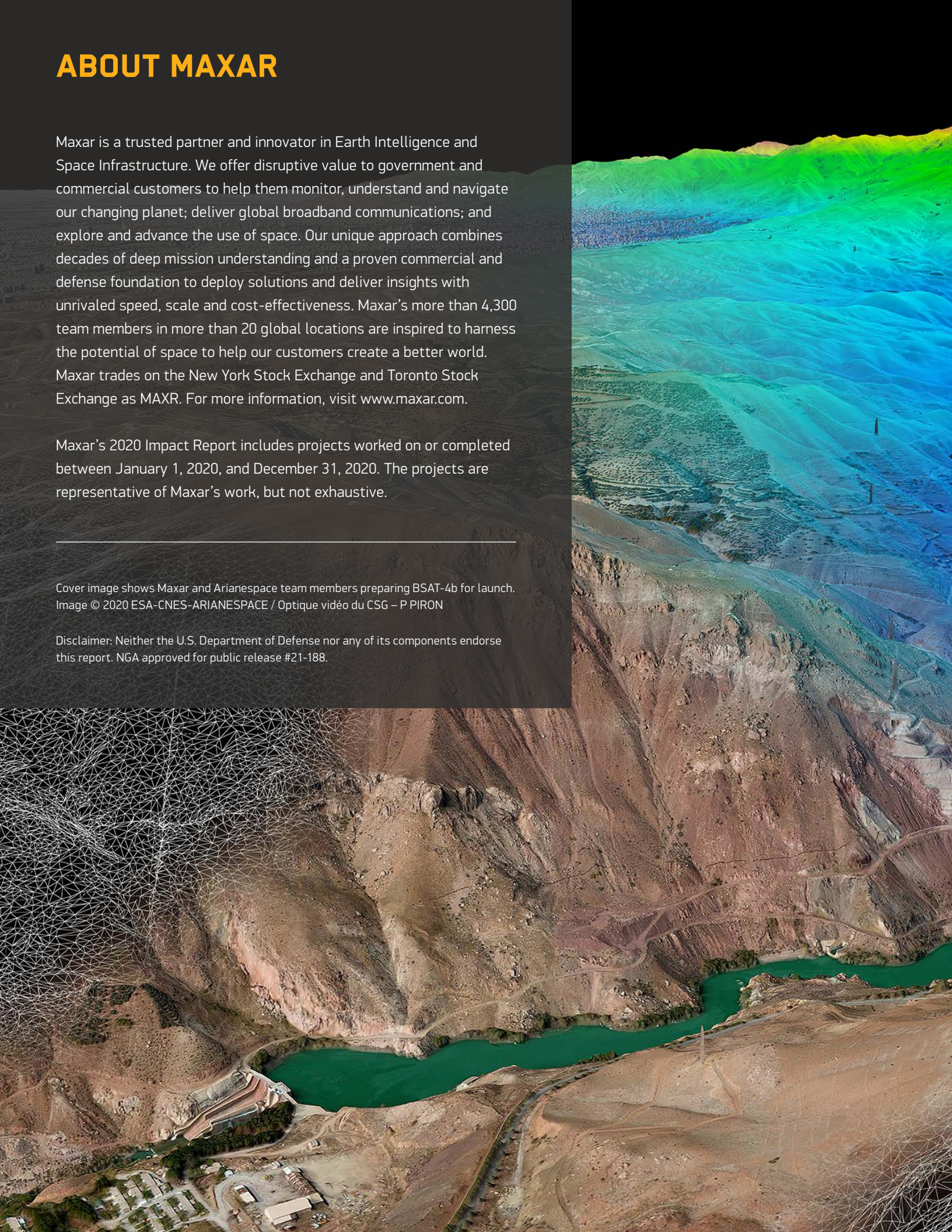
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# LETTER FROM THE CHIEF EXECUTIVE OFFICER

In January 2020—the start of a new decade—we had not imagined that within months the terms "quarantine" and "social distancing" would enter our daily dialogue, wearing masks would become the norm, and business would be transformed from shared offices and in-person meetings to a remote workforce and faces on screens. We've experienced seismic changes to how we live and work, and Maxar—like companies around the globe—adapted to protect our team members, our communities and our business

What remains unchanged is our commitment to our Purpose: For A Better World. In 2020, we continued to serve our customers and their missions and projects, and we expanded our work to contribute to the global effort to observe, understand and contain the pandemic. The company found new ways to support our team members: putting protocols in place to protect the health and safety of our people and especially our teams who continued

**DAN JABLONSKY
CEO, MAXAR**

> **This work took place from our homes and in sparsely populated facilities, and the pace of progress continued.**

to work on-site on critical missions. We enhanced in-depth cleanings and sanitization of our offices, and we offered financial stipends for team members to set up home offices.

Throughout 2020, I was routinely reminded of the dedication of our team members. This 2020 Impact Report details our efforts, in cooperation with our customers and partners and with one another, on pandemic-related projects, environmental monitoring and space exploration missions. This work took place from our homes and in our and our customers' facilities, and the pace of progress continued. I am grateful for our teams' unwavering commitment to our customers and partners around the world.

In these pages you will read about how we've deployed Maxar's intelligence and space capabilities to solve problems, support humanitarian efforts and further the understanding of global challenges. I hope you will be inspired by the stories and by our team's ongoing work For A Better World.

— Dan

# PURPOSE AND VALUES

We believe breakthrough insights unlock infinite possibilities.
We exist to create the connections between Earth and space.
**For A Better World**.

### WE PUT THE MISSION FIRST
This means that everything we do is to satisfy the goals, ambitions and dreams of our customers.

### WE WORK BETTER TOGETHER
We are an organization that values collaboration and diversity to create a better future.

### WE STAY CURIOUS
We never stop working to discover the answers to the questions of tomorrow and to solve the most difficult problems.

### WE ACT LIKE OWNERS
We know that results matter and we continually find new ways to grow, improve and deliver sustainable value.

### WE DO IT RIGHT
This means we operate with high integrity. No shortcuts. We honor our commitments to our customers, our partners and our team members.

### YOU MATTER
Our strength is our people. Each of you makes a unique contribution to our collective mission. We recognize and appreciate your commitment— every day bringing your best to work, living our values and fulfilling our purpose.

# OUR PURPOSE GUIDES OUR WORK

At Maxar, our Purpose is the North Star for all we do. It influences our decisions and guides our efforts to use the company's extraordinary capabilities to improve the world in which we live. Maxar's Purpose informs our work to create a sustainable business that delivers valuable insights about our Earth and supports the exploration of space.

We are aligned with environmental, social and governance (ESG) practices, and it drives our work in ensuring the value and breadth of our services and capabilities and expanding our reach to communities, both globally and locally.

This report highlights the impact of our initiatives in 2020, which range from pandemic response to climate and sustainability, community outreach and philanthropic and customer projects that collectively demonstrate Maxar's contributions to Earth and its inhabitants.

# A GLOBAL COMPANY
# WITH A TRULY GLOBAL REACH
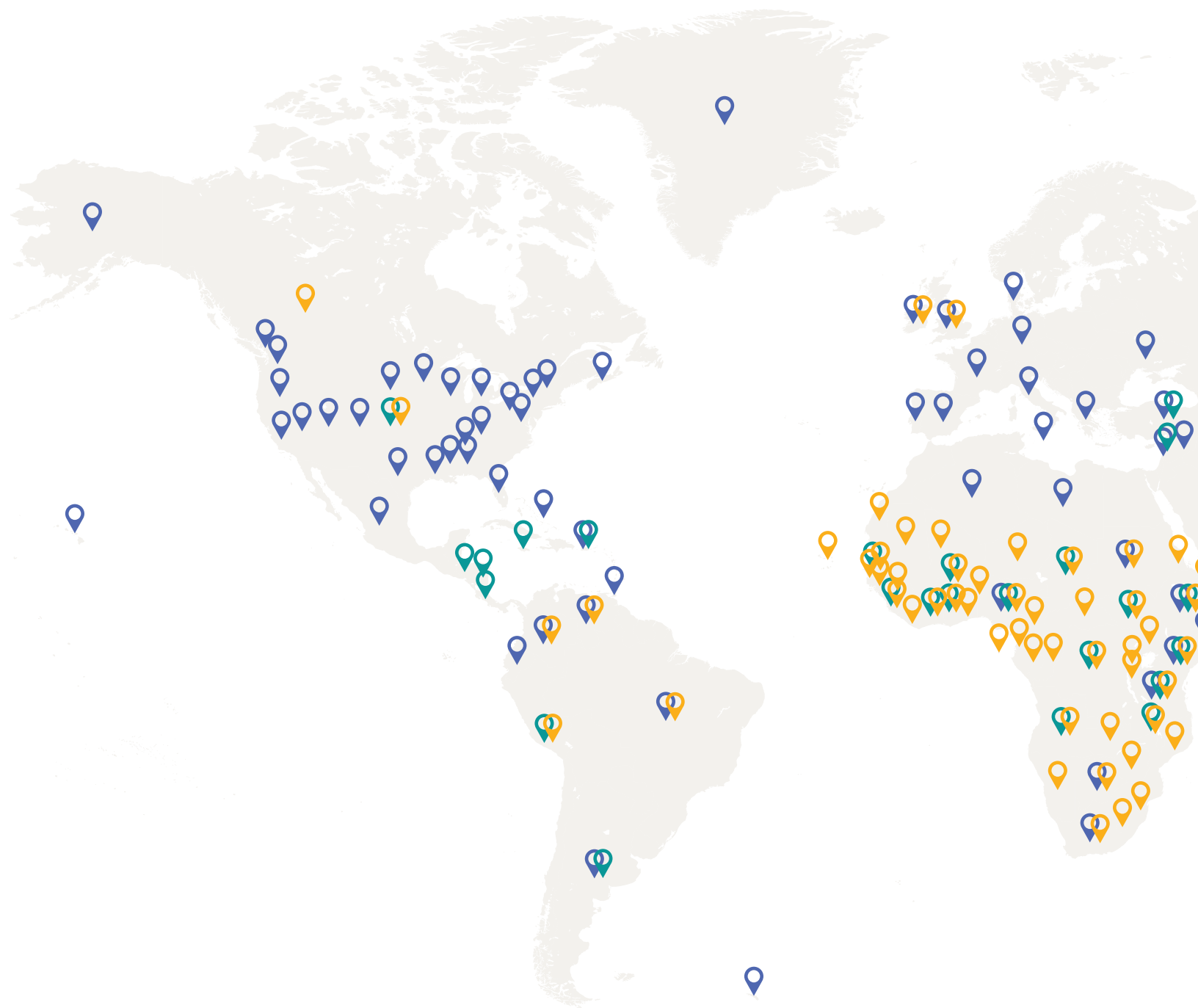


Sustainable Development
Practice Projects

Open Data Program
Event Activations

News Bureau Projects

# 2020 IMPACT



**16**

Open Data Program
event activations

**4,964**

Face shields produced
for health care workers

**221**

News Bureau projects

**951,116**

Images collected by the
Maxar constellation

**1.19**

Billion square kilometers
of satellite imagery collected

**9**

Satellites launched

Information is representative of
Maxar's work, not exhaustive.

TORO PARK, CALIFORNIA | DURING RIVER FIRE | AUGUST 21, 2020
WORLDVIEW-3 | NATURAL COLOR IMAGE



TORO PARK, CALIFORNIA | DURING RIVER FIRE | AUGUST 21, 2020
WORLDVIEW-3 | SWIR IMAGE

# HELPING FIRST RESPONDERS TRACK WESTERN U.S. WILDFIRES

## IMPACT

Wildfires raged in California, Oregon, Washington and Colorado in the second half of 2020, causing hundreds of thousands of people to evacuate. The fires spread rapidly, burning more than 6.7 million acres. Maxar's WorldView-3 satellite has the capability to collect shortwave infrared (SWIR) imagery, which sees through smoke to detect where fires are burning and reveal what has already burned. This imagery was provided to help first responders understand where to allocate firefighting resources to save time and protect people and buildings.

**High-resolution imagery access for local and state responders**

The wildfires in California and Oregon received Presidential Major Disaster Declarations, enabling local, state and tribal governments to receive federal assistance for emergency response, recovery and protective measures. As a result of these declarations, local and state first responders received access to all of Maxar's satellite imagery of the fires through the U.S. government's Global-Enhanced GEOINT Delivery (Global-EGD) program. More than 38 organizations, including the National Guard, FEMA, U.S. Army, U.S. Air Force, U.S. National Geospatial-Intelligence Agency (NGA), U.S. Geological Survey and the Army Corps of Engineers, viewed more than 6 million sq km of imagery over the wildfires in California.

In a SWIR image, active fires and hot spots glow orange and yellow. Burned vegetation appears in shades of dark orange and rust colors. Healthy, unburned vegetation appears in shades of blue. Clouds are still visible in SWIR imagery and typically look like white puffs of cotton.

WE WORK BETTER TOGETHER

## Interactive SWIR imagery map of California wildfires

Maxar and Mapbox, a location data platform for mobile and web applications, partnered to make the SWIR imagery of the California wildfires accessible to allow displaced Californians to monitor the homes they had to evacuate. The interactive map hosted 7,500 sq km of SWIR imagery.

## Open Data Program

Maxar activated its Open Data Program for the western wildfires to provide the humanitarian and first responder community with actionable information to assist response efforts and fulfill our Purpose, For A Better World. More than 100,000 sq km of pre- and during wildfire satellite imagery is available under the Creative Commons Attribution Non-Commercial 4.0 License for quick integration into first responder workflows.

## News Bureau

Maxar's News Bureau regularly provides media organizations with high-resolution satellite imagery to shed light on global events of significance. To provide context to the significant size of the wildfires and destruction they caused, the News Bureau released imagery at a consistent pace through the summer and fall, providing visual evidence for hundreds of published news articles.

## AUSTRALIAN BUSHFIRES

Australia's state of New South Wales suffered devastating bushfires in the 2019-2020 fire season. More than 1,300 homes and 12 million acres burned. To support the first responders and recovery efforts in Australia, Maxar coordinated with the Australian authorities to collect fresh SWIR and optical satellite imagery. Maxar's Open Data Program released 59,549 sq km of pre-fire satellite imagery for open, noncommercial use.
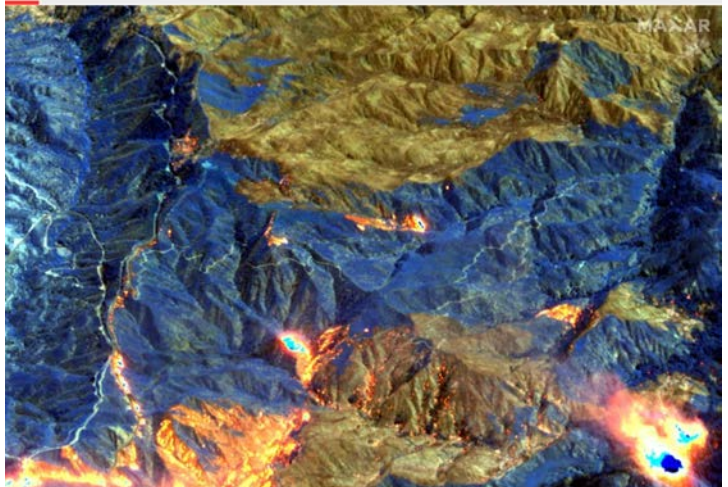
WorldView-2 collected the above images of the Pine Gulch Fire in Colorado on August 8, 2020, at 40 degrees off-nadir. The image on the left shows natural color and the image on the right shows infrared, meaning that healthy vegetation shows up in red while burned vegetation is black.

AS A FOUNDATIONAL COMPONENT OF NASA'S GATEWAY, THE MAXAR-BUILT PPE WILL FLY THE LARGEST ELECTRIC PROPULSION SYSTEM, HARNESSING THE SUN'S ENERGY TO GENERATE THRUST.

# RETURNING TO THE MOON SUSTAINABLY WITH NASA'S ARTEMIS PROGRAM

## IMPACT

As a partner in NASA's Artemis program, Maxar is contributing advanced technologies and expertise that supports humankind's ambitious return to the moon and a better understanding of the space environment, paving the way for the first humans to visit Mars.

### Apollo

Maxar's proud history in space exploration began when our company designed and built the Mission Control Center for NASA's Apollo missions before the first moon landing in 1969. Now, Maxar is once again working with the agency, this time helping to send the first woman and the next man to the moon, establish a sustainable human presence and to demonstrate essential capabilities needed for future space exploration.

### Power and Propulsion Element (PPE)

Sustainable space exploration relies upon reusability, recycling and the use of available local resources. Compared to missions in low Earth orbit (around 400 km from Earth) such as the International Space Station, sustainably exploring the moon (400,000 km from Earth) and Mars (100 million km from Earth) will require new technologies and innovations to support human life. For example, to survive and flourish, we need to be able to communicate over long distances and readily transport large amounts of space infrastructure, cargo and equipment. To enable these capabilities for the Artemis program, NASA is developing Gateway, an outpost orbiting the moon that will provide vital support for a long-term human return to the lunar surface and a staging point for deep space exploration.

WE STAY CURIOUS

As a foundational component of NASA's Gateway, the Maxar-built PPE will fly the largest electric propulsion system, harnessing the sun's energy to generate thrust. Equipped with massive, high-power rollout solar arrays and multiple electric propulsion thrusters, PPE will provide power, high-rate communications, attitude control and orbital transfer capabilities for Gateway. In 2020, NASA decided that PPE will be integrated and launched together with the Habitation and Logistics Outpost (HALO) instead of as two separate elements. Together, PPE and HALO will support astronaut expeditions to the lunar surface and provide a port for landers en route to the moon or future spacecraft destined for Mars and beyond.

## Human Landing System (HLS)

While the Gateway will provide a unique vantage point in orbit around the moon, NASA's science and exploration goals will require humans to land on the surface. To enable astronauts to travel from Gateway to the lunar surface and back sustainably, NASA released a solicitation in 2019 to American companies asking them to design and develop a modern HLS. Maxar teamed with Dynetics, a wholly owned subsidiary of Leidos, to design one of the systems under a study contract for the initial base period (below). Dynetics' HLS is designed to deliver astronauts and cargo from lunar orbit to the lunar surface and back, including surface habitation for about a week. NASA is expected to award two contracts for the full development of HLS in 2021.
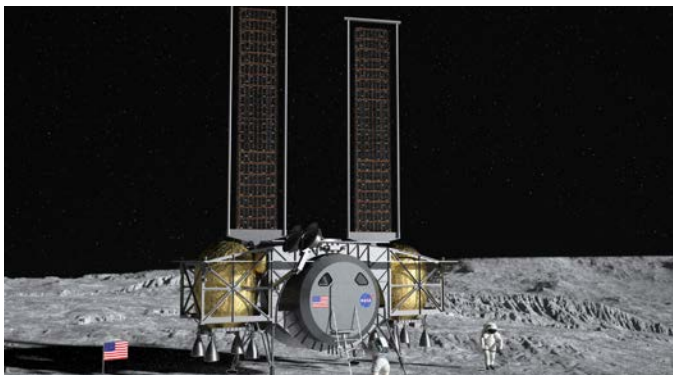


Under the study contract, Maxar presented Dynetics with a variety of hardware solutions to enable power, control, communications, robotic manipulation and thermal optimization, in addition to services for engineering and mission operations support.

Maxar leveraged its decades of experience in Space Infrastructure to provide mission solutions for this study while evolving legacy system designs to meet the needs for the next generation of deep space human exploration.

## SAMPLR

As part of the Artemis program, the agency will use commercially developed landers beginning in 2021 to deliver a range of science experiments and demonstrate technologies that will expand humanity's understanding of the moon and support sustainable exploration. That initiative is called Commercial Lunar Payload Services or CLPS.



SAMPLR will use Maxar's expertise in space robotics to increase humanity's understanding of the lunar surface before the next human landing.

Maxar was selected by NASA in 2020 to deliver a system called Sample Acquisition, Morphology Filtering and Probing of Lunar Regolith (SAMPLR) to fly on a future CLPS flight. As the first robotic arm used on the moon since the Surveyor missions more than 50 years ago, SAMPLR will be used to explore the lunar surface by acquiring samples and determining the geotechnical properties of lunar regolith. The arm has been assigned to fly to the moon in 2022 aboard Masten Space Systems' XL-1 lunar lander along with a suite of other payloads. The arm represents Maxar's latest generation of robotic systems and leverages the company's proven components from NASA's Mars Exploration Rover mission, which included the long-lived rovers Spirit and Opportunity.

For more than two decades, Maxar robotics have been integral to innovative government programs. The company provided robotic arms for six of NASA's Mars rovers and landers, including Perseverance rover, which is expected to land on Mars in February 2021. In addition to supporting human space exploration under NASA's Artemis program, Maxar is leveraging its experience in space robotics to assemble and service spacecraft and other space infrastructure while in orbit.

# MAXAR'S RESPONSE TO THE GLOBAL PANDEMIC

During the first weeks of March 2020, as the impact of the global pandemic was first recognized, Maxar activated its standing business continuity crisis response program, stood up a COVID-19 Crisis Response team and successfully postured the business for ongoing business operations. Consistent with our standing crisis response protocols, we consulted with government, public health and business leaders at the county, state and national levels to protect and support our workforce and continue to serve our customers.

Maxar's COVID-19 response was immediate, multifaceted and flexible to address the evolving needs of the business.

As the pandemic began, people around the world adjusted to social distancing and what it meant to their lives. The evolving efforts to implement physical distancing are well illustrated by Maxar satellite images of the Grand Mosque in Mecca, Saudi Arabia. Millions of Muslims annually performed the Hajj, a pilgrimage that Muslims are expected to carry out at least once in their lifetime. Part of the journey involves circling the Kaaba, Islam's holiest shrine, at the center of the mosque (image 1). In March 2020, at the start of the pandemic, Saudi Arabia first restricted direct access to the Kaaba (image 2) then closed the mosque entirely (image 3). In late July, the kingdom allowed a limited Hajj with pilgrims who passed health checks walking along the dashed lines seen in image 4.

IMAGE 1 | FEBRUARY 14, 2020 | WORLDVIEW-3

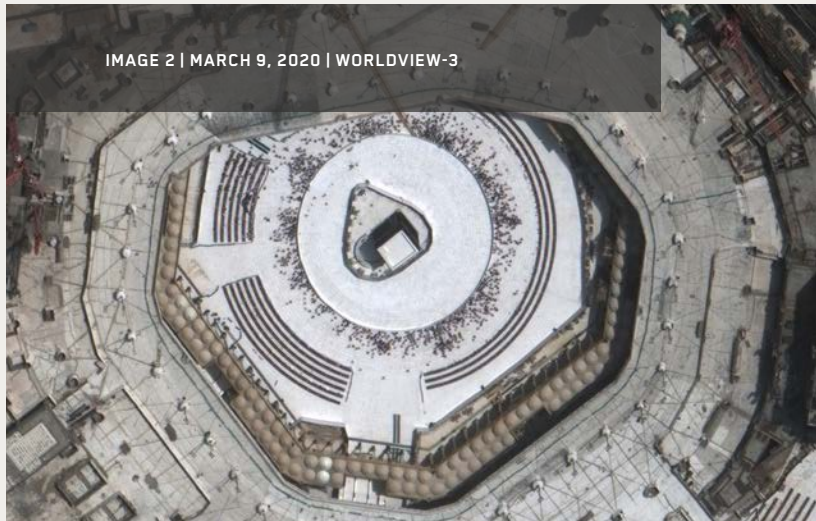IMAGE 2 | MARCH 9, 2020 | WORLDVIEW-3

IMAGE 3 | APRIL 3, 2020 | WORLDVIEW-3

IMAGE 4 | SEPTEMBER 24, 2020 | WORLDVIEW-2

YOU MATTER

## Stakeholder communications

- In early March, Maxar established a core COVID-19 Crisis Response team, which met daily to assess the rapidly worsening situation and build out plans for business continuity and team member health and safety—well in advance of the pandemic spreading to Maxar locations.

- The CEO and executive team increased their communications to keep team members, investors, customers and our supply chain informed of the company's ongoing efforts to protect the workforce's health and safety and keep customer commitments on track.

- Site leads from all major office locations created cross-functional contingency plans and established dedicated channels for two-way communications.

## Operational sustainability

- In less than one week, the company transitioned 75% of its workforce to full-time work-from-home status, enabling greater protection of the 25% whose jobs required them to work on-site.

- The IT organization leveraged enterprise collaboration tools and enhanced secure remote connections to seamlessly continue operations.

- Team members were offered financial stipends to help set up home offices and add tools to support productivity or for enhancing technology infrastructure if they worked on-site, which some used for their children's remote learning.

- Government relations and public relations teams were engaged to advocate for and protect the class of essential employees who needed to keep traveling and working on-site during community-based lockdowns.

- Maxar's 2020 intern program was preserved entirely and converted to a virtual experience, resulting in the largest and most diverse group of future talent for the business.

## Environmental and facility measures

- HVAC systems were enhanced with ionization to improve air quality and air flow.

- Site-specific operational protocols were implemented, informed by local case numbers and CDC guidelines.

- Stringent cleaning protocols were instituted at all sites, with heightened focus at on-site work locations including spacecraft and robotics manufacturing, sensitive compartmented information facilities (SCIFs), government customer sites and Maxar mission operation centers for spacecraft command and control.

- State-of-the art temperature screenings were installed at site entrances.

- Complimentary boxed lunches were delivered for on-site staff to thank them for their work and reduce exposure risk.

- New on-site workstation configurations were created to enable proper social distancing.

## Social support and well-being

- Personal protective equipment was provided to all on-site employees daily, and masks were mailed to all work-from-home team members.

- Robust resources and support for team member physical and mental health were offered in response to the enormous stress caused by the pandemic.

- Employee surveys were conducted routinely to gauge well-being, and managers made it a practice to check in regularly with team members to offer encouragement and refer them to resources as needed.

- Maxar avoided widespread layoffs and pay reductions through 2020.

In addition to the internal response measures above, the following stories highlight how Maxar team members helped customers, partners and the community at large during the pandemic. Maxar's Earth Intelligence is proving to be key data for understanding the societal and economic impact during the pandemic and bringing relief to those in need.

# SUPPORTING CRITICAL NATIONAL SECURITY MISSIONS FROM HOME

## IMPACT

The U.S. defense and intelligence community took decisive measures to prevent the spread of COVID-19 by directing government employees and contractors to telework to the greatest possible extent while also planning responses to the coronavirus. Many of Maxar's products and services are work-from-home-friendly and available via the internet, enabling the company to continue providing its unclassified and shareable Earth Intelligence capabilities in the face of the pandemic.

### NGA Open Mapping Enclave (NOME)

The NOME program gained popularity in 2020 as a telework option to advance the production of foundational geospatial intelligence to support missions across the U.S. government. Using NOME, trusted users with access to the internet and a browser are able to leverage a combination of customized tools and human expertise to improve the volume and quality of foundational maps throughout the world. The NOME platform streams current, accurate and high-resolution Maxar imagery via the Global-EGD program. The vetted users of the NOME community access the imagery to create foundational GEOINT data in a dynamic, collaborative mapping environment.

**FROM MARCH TO DECEMBER 1, 2020**

**17.5+**

Million edits to the NOME map

**83%**

Increase in registered NOME users

### Making 3D data available at home via Esri and Cesium

U.S. government customers rely on Maxar's 3D products and services to complete mission-critical assignments. We worked with our partners, Cesium and Esri, to enable new ways for our U.S. government customers to better access and share our 3D data while working from home during the pandemic.



Using Cesium Stories and a Maxar 3D Surface Model, a U.S. government analyst can measure the height and slope of the Ryugyong Hotel in Pyongyang, North Korea. Credit: Maxar 3D data in Cesium Stories.

In 2020, we made more than 132,000 sq km of U.S. government-licensed areas of interest from across the globe available in our partners' platforms so that government analysts and warfighters could use this unclassified data from their homes. Users can access our 3D Surface Models—with real textures, 50 cm resolution and 3 m absolute accuracy in all dimensions—and stream these large datasets directly in their web browsers, on any device. Analysis, collaboration and decisions can't wait. Together with our partners, we are ensuring mission and operational planning can be done at home or anywhere our U.S. government users have internet—with the most accurate representation of Earth.

UNIVERSITY COLLEGE HOSPITAL IN IBADAN,
NIGERIA, ONE OF SEVERAL AREAS THE
MAPATHON FOCUSED ON.
VECTOR DATA: COPYRIGHT OSM CONTRIBUTORS
SATELLITE IMAGERY: MAXAR TECHNOLOGIES

## Maxar–U.S. Department of State mapathon

Maxar's Open Data Program and MapGive, a State Department initiative, hosted an artificial intelligence (AI)-assisted mapathon to update the OpenStreetMap (OSM) data for three Nigeran cities: Ibadan, Kano and Lagos. The resulting current open map data enables local humanitarian and development agencies, such as the World Bank, to maintain existing activities and better plan their responses to the spread of the coronavirus. There was a particular focus on mapping areas around health facilities, which were identified by the President's Emergency Plan for AIDS Relief (PEPFAR).

In addition to traditional OSM mapping techniques, this mapathon augmented those efforts with AI. Maxar applied a predictive AI-based tool to define points of interest in Nigeria that likely needed to be mapped, as well as surrounding buildings to best support humanitarian activities.

These building and structure vector datasets were added back to the Open Data Program site once validated for others in the humanitarian community to use:

**26,750**

Map edits

**900**

Highways created

**3,209**

Buildings created

**96**

Bridges added at waterway crossings

**315**

Disconnected highway segments connected to the main highway network

# INCREASING GLOBAL TRANSPARENCY THROUGHOUT THE COVID-19 PANDEMIC

## IMPACT

The Maxar News Bureau is a partnership program with trusted media organizations that leverages technology for social good and transparency. During the global pandemic, the News Bureau provided satellite imagery and expertise as powerful, indisputable complements to good journalism. Maxar enabled its media partners to reveal the true conditions on the ground and contribute to our collective understanding of the scale of the pandemic and the economic and human devastation it has caused.

### Hospitals constructed

People infected with COVID-19 overwhelmed hospitals to the point that new facilities were needed. Several new buildings were constructed in Wuhan, China, where the virus was first identified, as seen in the image below on the left. Other cities made temporary field hospitals, like the one below on the right in New York City's Central Park. Galleries of new facilities were published in Politico, Business Insider and WIRED.



> **In a world thrown into chaos by a microscopic virus, sometimes it helps to take the 400-mile-view.**
>
> WIRED

### Tourism on hold

Destinations around the world normally packed with visitors suddenly emptied in March 2020 and stayed mostly deserted through the year. In previous years, tens of thousands of people would gather in St. Peter's Square in Rome to hear the Pope conduct Palm Sunday Mass. In 2020, Palm Sunday Mass was livestreamed from a nearby basilica, leaving St. Peter's Square empty. Many media outlets published imagery of empty attractions, including Reuters, the Wall Street Journal and Newsweek.



### Airports at a standstill

As countries asked citizens to stay home, passenger jets across the world were parked at gates, on runways and even nose to nose, as seen in this image of Munich Airport. Maxar satellite imagery of airports packed with planes was published in outlets like Bloomberg, USA Today and Vox.

## Cemetery changes

Significant activity at cemeteries provided insight into how the coronavirus affected countries believed to have not accurately disclosed their infection and death rates, like Iran (top left: burial trenches near a pile of white lime at Beheshte Masoumeh Cemetery in Qom), Syria (top right: lime piles at various points in the Al Bahdaliyah Cemetery, southeast of Damascus), and Somalia (bottom left: cars and mourners around fresh graves at the Calamada Cemetery, northwest of Mogadishu). The Sao Luis cemetery near Sao Paulo, Brazil, also saw an expansion of burial areas while the virus was spreading (bottom right). Extensive reporting on these graves was published by The Washington Post, PBS NewsHour and BBC Africa Eye.

# ADAPTING SPACECRAFT MANUFACTURING TO CREATE FACE SHIELDS FOR HEALTH CARE WORKERS

## IMPACT

When COVID-19 began spreading across the U.S., Maxar's California team members quickly stepped up to support health care providers doing high-risk work in the local community. They figured out how to use Maxar's technology, experience and resources to address the scarcity of personal protective equipment (PPE) and produced nearly 5,000 face shields for the Northern California area.

## PROBLEM

Health care providers needed fresh PPE to protect their own health when treating COVID-19 patients, which led to a nationwide shortage of masks, face shields, gloves and gowns, among other items.

## SOLUTION

Maxar joined many other companies nationwide in switching team members and production lines from creating their standard products to producing PPE. Maxar's California factories were exempt from the state's shelter-at-home order due to being deemed critical operations by the federal government. However, to protect critical workers, the number of on-site staff was limited to help prevent the spread of COVID-19.

Maxar's CORE Engineering team evaluated the different types of PPE that were needed and determined that Maxar's cutting-edge space manufacturing capabilities were best suited to building face shields. The team found an open source schematic for face shields and worked with an outside vendor to purchase and laser cut the visors using a sturdy, clear thermoplastic material called PETG. The head bands were cut using machines at our Palo Alto and San Jose campuses, and Maxar team members volunteered to assemble the face shields in their homes.



The face shield above is one of nearly 5,000 made and delivered by Maxar team members to health care workers during the pandemic.

The first deliveries were made in April to a dental office and a rehabilitation center in the Bay Area. In the subsequent months, the team made and delivered nearly 5,000 face shields to medical, dental and senior care facilities in Northern California.


Palo Alto Dental Wellness receives Maxar face shields.


Maxar team member Shannon Gaither got his family involved in assembling Maxar face shields.


Maxar team member Aaron Abell delivers face shields cut and assembled by Maxar to Watsonville Community Hospital.


ANX health care worker dons Maxar-donated face shield.

# INSPIRING STUDENTS VIRTUALLY
# WITH THE POWER OF EARTH INTELLIGENCE

## IMPACT

Maxar launched a new Academic Outreach Program in 2020 with a mission of "inspiring students and faculty by sharing Maxar's story, fostering the adoption of its technology and advancing collaborative opportunities." The Program has two groups—a K-12 Committee and a University Committee—staffed by team members who volunteer their time to bring science, technology, engineering and math (STEM) to students. These two committees combine existing initiatives across the company and multiply the efforts to reach students.

The K-12 Committee focused its efforts on presenting to classrooms, culminating in the annual GIS Day, an industry-recognized day in November for sharing our passion for geospatial information systems (GIS). The University Committee participated by demonstrating the types of careers available in the GIS industry. Together, they taught more than 1,500 students.

## PROBLEM

Many schools adopted fully virtual or hybrid virtual/ in-person teaching models in 2020. Teachers found new ways to help their students learn and that included bringing industry professionals in via video conferencing to inspire kids and demonstrate future career opportunities.

## SOLUTION

Maxar adapted its GIS Day content to enable virtual lessons. K-12 students learned about how Earth Intelligence is created, how it affects their daily lives and how to map their communities using Maxar satellite imagery on OpenStreetMap (OSM). Team members met with students in communities where Maxar has offices including Colorado, California, Washington, D.C., Virginia, Maryland, Missouri, Indiana, Florida and Connecticut, as well as London and Oxford, England.

Several Maxar team members also participated in university-level events. The U.S. Department of State's MapGive initiative, USAID's GeoCenter and the American



Students at Crest View Elementary School in Boulder, Colorado, participated in a GIS Day presentation.

Red Cross hosted a career panel, moderated by a Maxar team member, for about 80 students and young professionals to learn about private sector careers that use geography and imagery on OSM. Panelists represented companies like Esri, Mapbox, Microsoft, Azavea, Development Seed, INCATech, Critigen and Maxar. The panelists discussed how different organizations contribute to and utilize OSM data, as well as offered career advice for people joining the workforce.

Other Maxar team members presented during Yale University's GIS Day event and gave the keynote speech at an event organized by University of Colorado Boulder, University of Colorado Denver and Auraria Library.

The purpose of reaching out to students on GIS Day was to encourage the next generation to pursue STEM careers. Maxar believes there's power in giving children and young adults real examples of possible careers, including those requiring geography and Earth intelligence expertise.

# QUANTIFYING THE PANDEMIC'S ECONOMIC IMPACT FROM SPACE

## IMPACT

Maxar's Academic Outreach Program's University Committee collaborates with leading higher education institutions to advance innovative research and development. As part of this program, an interdisciplinary team came together—with researchers in remote sensing, data science and business from the University of South Florida (USF), the University of California, Berkeley and Maxar—and developed a new AI imagery analysis tool to derive insight about indicators of human activity to characterize the economic impact of lockdowns and reopening during the COVID-19 pandemic. Such indicators can provide insight into understanding patterns of activities at places like shopping center parking lots, airports, medical facilities, schools, recreational places and religious sites.

## PROBLEM

The COVID-19 outbreak forced governments worldwide to impose lockdowns and quarantines to prevent virus transmission. As a result, there were disruptions in human and economic activities around the globe. Decision-makers need timely information to understand economic activity and guide recovery efforts, but it can be difficult to perform such analysis in a timely manner at global scale.

> ❞
>
> **Thanks to the Maxar constellation's unparalleled imaging resolution, we can reliably locate small objects from space and observe a wide variety of behavioral patterns that serve as indicators for underlying human and economic activities.**
>
> Sudeep Sarkar
> Professor, Computer Science and Engineering
> University of South Florida

## SOLUTION

University researchers accomplished this by analyzing a sampling of strategic global locations using AI-powered computer vision algorithms to automatically detect and categorize objects that serve as human activity indicators. Maxar provided the high-resolution satellite imagery in which 60 classes of objects, such as cars, trucks, aircraft, shipping containers and vessels, were detected and analyzed.

Temporal analysis of imagery can be performed to compare activity before and after the pandemic. Such automated object detection and temporal imagery analysis provide insight into activities related to:

- Traffic and mobility
- Airports and ports
- Medical facilities
- Factories and offices
- Shopping centers and malls

As a result of this collaboration, researchers hope authorities can leverage their findings and algorithms during the COVID-19 pandemic and future scenarios when similar global awareness of human activity can benefit decision-makers. The source code will be distributed freely for research use through the USF Institute for Artificial Intelligence so that other students and faculty can improve on it or use it for other contexts. Such efforts are key to advancing research on applying AI to satellite imagery to gain new insights and inform decision-making for many of today's greatest challenges.



In this WorldView-3 image of the Westfield Brandon Mall near Tampa, Florida, AI-created bounding boxes highlight where cars are detected.

# AIDING GOVERNMENTS COVID-19 RESPONSES WITH IMAGERY BASEMAPS

## IMPACT

As one of 16 activations that released more than 1.5 million sq km of satellite imagery in 2020, Maxar's Open Data Program provided Metro imagery basemaps of requested locations in 18 countries to the humanitarian community for use in responding to the global pandemic. Producing maps from Maxar's current, visually consistent basemaps enables better assessment of potential sites for building new health facilities, more accurate extraction of roads and buildings using machine learning (ML) to determine access to health care and clearer context for making critical decisions when time is of the essence.

## PROBLEM

Sierra Leone's most recent census was conducted in 2015. The government needed updated geospatial information about where its citizens lived, how many people lived in each town and how transportation networks connected. This information would help identify those most at risk, determine the implementation of the most efficient support of anti-COVID-19 strategies including partial or total lockdowns and inform the allocation of government resources, particularly for the most vulnerable people.

"

**These data will help us significantly to ensure the safety of Sierra Leone's population and minimize the social and economic hardships caused by a prolonged shutdown. It allows us to accurately identify densely populated and high-mobility areas and highlight at-risk spaces where it may not be possible to adhere to physical distancing recommendations.**

David Sengeh
Minister of Basic and Senior Secondary Education and Chief Innovation Officer at Sierra Leone's Directorate of Science, Technology & Innovation
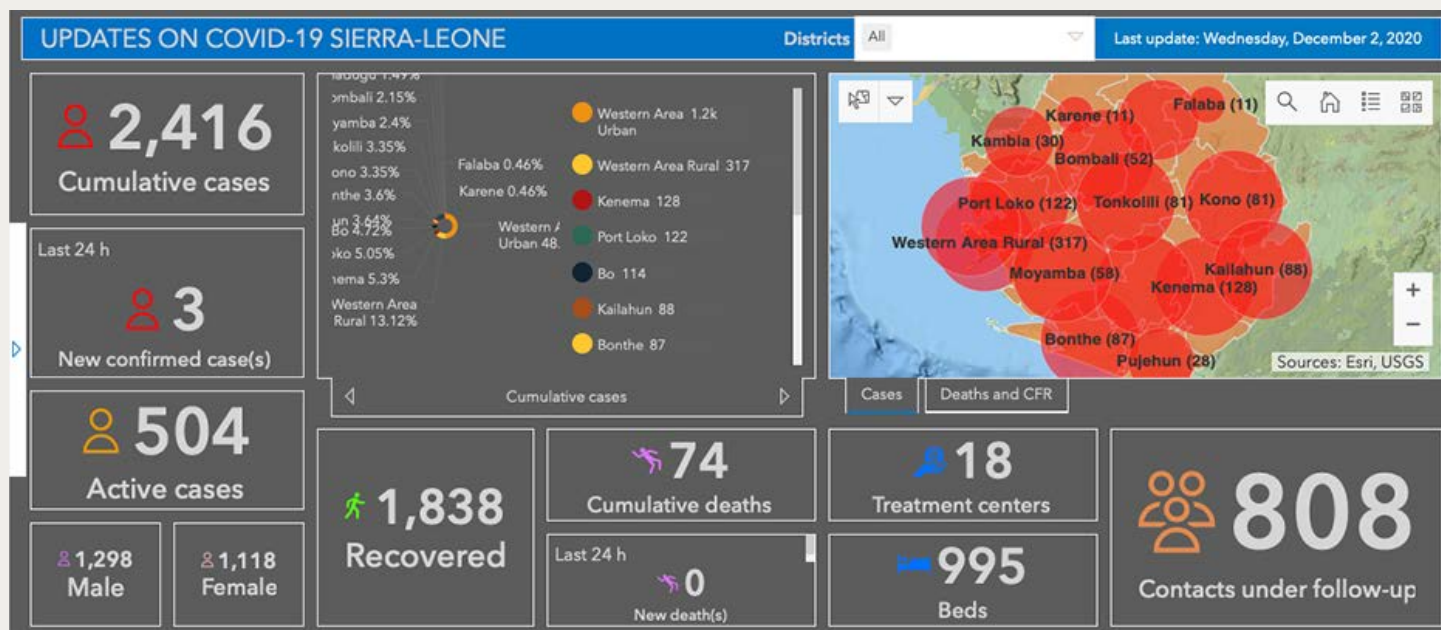
THIS GEOEYE-1 SATELLITE IMAGE FROM JANUARY 4, 2020, SHOWS A MEDICAL FACILITY IN BO, SIERRA LEONE.

## SOLUTION

The government of Sierra Leone set up a National COVID-19 Emergency Response Centre to coordinate a countrywide response to the pandemic. The Centre partnered with government agencies, like the Directorate of Science, Technology & Innovation, Statistics Sierra Leone, Ministry of Information and Communication and Ministry of Health and Sanitation; development agencies like the U.N. Economic Commission for Africa and Global Partnership for Sustainable Development Data; and industry partners, including Maxar, Esri, GRID3 and Fraym. Together, this coalition produced critical geospatial datasets, analyses and tools under an open, noncommercial license to support the COVID-19 response in Sierra Leone.

The data pillar of the response used Maxar's Open Data Program satellite imagery to identify high-mobility areas to inform how to enforce lockdown measures to contain the spread of the virus. Additionally, GRID3 used the imagery to create population estimates so that the density of people could be understood both within and between districts to better inform lockdown policies.

To ensure that everyone in Sierra Leone, including experts and the general public, could benefit from the newly assembled data, the findings were released via an online, interactive dashboard for easy use and interpretation (shown on the left).

# CONTINUING A LEGACY OF SUPPORTING WEATHER AND CLIMATE MISSIONS FOR NOAA

## IMPACT

Maxar has built eight satellites for the U.S. National Oceanic and Atmospheric Administration (NOAA) since the 1970s and is now leveraging this experience to once again support the agency in defining solutions for its next-generation Earth observation system. NOAA's satellites improve weather forecasting capability, contribute to worldwide environmental monitoring services and extend our knowledge of the atmosphere.

## PROBLEM

For 50 years, NOAA has delivered on its mission to understand and predict changes in climate, weather, oceans and coasts. Its success relies on collecting and delivering Earth observations. Space-based technologies have evolved to a point where new and innovative commercial solutions can provide a wider range of coverage with fewer taxpayer dollars. As NOAA's current space-based assets age, the agency is tasked with sifting through exciting new options to identify the best possible solutions for the next generation.

## SOLUTION

In the past five decades, Maxar has manufactured eight NOAA Geostationary Operational Environmental Satellites (GOES). In the 1980s, Maxar built the INSAT-1 series of weather satellites for the Indian Space Research Organization, which heavily influenced the design of NOAA's second-generation GOES. These satellites provided

a revolutionary upgrade over the first GOES by offering three-axis stabilization instead of spin stabilization, which made it possible for the satellites to image continuously as they monitored Earth as opposed to taking an image once every spin. Maxar implemented this same revolutionary technology on the second-generation GOES.

Many of the Maxar-built GOES led long and productive missions. GOES-3, for example, was originally built for a five-year mission but continued operating for more than 38 years, performing a wide variety of weather and communications missions. The satellite is Maxar's longest-lasting operational spacecraft and before the end of its mission in 2016 was one of the oldest functioning satellites on orbit.

Now, 19 years after the second generation of GOES launched, Maxar is proud to be supporting the analysis and planning for NOAA's next weather missions. NOAA awarded Maxar a study contract to explore both low Earth orbit (LEO) and geostationary orbit (GEO) platforms for future NOAA mission requirements. In LEO, Maxar is developing concepts for NOAA to integrate weather sensors on its modular architecture spacecraft platform. In one of the study scenarios, Maxar could own and operate the satellites, leveraging the same ground architecture it plans to use for its WorldView Legion Earth observation satellites. In GEO, Maxar is studying using its 1300-class platform as a dedicated satellite or hosting a NOAA weather payload on another commercial satellite as it is doing for NASA's TEMPO pollution monitoring payload.

WE WORK BETTER TOGETHER

## Maxar-built GOES Satellite Launches

### 🚀 First Generation

| | |
|---|---|
| **1975** | GOES-1 |
| **1977** | GOES-2 |
| **1978** | GOES-3 |

### 🚀 Second Generation

| | |
|---|---|
| **1994** | GOES-8 |
| **1995** | GOES-9 |
| **1997** | GOES-10 |
| **2000** | GOES-11 |
| **2001** | GOES-12 |

### 🚀 Next Generation

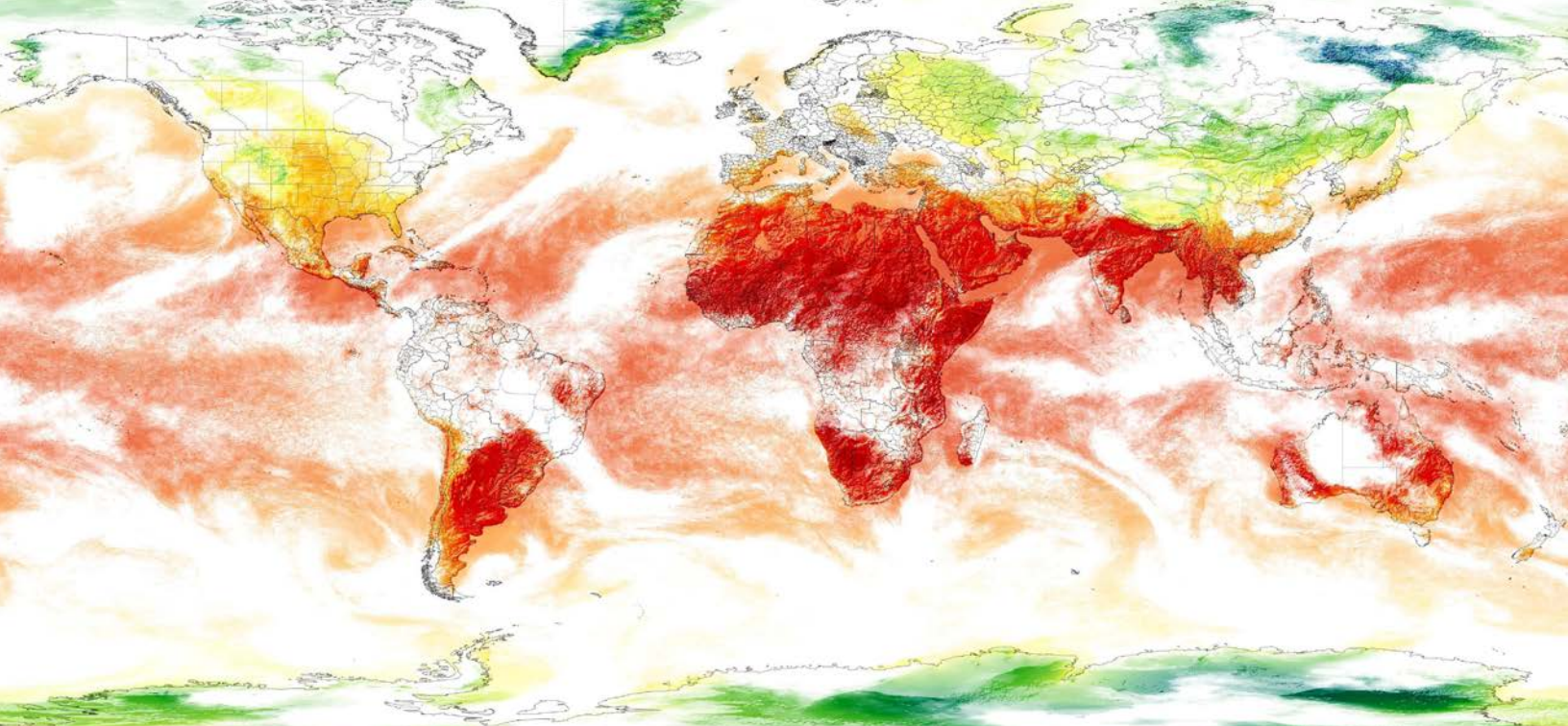| | |
|---|---|
| **2020** | **LEO Study Award** |
| | **GEO Study Award** |
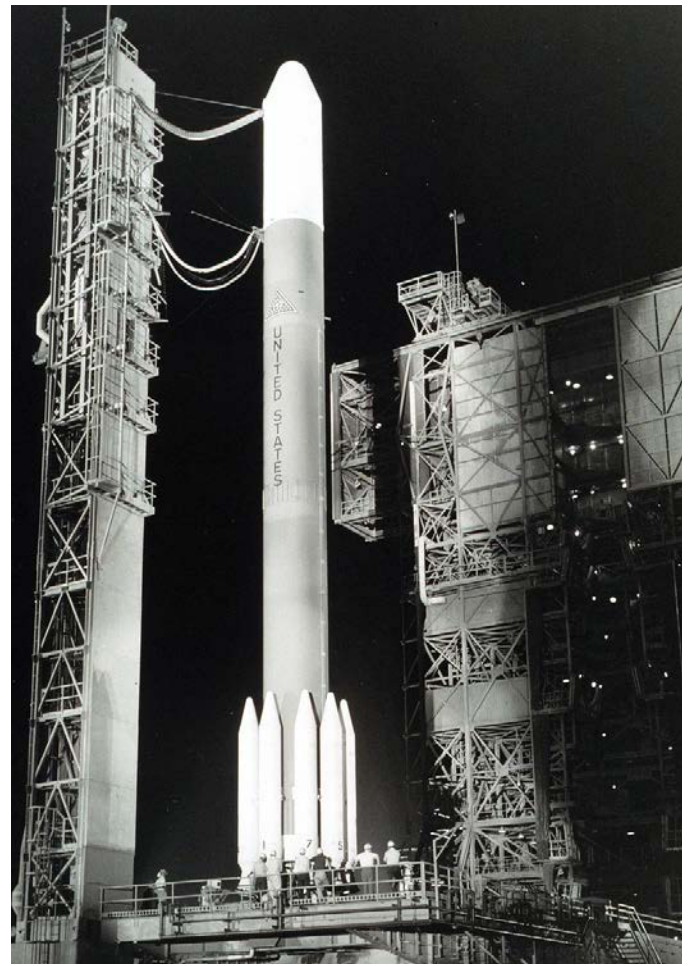


This Delta 2914 rocket delivered GOES-3 to space. Image: NOAA
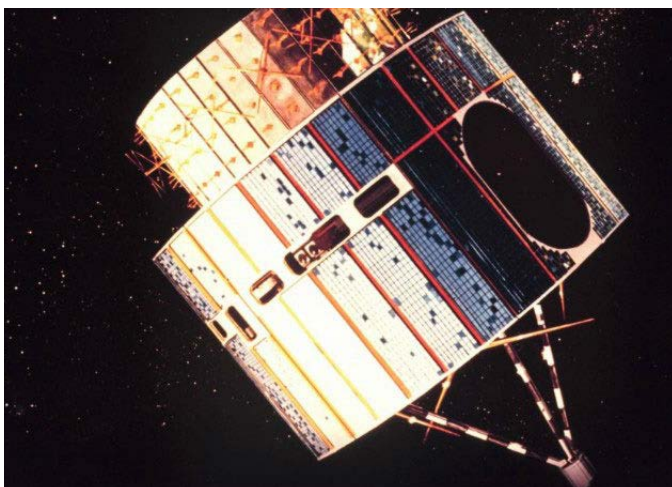


The Maxar-built GOES-3 spent more than 38 years in operation before ending its mission in June 2016. Image: NASA
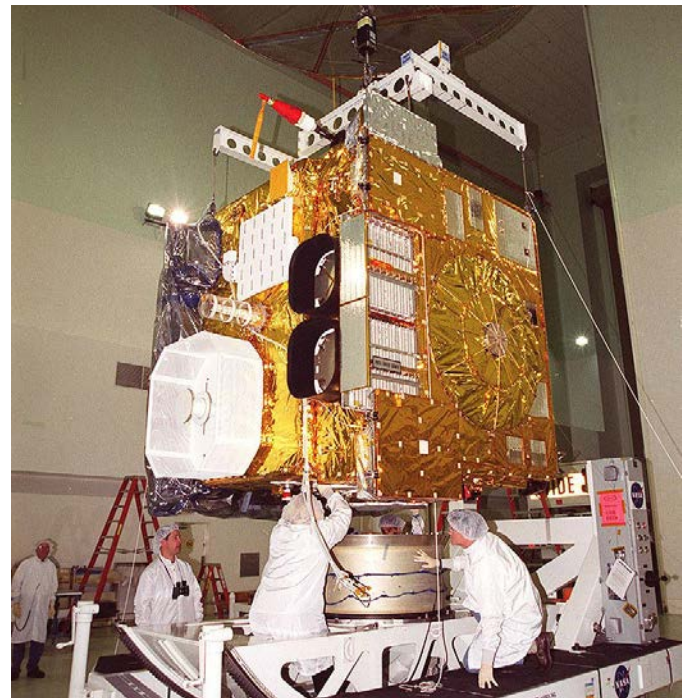


GOES 8-12 were the first NOAA satellites to offer three-axis stabilization for continuous imaging of Earth. Image: NASA

# PROTECTING PERSONNEL AND ASSETS THREATENED BY EXTREME WEATHER WITH CLOUD COMPUTING

## IMPACT

Maxar's WeatherDesk™ team collaborated with Amazon Web Services (AWS) to design a high-performance computing (HPC) solution for producing detailed global numerical weather forecasts. Maxar's HPC solution delivers the forecast 58% faster than NOAA's supercomputer, enabling power companies and oil and gas firms to manage natural resources more safely and economically.

## PROBLEM

When weather threatens drilling rigs, refineries and other energy facilities, companies want to move fast to protect personnel and equipment. Weather can also significantly affect the buy-sell decisions of firms that trade commodity shares in oil, precious metals, crops and livestock. To save lives, limit damage and balance natural resources, these companies need the earliest possible notice before a major storm strikes. They were relying on the global weather data generated by NOAA's on-premises supercomputer in an average of 100 minutes.

## SOLUTION

Maxar worked with AWS to design an HPC environment that balanced performance, cost and manageability to run NOAA's premier global weather model in the cloud. The success of this HPC solution is that Maxar creates the same forecast as NOAA's supercomputer in 42 minutes by using cloud computing resources that easily scale up or down based on usage requirements.

When WeatherDesk users get access to the forecasts faster, they take proactive measures earlier to protect personnel and assets that are threatened by extreme weather. The increased lead time on the anticipated weather allows them to make faster decisions with greater certainty. It also provides them the "time advantage" for optimizing price discovery in free markets, improving economic efficiency in the global supply chain. Raw materials, especially commodities, are often sourced in remote areas that are distant from where they are consumed, usually cities and towns. The decision process for how and when to transport or distribute a certain amount of goods is rife with uncertainty. Maxar's HPC solution reduces that uncertainty and decreases the lag time to deliver the right materials at the right time.

WE ACT LIKE OWNERS
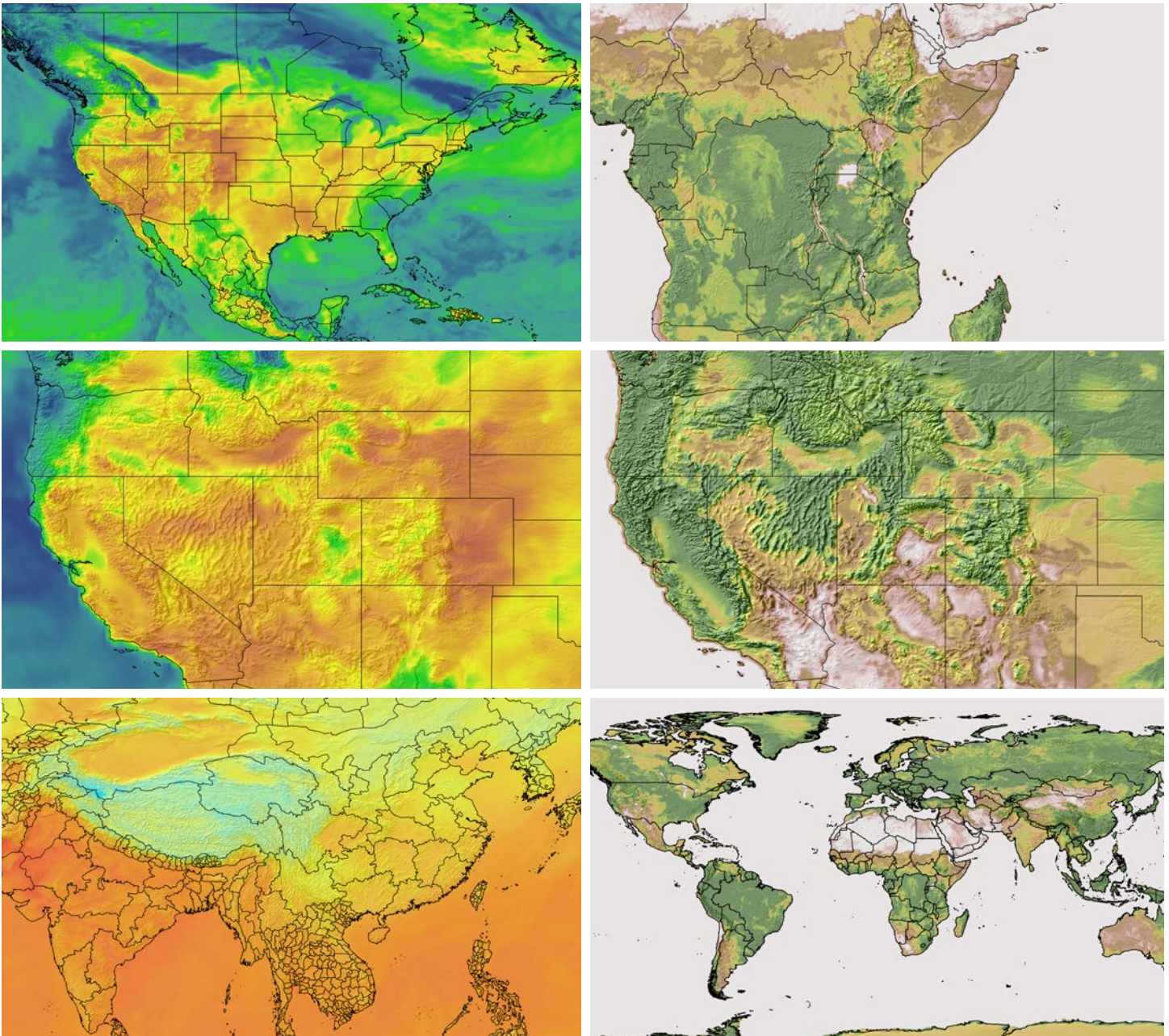
Using the HPC architecture, Maxar's WeatherDesk creates multiday graphics showing weather pattern anomalies, giving end users quick insight into weather that might affect their industries.

AWS presented Maxar with the 2020 Public Sector Partner Award for Best HPC Solution. AWS chose Maxar's solution based on selection criteria that included the innovativeness of the solution, engagement and success with the AWS Partner Network and delivery of results in a customer-obsessed way. The award was given in July 2020 at the AWS Public Sector Online Partner Advisory Council Virtual Meeting.

IN THIS MAXAR SATELLITE IMAGE OF ABU KASHAB (DAYRA AZ ZAWR PROVINCE, SYRIA), LAND INFO EXTRACTS TENTS AND TEMPORARY SHELTERS (GREEN OUTLINES) AND MORE PERMANENT STRUCTURES (RED BOXES).

# CREATING ACCURATE POPULATION ESTIMATES OF REFUGEE CAMPS FOR HUMANITARIAN ASSISTANCE

## IMPACT

Millions of refugees and internally displaced people (IDP) in Syria are affected by a growing, catastrophic humanitarian crisis: the scarcity of necessities like food, water, shelter and clothing while living in dense camps. Maxar's current, high-resolution satellite imagery of refugee and IDP camps combined with Maxar reseller LAND INFO Worldwide Mapping's geospatial production supported the United Nations Institute for Training and Research (UNITAR) Operational Satellite Applications Programme (UNOSAT) in creating accurate population numbers to use for planning and managing efficient relief operations.

## PROBLEM

Entering its 10th year, the Syrian civil war has created the largest IDP population in the world—about 6.2 million people, according to U.N. High Commissioner for Refugees, the U.N. Refugee Agency. Ongoing, effective and rapid action is urgently required to alleviate suffering, but the lack of accurate and timely data is delaying a prompt and efficient humanitarian response. Without knowing the rapidly changing number, size or distribution of temporary shelters, it is difficult for relief operations to estimate camp populations and welfare, so they cannot optimally plan staffing, supply lines, infrastructure and safety efforts or analyze capacity for additional displaced persons. On-the-ground surveys of settlements can be labor-intensive, time-consuming, costly and dangerous, as camps are in or close to conflict zones. In 2020, COVID-19 became an additional challenge for field surveys.

## SOLUTION

LAND INFO has been a Maxar partner since the 1999 launch of IKONOS, the world's first commercial high-resolution optical imaging satellite. While LAND INFO typically employs AI/ML to extract features such as buildings, trees and land use/land cover, that technology does not yet reliably work on small temporary shelters because of their shape, size, density and spectral characteristics. UNOSAT, as part of the REACH Initiative, needed highly accurate data on a fast timeline, so LAND INFO manually extracted the features to create a map to determine the current number, size and distribution of tents and temporary shelters at multiple IDP camps in Syria. The footprints produced allowed UNOSAT to accurately estimate population numbers for each camp and determine if minimum humanitarian standards were being met for camp residents. LAND INFO also mapped the remaining available land to assess the capacity for additional displaced people.

Based on the images extracted, UNOSAT was able to understand the evolution of the camps' populations and the camps' capacity through time with high precision. This not only helped the field activities in their logistics planning, but also provided evidence-based assessments of the evolution of the displacement of individuals in the area.

❝

## We were excited to be an early user of Maxar's new high-definition imagery on this project, which allowed us to better map small features, including individual tents and temporary shelters.

Nick Hubing
President, LAND INFO Worldwide Mapping

# MEET MAXAR'S PURPOSE PARTNERS: THE NONPROFITS MAKING SIGNIFICANT IMPACT

## IMPACT

Maxar believes its geospatial data and analytics, as well as team member expertise, can have a significant impact on the nonprofits chosen as Purpose Partners. These organizations reflect Maxar's Purpose, For A Better World, and receive donations of imagery, analytics and services.

### International Justice Mission

International Justice Mission (IJM) is a leading global organization that combats human trafficking, violence against women and children and other forms of abuse against people in poverty by working to rescue and restore victims, hold perpetrators accountable and help strengthen public justice systems. In Ghana, IJM rescues children held as slaves in the fishing industry on Lake Volta, the world's largest man-made lake, by working with Ghanaian law enforcement partners. These children work up to 16 hours per day in treacherous conditions, and many experience extreme physical violence from boat masters. In 2020, IJM in support of the Ghanaian government used Maxar's SecureWatch platform to comprehensively map remote regions of Lake Volta and accurately pinpoint locations of fishing operations, which resulted in the rescue of 71 children from enslavement. In IJM's continued efforts to leverage technology for good, SecureWatch has been an invaluable capability and continues to provide a critical deterrent for potential perpetrators.
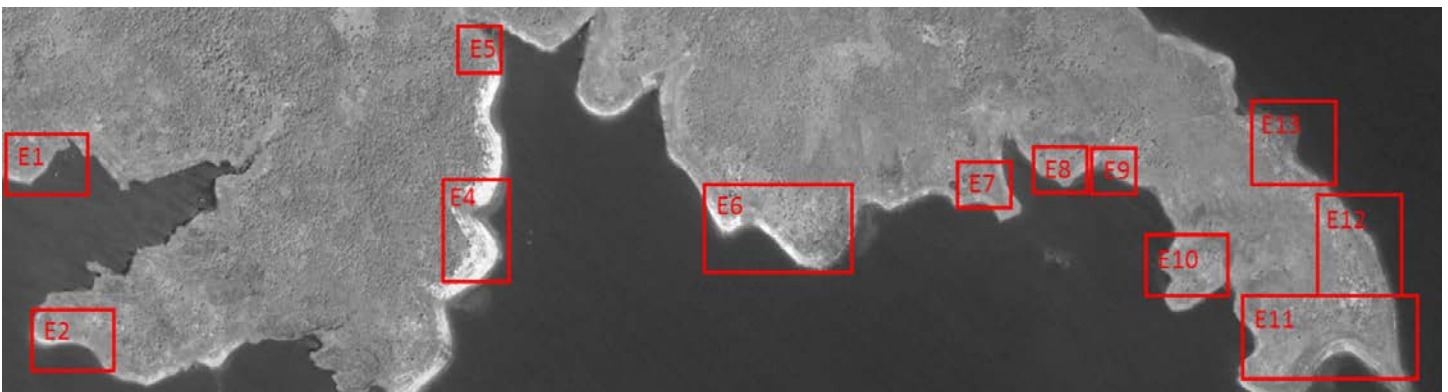


IJM in support of the Ghanaian authorities used SecureWatch to annotate locations of fishing communities on satellite imagery of Lake Volta.

## Jane Goodall Institute

July 14, 2020, marked the 60th anniversary of the day that Jane Goodall first arrived in Gombe, Tanzania, to begin her groundbreaking study of wild chimpanzees. Goodall's subsequent discoveries revealed remarkable insights about chimpanzee behavior and humankind, forever changing our relationship to the rest of the animal kingdom. As a long-term supporter of the Jane Goodall Institute (JGI), Maxar provides high-resolution satellite imagery and geospatial data to enable the organization to bring together human sustainable development and wildlife conservation efforts using its holistic community-led approach called Tacare, which began in Gombe. Honoring 60 years of discovery, innovation and hope, and more than 25 years of community-led conservation, Maxar is proud to help JGI further revolutionary scientific discovery and expand the impact of its work across the chimpanzee range to create a better future for all.



Community representatives in Tanzania document their knowledge of forests and land use on their village lands using Maxar satellite imagery. Credit: Lilian Pintea/JGI.

# MAXAR'S PURPOSE PARTNERS (CONTINUED)

## Team Rubicon

Team Rubicon unites the skills and experiences of military veterans with first responders to rapidly deploy emergency response teams in the wake of natural disasters. Maxar provides Team Rubicon with access to its SecureWatch platform so volunteers can leverage pre-event imagery when planning their disaster response efforts. When Hurricane Laura made landfall at the end of August 2020 as a Category 4 storm, Team Rubicon used Maxar's high-resolution imagery to identify the most impacted areas and establish forward operating bases to stage volunteers and equipment. Team Rubicon deployed over 800 volunteers, clearing debris from 621 homes and assisting more than 1,250 people in Calcasieu, Beauregard and Jefferson-Davis parishes, Louisiana, and Orange, Newton and Jasper counties, Texas. In the first five days after the storm, volunteers also cleared roadways to help the community access critical needs in Calcasieu Parish, Louisiana.



Team Rubicon volunteers cleared downed trees after Hurricane Laura. Credit: Team Rubicon.



Team Rubicon volunteers pull a tarp over a damaged home after Hurricane Laura. Credit: Team Rubicon.

## The Amazon Conservation Team

The Amazon Conservation Team (ACT) partners with indigenous and other local communities to protect tropical forests and strengthen traditional culture. In 2020, ACT worked with the Kogui association Organización Gonawindúa Tayrona to conduct a census of the Kogui-Malayo-Arhuaco (KMA) Indigenous Reserve in the Sierra Nevada de Santa Marta mountains of Colombia, an area that encompasses more than 17,000 sq km. As the teams collected census data throughout the region, they also used Maxar's high-resolution satellite imagery, GIS software, GPS units and smartphones equipped with data collection apps to locate and map priority properties and georeference each town visited, providing a valuable geospatial component to the socioeconomic census data for a better understanding of local dynamics in the area. The combined datasets will be submitted to the Colombian government for inclusion in the national census and be part of the application to expand the KMA reserve.



The Kogui use Maxar satellite imagery during a participatory mapping workshop. Credit: ACT.



Map of the Kogui-Malayo-Arhuaco Indigenous Reserve, showing population centers visited during the 2019-2020 census. Credit: ACT.
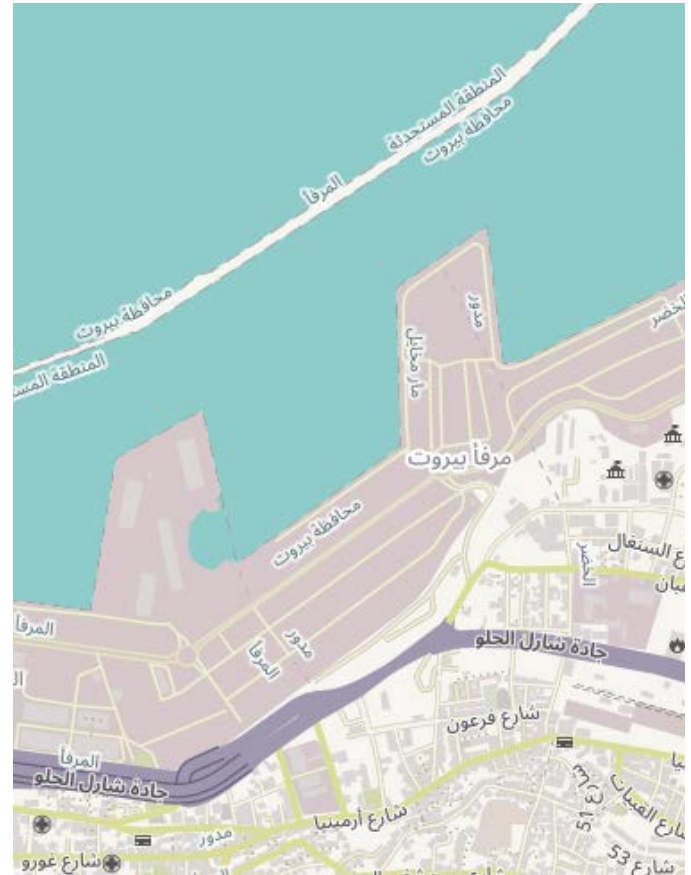


## Humanitarian OpenStreetMap Team

Humanitarian OpenStreetMap Team (HOT) is an international group dedicated to launching crowdsourced mapping campaigns that allow the public to contribute to the response to natural disasters and help achieve the United Nations' Sustainable Development Goals. Maxar provides HOT with satellite imagery for accurate mapping and access to Open Data Program data after disasters. On August 4, 2020, a large fire at the Port of Beirut caused a warehouse filled with ammonium nitrate to explode, leveling buildings near the port, killing more than 200 people, injuring thousands and causing as many as 300,000 to become temporarily homeless. HOT and the local Open Map Lebanon community used Maxar imagery layers available through OpenStreetMap (OSM) to update the map around Beirut (seen above) so that first responders and aid organizations could do assessments and prepare their service delivery plans. HOT also used Open Data Program post-explosion imagery to verify which buildings had been demolished by the explosion. Overall, 223 mappers contributed 63,080 edits to OSM, including 58,111 buildings and 71 km of roads.

# REDUCING THE ENVIRONMENTAL IMPACT OF MAXAR OPERATIONS

## IMPACT

Maxar operates spacecraft manufacturing facilities in Palo Alto and San Jose, California, and maintains offices at 20 locations around the globe. In 2020, the company renewed its commitment to operate responsibly in all facilities and is committed to improving its environmental impact.

## PROBLEM

Power plants and related electricity-generation operations produce large amounts of greenhouse gas emissions. Maxar is doing its part to reduce electricity usage in its manufacturing facilities and office buildings.

Manufacturing operations like Maxar's are inherently labor-intensive. Accidents can happen in the workplace, and Maxar has developed several programs to reduce work-related injuries.
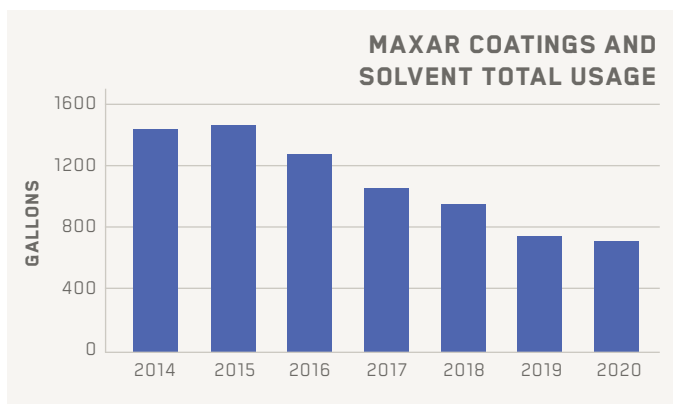
## SOLUTION

Maxar strives to achieve the highest standards of life, safety and environmental quality, providing a safe and healthful workplace for its team members, contractors and communities. Maxar team members recognize the environmental health and safety aspects of their positions and take proactive measures to optimize the use of natural resources, prevent pollution and avoid industrial accidents. Here are a few examples of our environmental and safety efforts.

### Energy efficiency

Beginning in 2019 and completed in 2020, Maxar's Palo Alto location implemented an optimization project to maximize the use of available office space to reduce unnecessary energy consumption in underused buildings. Also in 2020, LED lighting was installed at eight Maxar office locations. At least two additional LED lighting conversion projects are planned for 2021. Maxar values the environmental benefit of installing LED lighting in our new construction and renovation projects.

In addition to installing new lighting, the Facilities team at Maxar's headquarters in Westminster, Colorado, implemented a new light-harvesting system, which monitors the light that comes in through the windows and adjusts the outer row of interior lighting to maintain the correct light level.

## MAXAR COATINGS AND SOLVENT TOTAL USAGE



In 2020, Maxar installed ionization air systems in many of our offices, including Westminster and Longmont, Colorado; St. Louis, Missouri; Ypsilanti, Michigan; and Herndon, Virginia—the offices and facilities where our essential workers have been on-site throughout the COVID-19 pandemic. Air ionizers are designed to use ions to remove particulates, microbes and odors, making the air healthier for people to breathe.

## VOC reduction

Maxar uses low volatile organic compound (VOC) paints in building renovation projects. VOCs are toxic chemicals emitted from drying paint, solvents and coatings, and can cause health issues, especially for those with asthma and allergies. They're also a major source of air pollution. Low VOC architectural paints were used on 2020 facility projects at the Palo Alto and San Jose, California, and Longmont, Colorado, offices.
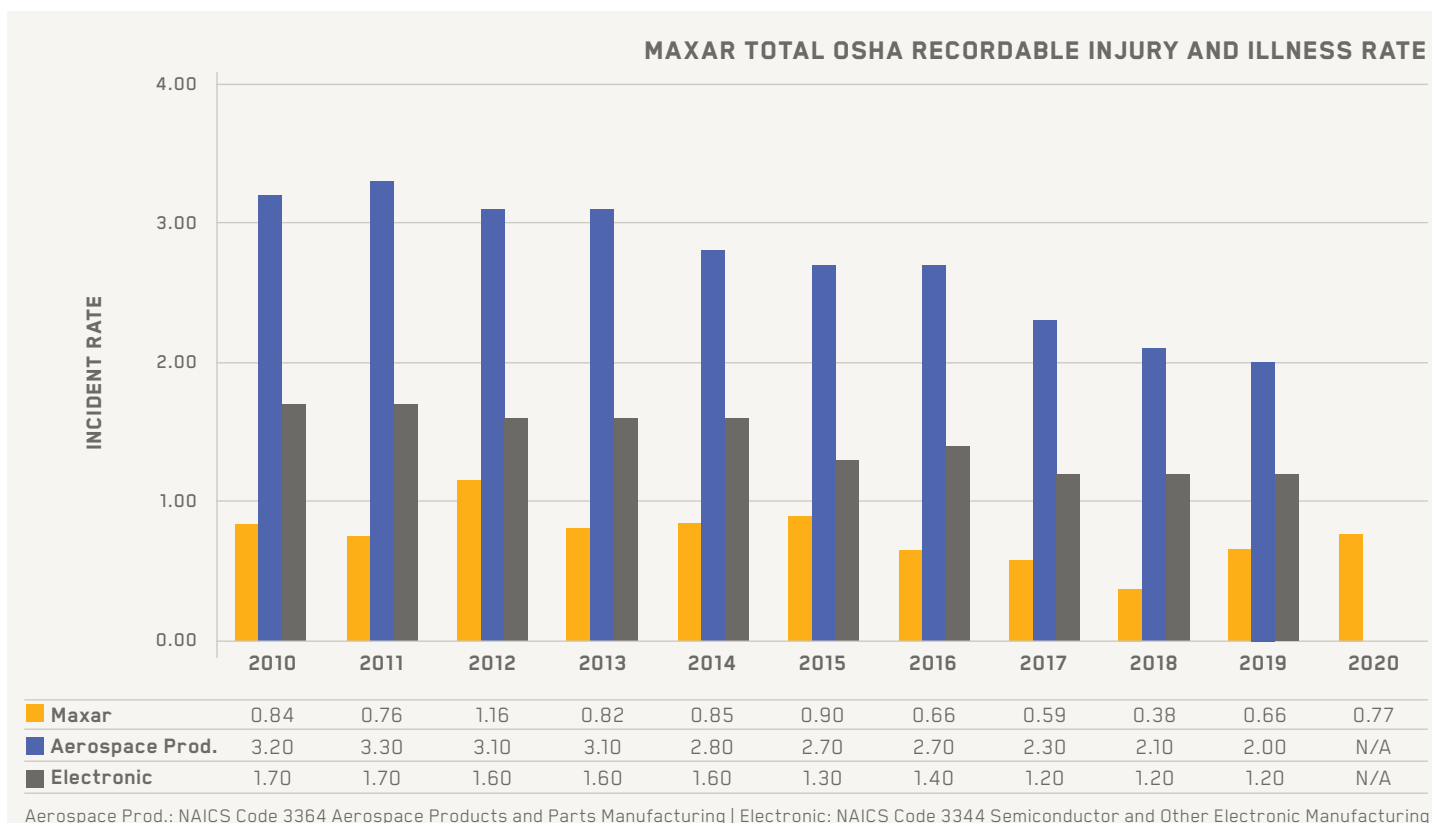
While manufacturing spacecraft, Maxar reduced coatings and solvents use by 23% in 2019. Through equipment and process consolidation along with continual training on solvent conservation, Maxar further reduced usage by 2.7% in 2020.

## Team member health and safety

Maxar's Environmental, Health and Safety (EH&S) department and the executive team are committed to ensuring safe work conditions. Health and safety training classes are conducted regularly to educate team members and promote safety awareness. Because of the COVID-19 pandemic, the EH&S Department developed computer-based training modules to temporarily replace classroom training to comply with social distancing requirements.

The team also conducts routine internal safety investigations to ensure effectiveness of the EH&S programs. Maxar's 2019 total Occupational Safety Health Agency (OSHA) Recordable Incident Rate of 0.66 is 67% below the Aerospace Product Manufacturing Industry average rate of 2.00, and Maxar's 2020 OSHA Recordable Incident Rate of 0.77 remains well below industry benchmarks.

## MAXAR TOTAL OSHA RECORDABLE INJURY AND ILLNESS RATE



| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maxar | 0.84 | 0.76 | 1.16 | 0.82 | 0.85 | 0.90 | 0.66 | 0.59 | 0.38 | 0.66 | 0.77 |
| Aerospace Prod. | 3.20 | 3.30 | 3.10 | 3.10 | 2.80 | 2.70 | 2.70 | 2.30 | 2.10 | 2.00 | N/A |
| Electronic | 1.70 | 1.70 | 1.60 | 1.60 | 1.60 | 1.30 | 1.40 | 1.20 | 1.20 | 1.20 | N/A |

Aerospace Prod.: NAICS Code 3364 Aerospace Products and Parts Manufacturing | Electronic: NAICS Code 3344 Semiconductor and Other Electronic Manufacturing

# LOOKING AHEAD TO 2021

Each year, Maxar's Earth Intelligence and Space Infrastructure capabilities offer unique insights and solutions for a broader range of the world's toughest challenges. The ability to observe Earth from space, combined with strategic partnerships and cutting-edge technology, has demonstrated again and again that it is a critical tool for understanding, responding to and addressing pressing issues on this planet.

Maxar looks forward to continuing government and commercial partnerships for mission success, to developing new AI/ML applications to extract more insights at scale, and to launching our WorldView Legion satellites, which will deliver more frequent collection of the industry's highest-resolution commercial satellite imagery. When these elements come together, the potential to find solutions For A Better World increases our impact.
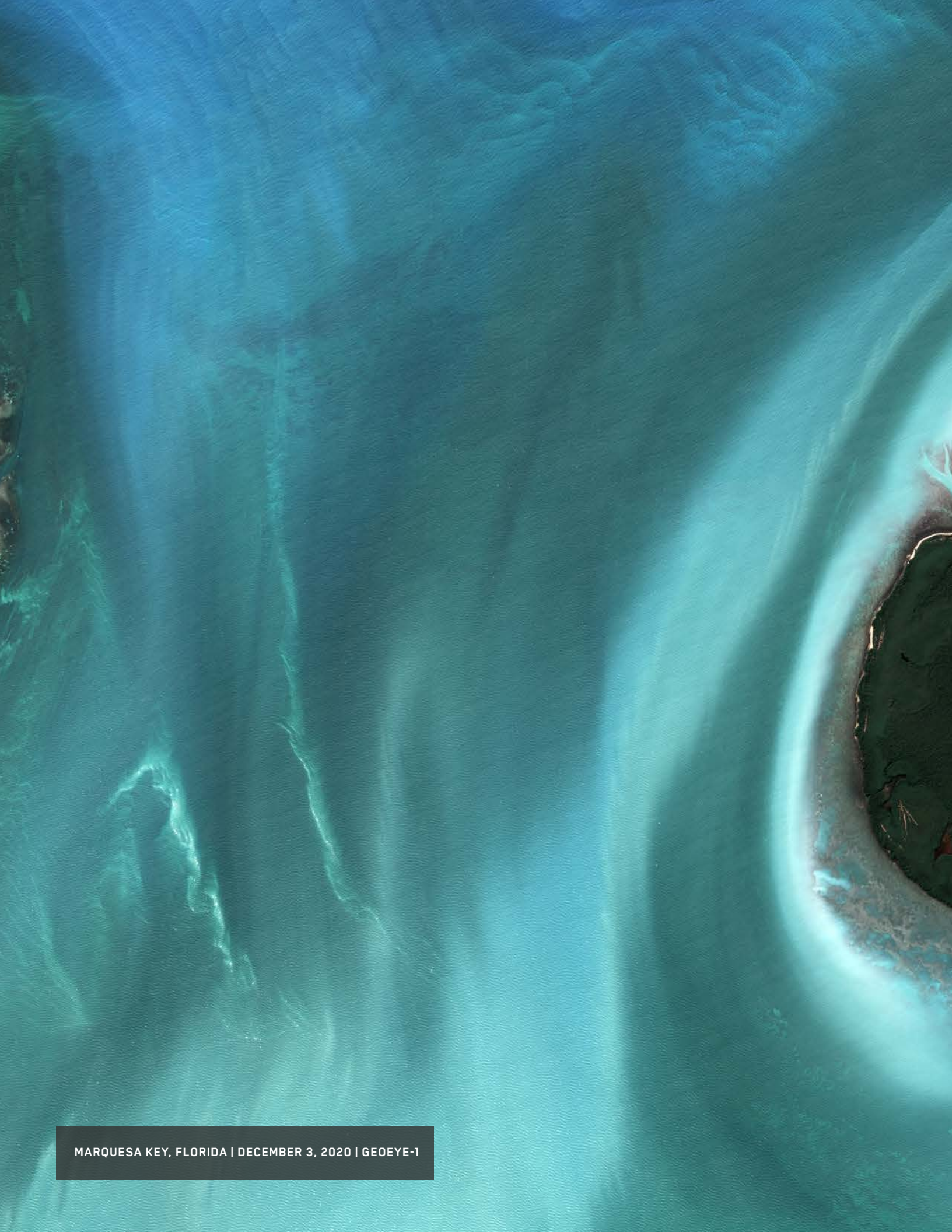
## THANK YOU

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