



2019 IMPACT REPORT

Applying Maxar Capabilities
For A Better World



MAXAR



ABOUT MAXAR TECHNOLOGIES

Maxar is a trusted partner and innovator in Earth intelligence and space infrastructure. We serve the most discriminating and innovative 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 5,800 team members in 30 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.

The Maxar Impact Report 2019 includes projects worked on or completed between January 1, 2019–December 31, 2019. The projects enclosed are representative of Maxar's work, not exhaustive.

Cover image courtesy REUTERS / Mohammad Ponir Hossain.

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PURPOSE & 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**



**WE STAY
CURIOUS**



**WE WORK
BETTER
TOGETHER**



**WE DO IT
RIGHT**



**WE ACT LIKE
OWNERS**



**YOU
MATTER**

We put the mission first. This means that everything we do is to satisfy the goals, ambitions and dreams of our customers.

We stay curious. We never stop working to discover the answers to the questions of tomorrow and to solve the most difficult problems.

We work better together. We are an organization that values collaboration and diversity to create a better future.

We do it right. This means we operate with high integrity. No shortcuts. We honor our commitments to our customers, our partners and our employees.

We act like owners. We know that results matter and we continually find new ways to grow, improve and deliver sustainable value.

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.



DAN JABLONSKY
CEO, MAXAR



**Our team members
are passionate
about the work
we do, and believe
strongly that our
Earth intelligence and
space infrastructure
capabilities have
the power to change
the world.**

LETTER FROM THE CHIEF EXECUTIVE OFFICER

At Maxar, we bring together technologies that enable understanding, exploration and communication across our planet and beyond. Our work is inspired by [our purpose “For a Better World” and guided by our values](#). Our team members are passionate about the work we do, and believe strongly that our Earth intelligence and space infrastructure capabilities have the power to change the world. They put that belief into action in myriad ways every day—from supporting customers and their critical missions, to doing educational outreach and volunteering in their community.

Over the years, Maxar has supported organizations and individuals dedicated to addressing challenges, both local and global. For example, Maxar contributed data to investigations that led to freedom for thousands of enslaved people. We’ve helped with mapping efforts for vaccination outreach programs to eradicate preventable illnesses and to guide healthcare professionals to areas at risk of deadly epidemics. Our technological innovations in space robotics have been used to enhance how medical procedures on Earth are performed.

We have never compiled the stories of how we work to make the world a better place. Until now, with this—our first Impact Report.

This report outlines our view of corporate social responsibility and details the actions we took in 2019 to put our Purpose into action to improve the health and sustainability of our planet and the people who call it home. Many of the vignettes told in this report have been generated by our team members taking initiative to make the world a better place.

As you’ll learn, our efforts take place both on Earth and in space. We provide insight about what’s happening on Earth that can be used to monitor changes both natural and manmade, and to inform understanding and decision-making. Maxar produces data and spacecraft used to protect and defend human rights, to monitor climate change, to support humanitarian assistance and disaster response efforts, to inform natural resource management and to increase transparency about current events around the globe. We are also committed to preserving the space environment through debris and collision management and responsible manufacturing.

I am proud to present this 2019 Impact Report, which highlights how Maxar’s team members and our trusted customers and partners are working toward a shared goal of a Better World.

— Dan

A GLOBAL COMPANY WITH A TRULY GLOBAL REACH



2019
IMPACT

9

Open Data Program
event activations

\$10.3

Million U.S. dollars
of in-kind imagery

129,612

Open Data Program
pageviews



25,000

Remote villages connected to the internet by a Maxar-built satellite

176

News Bureau projects

876,781

Number of WorldView images collected in 2019

1.17B

Number of square kilometers of WorldView imagery collected in 2019

OUR IMPACT PHILOSOPHY

Corporate Social Responsibility at Maxar

Maxar's Purpose—For a Better World—is what we aspire to achieve with the work we do. It drives us forward, it informs our decisions, and, most important, it makes what we do worthwhile. It's a statement of hope and belief that our work matters and contributes to making the world a better place.

Within a single company, we focus on a multitude of critical missions, problems in need of solutions, questions that require data and insight to answer—around the planet and in space. But with this extraordinary perspective, comes an understanding of the complexity of the world in which we live and a sense of responsibility.

Maxar's approach to Corporate Social Responsibility (CSR) takes into full account the uniqueness of what we deliver and why it matters. Our CSR program is how we put our Purpose, our North Star, into action: by supporting people, organizations and initiatives that address issues local and global.

At Maxar, we believe it's our responsibility to make a positive impact on the world in which we live and to do our part to ensure a sustainable future for our planet and its inhabitants.



FOUR PILLARS OF MAXAR'S CSR STRATEGY

DATA PHILANTHROPY

Purpose Partners

Maxar contributes geospatial data and expertise to nonprofits we select that significantly benefit from using our data to achieve their missions. Jane Goodall Institute and the Amazon Conservation Team are two long-term Purpose Partners who rely on Maxar data.

Open Data Program

When crises occur, Maxar supports humanitarian organizations and communities by providing critical and actionable information to assist response efforts. Satellite imagery and information layers are released into the public domain under a Creative Commons 4.0 license, allowing for rapid use and easy integration with on-the-ground response teams.

News Bureau

The Maxar News Bureau is a partnership program with trusted media organizations around the world. We provide satellite imagery as visual evidence of ground truth to promote global transparency and expose injustice. Access to high-resolution satellite imagery has enabled journalists to definitively and accurately report from areas that are too remote, dangerous or inaccessible to reach in any other way.

CLIMATE & SUSTAINABILITY

We've created corporate programs like our Sustainable Development Practice that use Maxar's Earth intelligence products and services to support the 17 United Nations Sustainable Development Goals (SDGs) established in 2015.

Maxar also supports company practices like reducing hazardous waste at our Space Infrastructure manufacturing facilities. In addition, we support recycling, energy-efficient lighting, carpooling and bike to work days to minimize negative impacts of our environmental footprint.

CUSTOMER IMPACT

We create solutions in partnership with our customers to address pressing challenges, save lives, and improve the quality of life for billions of people every day. Our collaborative approach with customers has led to innovative work in human trafficking, gender inequality, diseases prevention and eradication, and disaster response and recovery. We build satellites for customers that provide broadband access for underserved populations. We apply machine learning and artificial intelligence to our imagery to create dynamic, continent-wide maps used for safe navigation, mission planning and insights about our changing planet.

COMMUNITY OUTREACH

In addition to Maxar providing data for disaster response to organizations like our Purpose Partner Team Rubicon, our employees also volunteer on the ground, as well as fundraise for other nonprofits that mobilize in the wake of global disasters, such as World Central Kitchen.

In local communities, Maxar employees select nonprofits like the Make-a-Wish Foundation to support with volunteer work, financial contributions and fundraising to give back. We support the passions of our employees who best understand the unique needs of the areas where we live and work.

Science, Technology, Engineering and Math (STEM) education: Maxar team members bring their experiences and excitement for space and Earth Intelligence into K-12 schools, universities, museums and clubs to inspire students to pursue careers in our industry. We understand it's our responsibility to cultivate and engage the next generation of innovators who will contribute to our collective future.

EMPOWERING NASA TO CLOSELY MONITOR GLOBAL CLIMATE CHANGE AND RESILIENCE

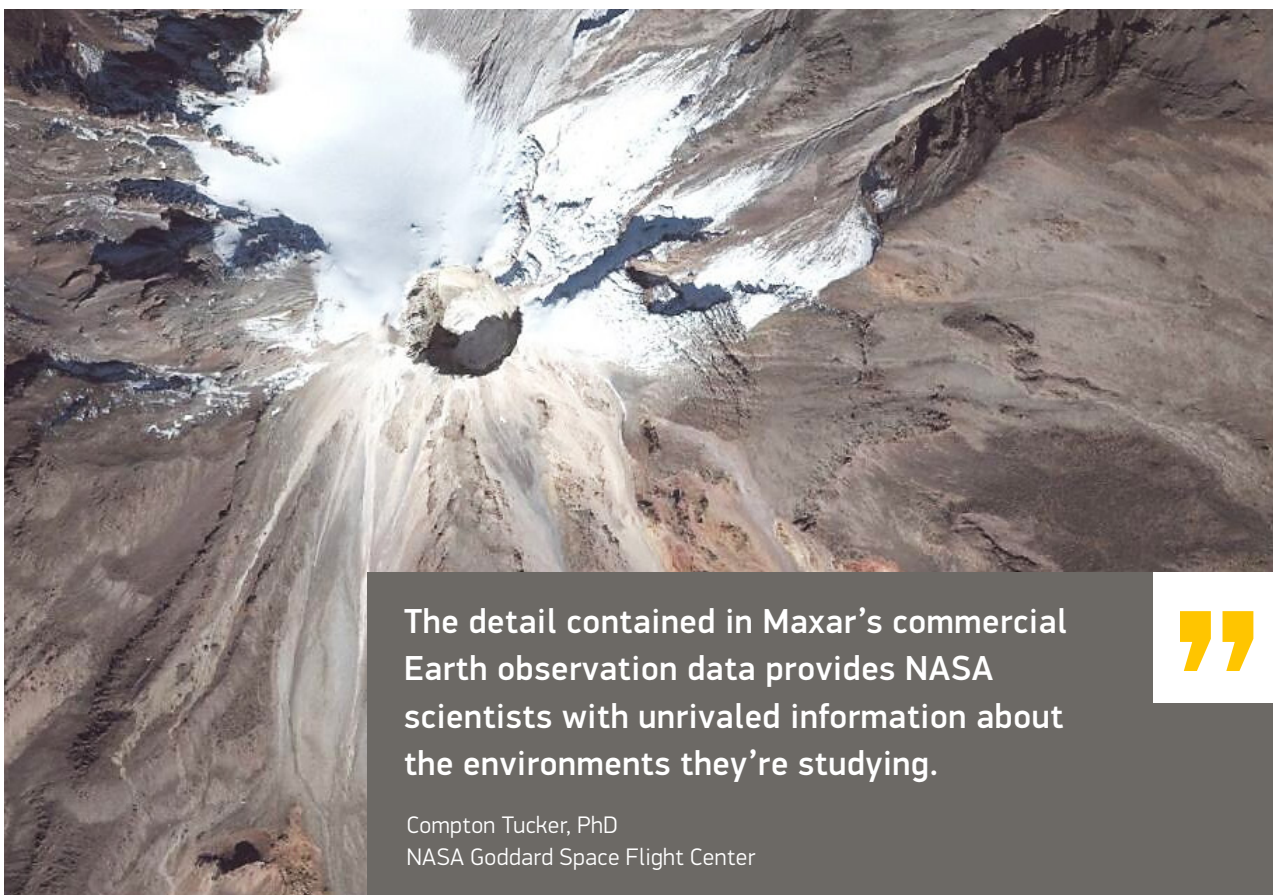
Partners on four programs focusing on carbon absorption, water policy and ecosystem recovery

IMPACT

NASA-funded researchers are using Maxar's high-resolution, commercial electro-optical satellite imagery to advance the agency's science and application development goals to understand and explore Earth, improve lives and safeguard our future.

PROBLEM

NASA's orbiting Earth-monitoring spacecraft are aging. NASA's Earth Science Division wants to evaluate other data sources to see if commercial data can be used as an alternative to NASA building, launching and operating new spacecraft.



The detail contained in Maxar's commercial Earth observation data provides NASA scientists with unrivaled information about the environments they're studying.

Compton Tucker, PhD
NASA Goddard Space Flight Center

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Maxar's WorldView-4 satellite imaged Gran Glaciar Norte on Volcán Citlaltépetl in Mexico on December 22, 2018.

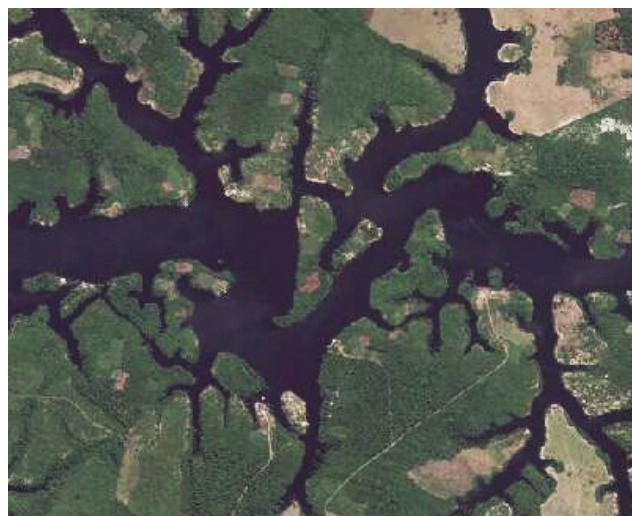
SOLUTION

NASA's scientists are [evaluating Maxar's commercial data](#) to determine if it can augment or supplement its own data, creating more complete climate data sets. In the first half of 2019, Maxar delivered a batch of WorldView-4 30 cm, multispectral archive data from around the world to NASA's Earth Science Division. Scientists from these four climate change programs will use the imagery:

- Arctic-Boreal Vulnerability Experiment ([ABoVE](#)): NASA's Terrestrial Ecology Program is conducting the ABoVE campaign in Alaska and western Canada to better understand the vulnerability and resilience of ecosystems and society in this changing environment.
- High Mountain Asia ([HMA](#)) Team: This collaborative research team studies the large reservoirs of glaciers and snow in the HMA region to address changes in the climate, hydrology and cryosphere that will impact water security in the region, with the goal of influencing resource management and policy decisions.
- Global Ecosystem Dynamics Investigation ([GEDI](#)): The GEDI program uses a laser altimeter on the International Space Station to study how much carbon is absorbed by forests and how habitat degradation will affect global biodiversity.
- Vegetation Monitoring and Biomass Estimation: In partnership with the NASA Center for Climate Simulation (NCCS), scientists are studying [low-land vegetation in sub-Saharan Africa](#) to estimate the amount of carbon stored in the vegetation.



WorldView-4 imaged near Prudhoe Bay, Alaska on September 18, 2018.



This WorldView-4 image shows the Amazon River coursing through Brazil.



SUPPORTING THE FIGHT TO END MODERN-DAY SLAVERY WITH INTERNATIONAL JUSTICE MISSION

Disrupts human trafficking networks, finding victims and locating suspects using satellite imagery

IMPACT

International Justice Mission (IJM) is innovatively leveraging a broad range of tools, methodologies and datasets, including Maxar data and analytics, to assist international law enforcement partners in identifying possible victims, suspected traffickers and locations of interest. Their collaboration has led to the successful rescue of thousands of victims and the arrest of hundreds of criminals, including one of Europe's "most wanted" criminals.

PROBLEM

There are estimated to be more than 40 million people enslaved today, with approximately one in four victims a minor under the age of 18. Human trafficking generates approximately \$150 billion a year in revenue (per "Global Estimates of Modern Slavery" published in 2017 by Walk Free, ILO and IOM). To effectively fight modern-day slavery, IJM is building the capacity of public justice systems around the world to protect their most vulnerable citizens and hold perpetrators accountable.

SOLUTION

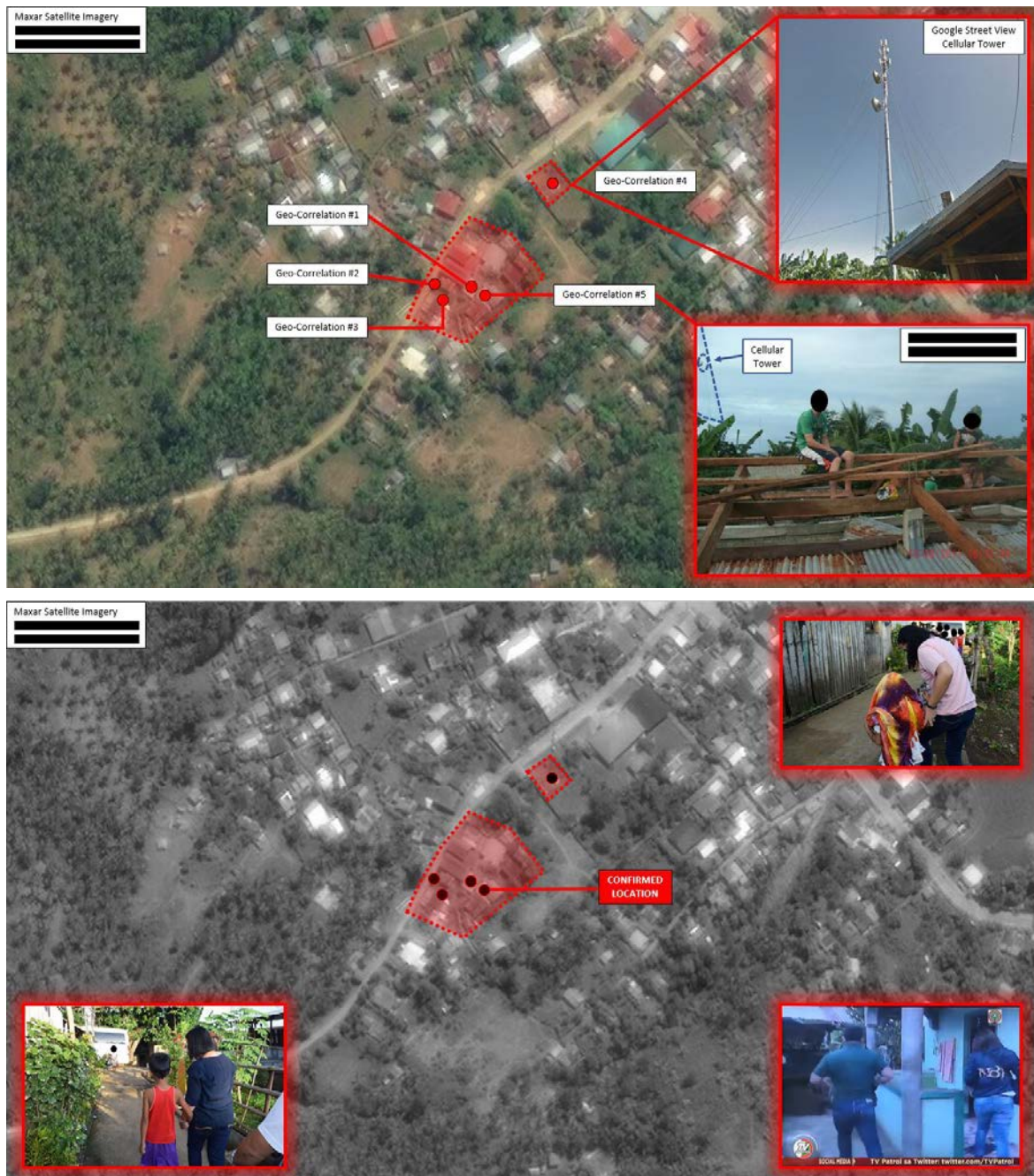
Non-governmental organizations like IJM need current and accurate geospatial data on a global scale. On a daily basis, IJM leverages Maxar's SecureWatch platform to enhance its ability to detect, monitor and disrupt human

trafficking networks in Latin America, Africa, Europe, South Asia and Asia Pacific. Having access to high-resolution satellite imagery and other cutting-edge technologies enables IJM to help international law enforcement partners, directly leading to the rescue of victims and restraint of criminals.

In a 2019 case, IJM worked with Maxar satellite imagery to identify the location of a cybersex den in the Philippines responsible for exploiting minors online. With the geo-correlation of ground-based photographs to space-based imagery, IJM was able to help Philippine authorities identify the location of a cybersex den resulting in the arrest of three traffickers and the rescue of 13 victims, including nine children.

In a recent investigation, IJM leveraged Maxar's satellite imagery to identify potential labor traffickers in the Pacific Ocean and highlight key vessels of interest. With indications of transshipment at sea via satellite imagery, IJM was able to help Thai authorities build a more confident assessment of where possible criminal activities were occurring and focus their efforts for potential interdiction.

In another case, IJM used Maxar's satellite imagery to identify locations of interest associated with the trafficking of minors on Lake Volta, Ghana. With increased visibility of potential points of debarkation, IJM was able to assist Ghanaian authorities plan rescue operations in previously unmapped and unidentified locations in remote areas.



International Justice Mission uses Maxar's SecureWatch platform to geolocate evidence of human trafficking, prove locations of incidents and provide concrete information to law enforcement.

LEVERAGING RADARSAT-2 IMAGES AND SENSORS TO HELP SCIENTISTS STUDY THE ANTARCTIC ICE SHEET

Provides key evidence for studying the effects of climate change

IMPACT

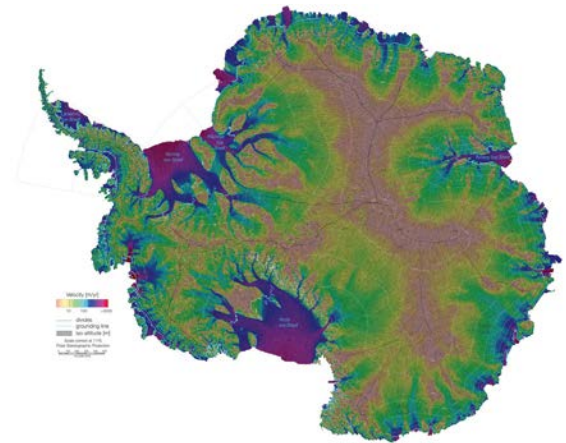
MDA, a Maxar company, and the Canadian Space Agency (CSA) partnered under the Polar Space Task Group (PSTG) of the World Meteorological Organization to support research of the Antarctic Ice Sheet. This ice sheet extends 14 million square kilometers, about the size of the contiguous United States and Mexico combined, according to the National Snow & Ice Data Center. With about 30 million cubic kilometers of ice, this ice sheet is a key source of the world's freshwater. MDA's RADARSAT-2 satellite provides scientists with critical data to map the velocity of this ice sheet, leading to a better understanding of this critical part of the cryosphere.

SOLUTION

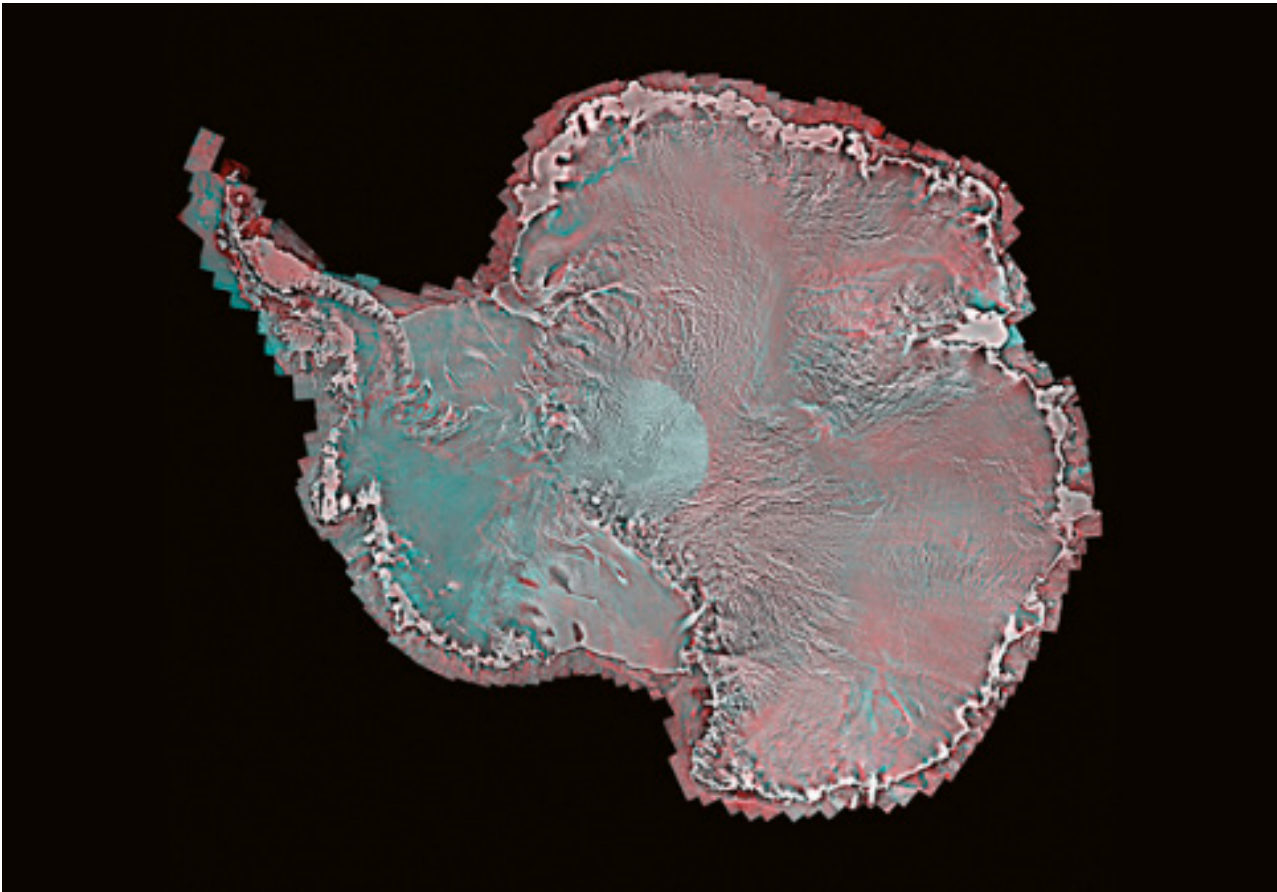
RADARSAT-2 has a Synthetic Aperture Radar (SAR) sensor that is well suited to provide weather- and season-independent images and measurements of ice sheets. It also has a unique capability to acquire data over the entire Antarctic continent. MDA worked closely with the Canadian Space Agency to acquire and process 30,000 RADARSAT-2 images as part of an international effort under the PSTG that fills a critical gap in Antarctic observations. MDA processed this RADARSAT-2 data and provided it to scientists allowing them to integrate their ice measurements into complete 3D velocity maps of the Antarctic Ice Sheet.

PROBLEM

Scientists need to fully understand and monitor changes to the world's ice sheets as an indicator of climate change and global sea level rise. A key input for this is accurate and up-to-date maps of the ice sheets including three-dimensional (3D) velocity. Weather, illumination and atmospheric effects often prevent optical Earth observation systems from providing accurate measures of ice dynamics. In addition, few space-borne platforms are in orbits that allow regular imaging at extreme southern latitudes.



Map of ice sheet velocity over Antarctica produced with multisource SAR data. Graphic created by Rignot E., Mouginot J., Scheuchl B. at the University of California, Irvine.



Multi-Polarized Pole to Coast mosaic of RADARSAT-2 data. RADARSAT-2 Data and Products® MacDonald, Dettwiler and Associates Ltd. 2008 – All Rights Reserved. RADARSAT is an official mark of the Canadian Space Agency.

None of this would have been possible without the outstanding efforts by the CSA and MDA to acquire and provide RADARSAT-2 data ... We want to specifically commend MDA mission planning and mission operations teams for contributing to a critical scientific objective.

Dr. Mark R. Drinkwater and Dr. Fernando Belda
World Meteorological Organization

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LEADING ADVOCACY FOR SUSTAINABLE SPACE OPERATIONS AND SPACE DOMAIN AWARENESS

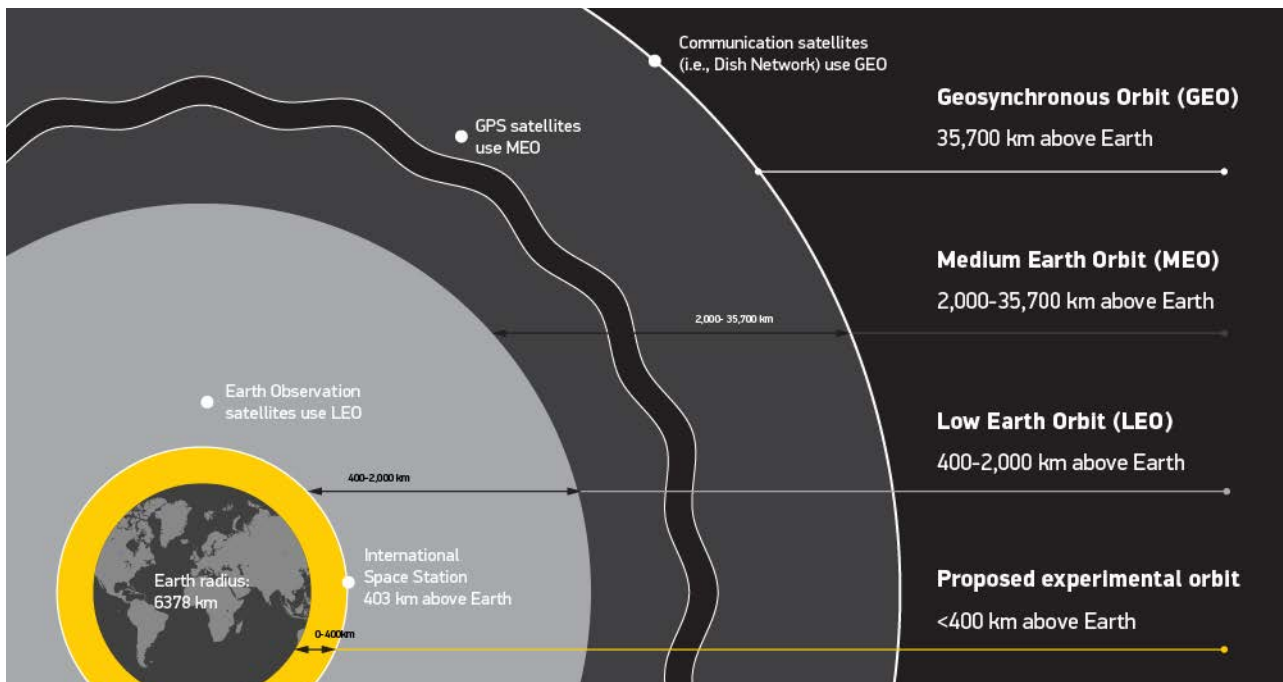
Implements new technologies and consults with other LEO actors to manage space as a critical natural resource and national security interest

IMPACT

Space influences every part of our lives, from weather forecasts to navigation instructions and banking transactions. It is imperative that space operators keep this environment safe for future generations. At Maxar, we participate in debris management and collision avoidance activities to do our part to protect space, and we also advocate for the industry to do the same.

PROBLEM

Current estimates indicate there are 29,000 objects in space 4 inches or bigger traveling more than 16,000 mph. There are also about 166 million pebble-sized pieces on orbit.¹ If any two objects in space collide, many smaller pieces of debris are created and require tracking. Space debris of any size creates a risk to Maxar's satellites on orbit and the spacecraft we manufacture for customers.



In a [blog post](#), Maxar CTO Dr. Walter Scott expands upon the Space Safety Coalition's "Best Practices for Sustainability of Space Operations" by advocating for the creation of an "experimental orbit" that's 400 km above Earth and lower. This will allow space operators to protect the humans on the International Space Station, which orbits at 403 km, and this orbit has enough atmospheric drag to be "self-cleaning."

1. Fletcher, K. Space Debris: The ESA Approach. European Space Agency, ISBN 978-92-9221-104-2, 2017.

SOLUTION

Maxar is a member of the Commercial Integration Cell (CIC) at the Combined Space Operations Center (CSpOC). As part of the CIC, a Maxar team member spent six months in 2019 embedded at Vandenberg Air Force Base as a commercial liaison, bridging the gap between military and commercial satellite operations and enhancing capabilities and awareness of the warfighting domain. The 18th Space Control Squadron (18 SPCS), also located in the CSpOC, tracks space objects down to 10 cm in size. This Maxar team member worked closely with the 18 SPCS to improve collision avoidance accuracy to protect both government and commercial assets on-orbit.



Maxar's Doug Engelhardt (left) spent time in 2019 as the CIC's representative at CSpOC. Engelhardt worked closely with Senior Airman Bailey Bourque from the 18 SPCS (right) on improving the accuracy of space object trajectories that are on a potential collision course with satellites. As a result of their work, operators like Maxar have better knowledge of when and where to maneuver their satellite sooner to avoid space debris.

This unique effort is a global first in endorsing the current international set of treaties, guidelines, and standards to address what spacecraft operators and stakeholders can additionally aspire to accomplish for the long-term sustainability of space operations—exceeding the status quo beyond minimum accepted consensus levels.

Dan Oltrogge
Space Safety Coalition Administrator

Maxar actively contributed to the development and subsequent endorsement of the Space Safety Coalition's "[Best Practices for Sustainability of Space Operations](#)," a document co-signed by 37 space companies. This foundational document promotes the best ways to operate in and protect space. Additionally, Maxar published [a joint op-ed](#) and [white paper](#) with OneWeb and Iridium Communications in 2019 advocating for stronger environmental protections to create a safer low Earth orbit (LEO) environment for generations to come.

Maxar-built spacecraft comply with international standards that require no hardware be jettisoned or released from the spacecraft during operations. Maxar also helps its customers plan for enough fuel to enable controlled deorbiting once a satellite reaches the end of its useful life, which adheres to international standards and guidelines.

BRIDGING THE DIGITAL DIVIDE BY BRINGING INTERNET TO REMOTE INDONESIAN ISLANDS

Expands human rights by bringing remote communities online and creating economic growth

IMPACT

As a world leader in building advanced space infrastructure for communications, Maxar is helping to bridge the digital divide in remote locations. Access to the internet helps underserved populations with medical, educational and emergency services, improves quality of life and spurs economic development.

PROBLEM

The nation of Indonesia is made up of more than 10,000 islands. This complicated geography makes building out terrestrial infrastructure like fiber, cable and wireless networks nearly impossible. This leaves many remote islands and villages in the Indonesian archipelago with little to no access to the internet and separated from the benefits of a digital world.

SOLUTION

Satellites offer a cost-effective and rapid way to provide communication infrastructure over regions where terrestrial services are cost-prohibitive. To connect Indonesia, [Maxar built the Nusantara Satu satellite](#) for Indonesian satellite operator PT Pasifik Satelit Nusantara (PSN) and it launched in February 2019. As Indonesia's first high-throughput satellite, Nusantara Satu is a vital link for remote islands, connecting 25,000 villages with access to emergency services and educational opportunities. In addition to providing reliable and affordable broadband service to fuel economic growth and opportunity in the region, the satellite's C-band and Ku-band transponders allow for voice and data communications and video distribution throughout the Indonesian archipelago.

1

Satellite

25,000

Villages receiving high-speed internet

>25M

People now connected to the world with Nusantara Satu

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Maxar has been a collaborative partner in helping us make Nusantara Satu a success. Maxar is a leader in broadband satellites and has designed and built a next-gen spacecraft solution that will advance our aspiration to improve lives and create new opportunities for economic growth in remote regions of Indonesia.

Adi Rahman Adiwoso
Chief Executive Officer
PSN

Image: SpaceX



INTEGRATING NASA'S TEMPO INSTRUMENT ON A 1300-CLASS SPACECRAFT

Advances monitoring of air pollution and related public health issues

IMPACT

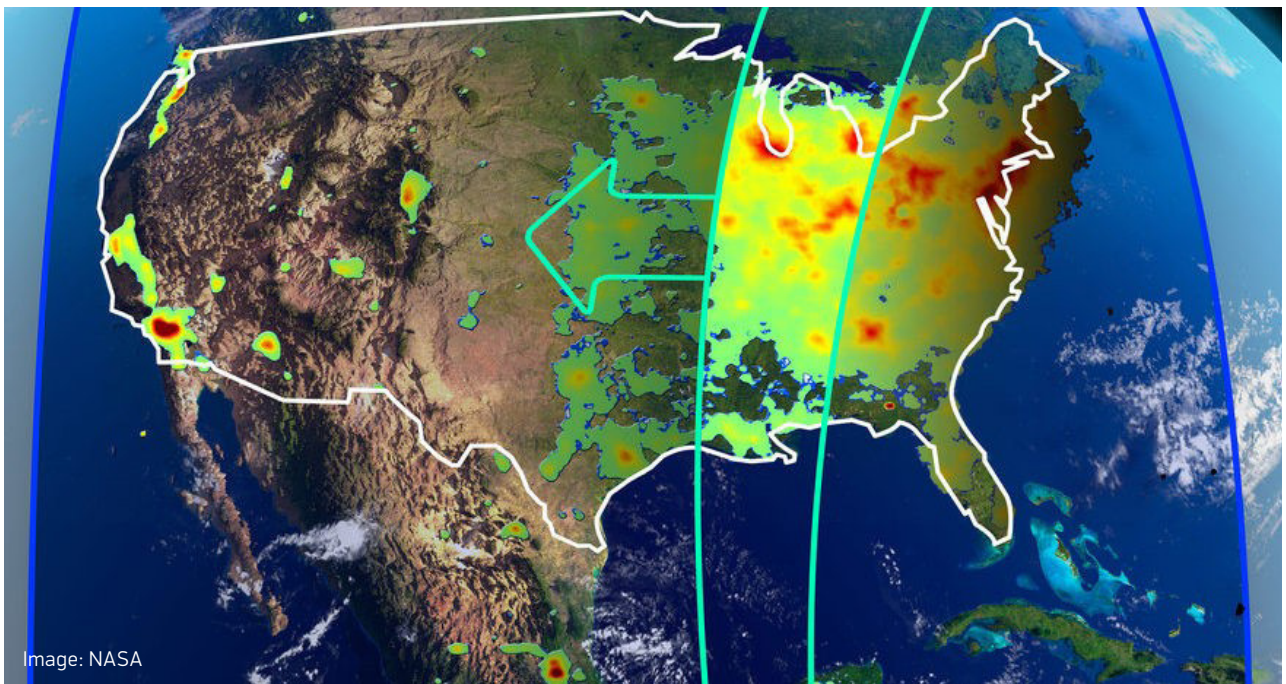
Maxar is helping to revolutionize the way we sample, monitor and analyze major air pollutants across North America.

PROBLEM

While air pollution is linked to negative health effects and changes in climate, scientists don't have enough data to answer key questions that could lead to significant discoveries about the role major air pollutants play in our well-being and environment.

SOLUTION

[Maxar will integrate NASA's Tropospheric Emissions: Monitoring of Pollution \(TEMPO\) instrument](#) on its 1300-class satellite platform. TEMPO will be the first space-based instrument to provide hourly monitoring of major air pollutants during the daytime across North America at high spatial resolution. It will detect pollutants by measuring sunlight reflected and scattered from the Earth's surface and atmosphere. The resulting data from TEMPO will be used to enhance air quality forecasts in North America, enabling more effective, early public warning of pollution incidents.





Artist's impression of TEMPO hosted on Maxar's 1300-class platform.

Finding the right commercial partner to integrate our payload was of utmost importance to us, and Maxar's strong legacy in bridging commercial and government needs made it the perfect candidate. TEMPO will revolutionize the way NASA samples and analyzes critical air quality measurements.

Kelly Chance
Principal Investigator
Smithsonian Astrophysical Observatory

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REDUCING HAZARDOUS WASTE AT OUR MANUFACTURING FACILITIES

Expands sustainability and governance programs to conserve natural resources and reduce our environmental footprint

IMPACT

As a leading provider of space infrastructure, Maxar renewed its commitment in 2019 to responsibly building cutting-edge space systems in its manufacturing facilities.

PROBLEM

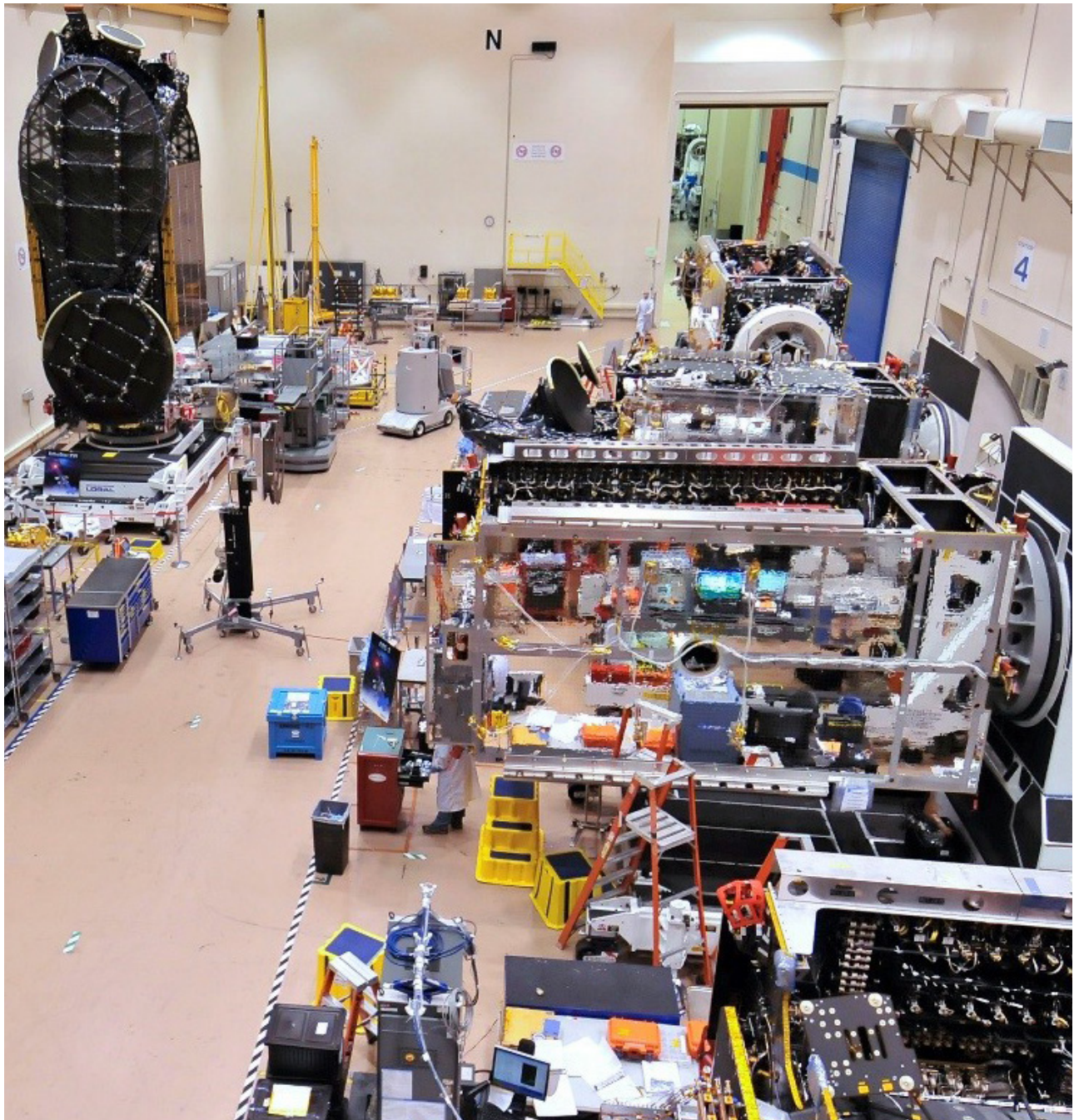
Manufacturing spacecraft and robotics demands the use of a broad range of materials and techniques that result in hazardous waste and increased use of power and water.

SOLUTION

Maxar pays particular attention to reducing its hazardous waste production. Beginning in late 2015, Maxar introduced a new, permitted process that evaporates the water content from the waste stream and collects the waste residue for disposal. Over the years, this process eliminated approximately 80 percent of Maxar's hazardous waste in its machine shop. The company continues to work to identify additional opportunities for further hazardous waste reductions, and toxic waste is always properly contained in accordance with disposal regulations. In addition, Maxar is vigilant in its review of every hazardous material used in production, and has completely eliminated use of any Class I ozone-depleting substances.

In addition to reducing hazardous waste, Maxar has a variety of other programs that reduce its environmental footprint:

- **Recycling:** All metal chips/shavings, metal furniture, lead solder and all scrap electronics such as old equipment and computer monitors are responsibly recycled. Old computers are donated or sold for reuse. Maxar also has an initiative to recycle paper, plastic and aluminum cans and bottles. Compostable plates, silverware, cups and serving dishes are used in many locations.
- **Energy Efficiency:** To save electricity, Maxar is installing energy-efficient lighting with sensors that turn lights off when a room is not occupied. These sensor-activated lights are already in-use in many of Maxar's buildings. Over the course of 2019, more than 5,000 lights were converted to LED. To reduce emissions, the company encourages employees to carpool and provides charging stations for electric cars.
- **Water Conservation:** Maxar recycles all water used for cooling and prohibits the use of chlorinated solvents.



Maxar's manufacturing facility in Palo Alto, California.



EQUIPPING FIRST RESPONDERS WITH MISSION-CRITICAL EARTH INTELLIGENCE FOR HUMANITARIAN ASSISTANCE AND DISASTER RESPONSE

Open Data Program responded to nine humanitarian emergencies and disasters in 2019

IMPACT

Maxar's satellite imagery and analysis are critical data sources in the aftermath of a sudden natural disaster, providing a detailed view of the disaster's impact, informing first responder rescue and recovery efforts. [Maxar's Open Data Program](#) activated for Cyclone Idai, Hurricane Dorian and Cyclone Kenneth, among others, releasing 308,844 square kilometers of imagery to support response efforts.

PROBLEM

Climate change will continue to cause more extreme weather events like droughts, hurricanes, flooding, sea level rise and spread of waterborne diseases. To best support affected communities, first responders need timely information about which areas are the hardest hit, the best routes to get there and what issues to address first.

Jhpiego is an international health organization affiliated with Johns Hopkins University dedicated to improving the lives of the most vulnerable women and families. When Cyclone Idai hit, they needed to assess the condition of the rural health clinics they support across Mozambique.

SOLUTION

Maxar publicly releases its satellite imagery and associated analysis so partner organizations like Team Rubicon, the Red Cross, Humanitarian OpenStreetMap Team (HOT), NetHope and others can quickly integrate the data into their workflows to better plan and deploy their resources.

Jhpiego was able to combine Maxar's high-resolution satellite imagery with building footprints to create a before and after map in which they could assess damage to rural health clinic locations prior to arriving on the ground.

SOCIAL MEDIA AWARD

Maxar won PRNews' Social Media Awards 2019 Twitter – Social Good Campaign Award for our use of Twitter to engage directly with first responders. Maxar uses Twitter to promote the availability of Open Data Program data, gather information about what areas of interest need imagery and analysis support, share compelling imagery of the disaster to raise awareness and interact with media outlets.



OPEN DATA PROGRAM

The high-resolution satellite imagery from Maxar's Open Data Program allowed Jhpiego to compare before and after images of damage to health clinics in Beira after Cyclone Idai hit Mozambique. We shared the information with USAID and other partners to help prioritize the deployment of available relief resources. By knowing which clinics and areas needed the greatest recovery support, resources could be focused to get health services up and running again in a relatively short amount of time.

Daren Trudeau
Jhpiego's Deputy Country Director for Mozambique

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Images of Beira, Mozambique before and after Cyclone Idai.



Images of Marsh Harbor, Great Abaco Island, Bahamas before and after Hurricane Dorian.



WE PUT THE MISSION FIRST

INVESTIGATING MAJOR EVENTS USING SPACE-BASED DATA TO INCREASE GLOBAL TRANSPARENCY

News Bureau partners with journalists and observers to expose and act on human rights and environmental change

IMPACT

The Maxar News Bureau is a partnership program with trusted and respected media organizations that leverages technology for social good and global transparency. Maxar provides electro-optical and radar satellite imagery, analytics and expertise that are powerful complements to good journalism, providing indisputable visual truth.

HUMANITARIAN ASSISTANCE & DISASTER RESPONSE

Hurricane Dorian devastated the Bahamas after slamming into the country as a Category 5 storm. As governments deployed troops to help with recovery efforts and humanitarian groups sent in medical teams and other assistance, Maxar's satellites captured imagery of the destruction. USA Today created comparisons of pre- and post-hurricane Maxar satellite imagery [to educate their audience on the impact of the storm](#), while humanitarian organizations used the Maxar imagery to plan their on-the-ground operations.



Maxar's GeoEye-1 imaged Green Turtle Cay, Bahamas before the storm on January 29, 2019 (left). GeoEye-1 imaged the same area again after Hurricane Dorian on Sept. 5, 2019, capturing the destruction of this neighborhood (right).



The Washington Post is monitoring [the humanitarian crisis](#) that is unfolding at the al-Hol refugee camp in northeastern Syria (left). More than 73,000 people who are primarily fleeing violence caused by the Islamic State are packed into the camp, which lacks proper infrastructure, medical facilities and other supplies. The Washington Post used Maxar's deep archive compared to current satellite imagery to demonstrate how the camp has exploded in size over recent years.

HUMAN RIGHTS

Reuters reported on the Rohingya refugee crisis in Myanmar in its [“Myanmar Burning”](#) investigative series, which exposes the military units and Buddhist villagers responsible for the systematic expulsion and murder of more than 900,000 Rohingya Muslims in Myanmar. Reuters won the **2019 Pulitzer Prize for International Reporting** for this series. While addressing the United Nations Human Rights Council in July 2019, a UN-appointed independent expert said the Rohingya still face “grievous human rights violations” at the hands of Myanmar security forces. The Maxar News Bureau contributed high-resolution satellite imagery to Reuters’ [“Massacre in Myanmar”](#) and [“Erasing the Rohingya”](#) stories in this series.

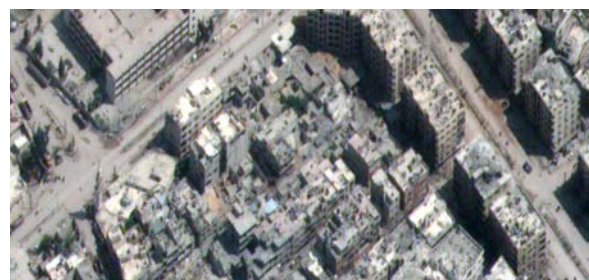


A Rohingya refugee in Kutupalong camp holds a Maxar WorldView-3 satellite image that shows what his village of Inn Din in Myanmar’s western Rakine State looked like before it was burned to the ground and bulldozed. Image: REUTERS / Mohammad Ponir Hossain.



BBC Africa Eye investigated a mysterious video circulating on social media that showed two women and two small children being extra-judiciously executed by men in military fatigues. BBC Africa Eye used open source tools, geospatial data and Maxar satellite imagery (left) in its [“Anatomy of a Killing”](#) investigation to track down the location and prove Cameroonian soldiers committed the violence. The soldiers were arrested and prosecuted as a result of the BBC Africa Eye investigation. BBC Africa Eye won a **Peabody Award** in May 2019 for this investigation.

The New York Times investigated a chemical bomb attack on a multi-story building in Douma, Syria. The investigation, called [“One Building, One Bomb: How Assad Gassed His Own People,”](#) uncovered evidence that contradicted Syria’s claim that the bombing didn’t happen. The U.S. and its allies launched airstrikes against Syria as punishment for this attack, which violated international law. This report, which included Maxar satellite imagery, won a **News & Documentary Emmy Award** in September 2019.

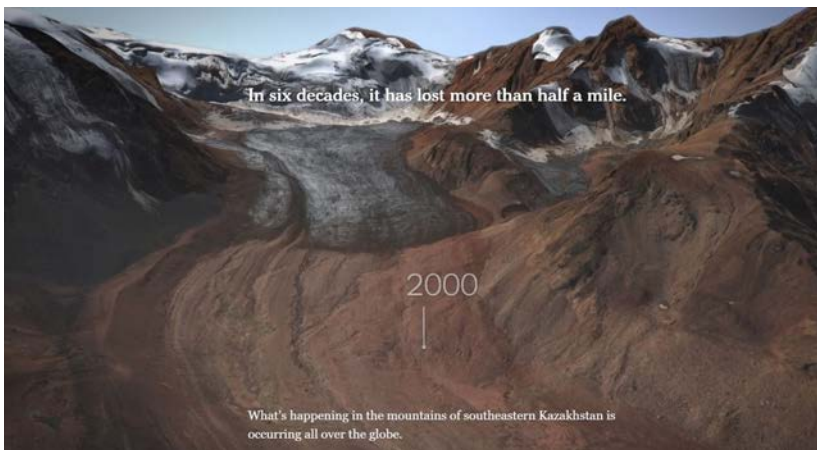


Maxar’s WorldView-4 image of Douma, Syria shows the suspected chemical attack location.



CLIMATE CHANGE

Extensive wildfires burned through the Brazilian Amazon rainforest in the summer of 2019. The Sydney Morning Herald [published an in-depth explainer](#) about what was causing the fires, why the Amazon matters to the world and how climate change played a role in the fires. Maxar's archive and current satellite imagery provided a look at fires burning in deforested areas of the rainforest.



The New York Times sent two reporters to Kazakhstan to observe [the effects of climate change on mountain glaciers](#). These massive glaciers are receding and losing mass, while millions of people rely on these natural resources for water. The New York Times used Maxar satellite imagery to create a 3D animation (left) demonstrating how the Tuyuksu Glacier in Central Asia has retreated over the decades.

NATURAL RESOURCE MANAGEMENT

Argentina is assembling South America's largest solar farm in a rural part of its country. [Reuters Graphics lays out a global trend](#) of China becoming a financial backer of major infrastructure projects in cash-strapped parts of the world; in exchange for financing this project, Argentina must buy nearly 80 percent of its materials from Chinese companies. Maxar provided imagery and analysis for this investigative, feature story.

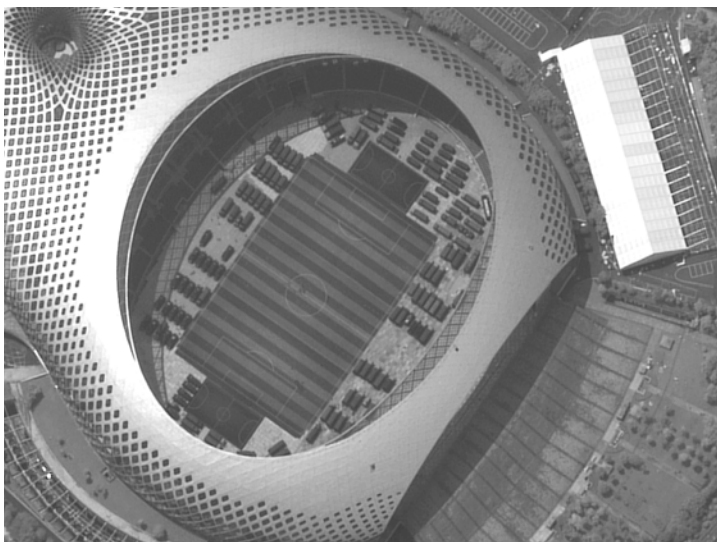




A mining dam in Brumadinho, Brazil collapsed in January 2019, sending a wall of toxic sludge toward homes and offices, killing at least 154 people. The New York Times interactive story, “[A Tidal Wave of Mud](#),” used Maxar satellite imagery to tell the story of how the dam collapse happened and examined other at-risk dams in the country.

GLOBAL TRANSPARENCY

The Wall Street Journal used Maxar satellite imagery to [analyze North Korea's actions with its nuclear arsenal](#) while engaging in diplomatic discussions with the Trump Administration. The evidence indicates that North Korea has increased its production of long-range missiles and nuclear material.



As tensions escalated in and around Hong Kong in 2019, Maxar’s WorldView constellation monitored the situation. On August 12, 2019, WorldView-1 captured imagery of Chinese military and security vehicles staged inside the Shenzhen Bay Sports Center, across the harbor from Hong Kong. The Associated Press used [WorldView-1’s imagery as part of their coverage](#) of the developing story.

IMPROVING THE OUTCOMES FOR NONPROFITS WITH GEOSPATIAL DATA

Provides our Purpose Partners with geospatial data and team member expertise to advance their global development efforts

IMPACT

Maxar empowers nonprofits that uniquely benefit from the company's geospatial data and analytics and team member expertise. These Purpose Partners reflect Maxar's purpose: For a Better World. These organizations receive donations of imagery, analytics and service.

PARTNERS

Jane Goodall Institute (JGI) promotes understanding and protection of great apes and their habitat, and builds on the legacy of Dr. Jane Goodall to inspire individual action by people of all ages to help animals, other people and to protect the world in which we live. Maxar is a long-term supporter of JGI, providing imagery and geospatial analytics to help JGI make effective conservation decisions. From land use change detection to high-resolution satellite imagery, JGI takes cutting-edge geospatial techniques to the field to help communities better manage and protect their natural resources.



Jane Goodall met with Maxar employees at the company booth at the Esri User Conference in July 2019.

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 its SecureWatch platform so volunteers can leverage pre-event imagery when planning their disaster response efforts. Team Rubicon used Maxar imagery for planning [their response to Hurricane Dorian's destruction](#) of the Bahamas in August 2019, ultimately deploying 555 volunteers and clearing debris from over 375 homes, structures and roadways.



PURPOSE PARTNERS

Amazon Conservation Team (ACT) is a nonprofit dedicated to preserving South American rainforests. This small but robust organization occupies a unique niche among environmental nonprofits working in the tropics. ACT works hand-in-hand with local indigenous communities to devise and implement its conservation strategies. Maxar provides imagery to support participatory indigenous mapping initiatives and to help ACT locate and map uncontacted indigenous communities so that they can be better protected from external threats. Maxar imagery helps ACT monitor destructive impacts on rainforests, including the recent Amazon fires, to support local indigenous partners on the frontlines of conservation.



ACT's Brian Hettler works with a group of people of all ages from the Curare-Los Ingleses Reserve on how to interpret Maxar's satellite imagery and map their community for monitoring and conservation efforts. Image: Amazon Conservation Team.

Humanitarian OpenStreetMap Team (HOT) is an international team dedicated to launching crowdsourced mapping campaigns for the public to participate in as a response to natural disasters and supporting the achievement of the United Nations SDGs. Maxar provides HOT with satellite imagery for accurate mapping and team member hours for company-wide mapathons. In August 2019, [Maxar hosted a HOT mapathon](#), in partnership with the American Red Cross and the Missing Maps Project, to create up-to-date maps of Myanmar before the next flood season started. More than 120 employees from around the globe contributed their time to add 48,581 new buildings and 1,121 km of roads to the map.



Maxar employees volunteered their time adding to the map in Myanmar from office locations in Westminster and Longmont, Colorado; Herndon, Virginia; Palo Alto, California; Ypsilanti, Michigan; and Brampton, Ontario, Canada.



INSPIRING THE NEXT GENERATION OF SPACE, SCIENCE AND INTELLIGENCE PROFESSIONALS

Supports STEM and space-based technology education with mentorship and events for students and underrepresented groups

IMPACT

As a leading technology company, Maxar believes in sparking interest in the next generation of professionals. The company uses its unique capabilities to teach students about space-based technologies and how technology can create a better world.

STEM

Maxar team members encourage students to pursue the study of Science, Technology, Engineering and Math (STEM) by highlighting how STEM subjects are used every day in Maxar products, capabilities and projects.

- MDA, a Maxar company, partnered with FIRST Robotics Canada in 2019 for the robotics competition “Destination: Deep Space.” In an epic space adventure of innovation with a build time of only six weeks, teams of high school and elementary school students collaborated to engineer and program robots to compete across Canada. The competitions combine the excitement of a championship sporting event with the practical application of STEM with mentorship from industry experts, including MDA team members.



Students participating in the FIRST Robotics Canada program toured MDA's Space Robotics facility in Brampton, Ontario.



Students in the FIRST Robotics Canada program competed in a Lego League robotics competition against MDA team members.

COMMUNITY

Education

- In six career expos and STEM events in the metro Denver area including at The Denver Museum of Nature and Science, Maxar team members taught 2,100+ students about Earth observation satellites and how satellite imagery is integral to applications they use every day.
- Maxar participated in the San Jose State University Science Extravaganza with our “Build a Satellite” workshop. The Extravaganza provides 600+ middle school students in underrepresented groups an opportunity to learn about various types of spacecraft and what Maxar engineers and scientists do in the aerospace industry. Students explored their creativity and construction skills fabricating a spacecraft with a dedicated mission.
- San Jose State University’s cubesat design club toured Maxar’s Palo Alto manufacturing facility. They saw the spacecraft under construction and learned about careers in the aerospace industry.



For the fifth year, Maxar employees participated in the Adams County Education Consortium 8th Grade Career Expo, sharing Maxar’s capabilities with more than 600 students.

5,200+

Students reached

710+

Hours spent
with students

\$118K+

Investment in
student education



WE ACT LIKE OWNERS

INSPIRING THE NEXT GENERATION OF SPACE, SCIENCE AND INTELLIGENCE PROFESSIONALS

Supports STEM and space-based technology education with mentorship and events for students and underrepresented groups

WOMEN IN STEM

Maxar supports STEM events focused on bringing more women into the male-dominated field.

- Maxar's headquarters hosted the American Heart Association's Bring STEM to Life event that brought 150 high school girls together with STEM professionals to learn about career possibilities. The October 2019 event included breakout sessions, speed mentoring and an expo area.
- MDA participated in a variety of Women in STEM activities, exposing about 700 students to MDA's Canadian space technology.



MDA team members promoted STEM careers during The Intrepids at the Montreal Science Centre.

STUDENT MENTORING

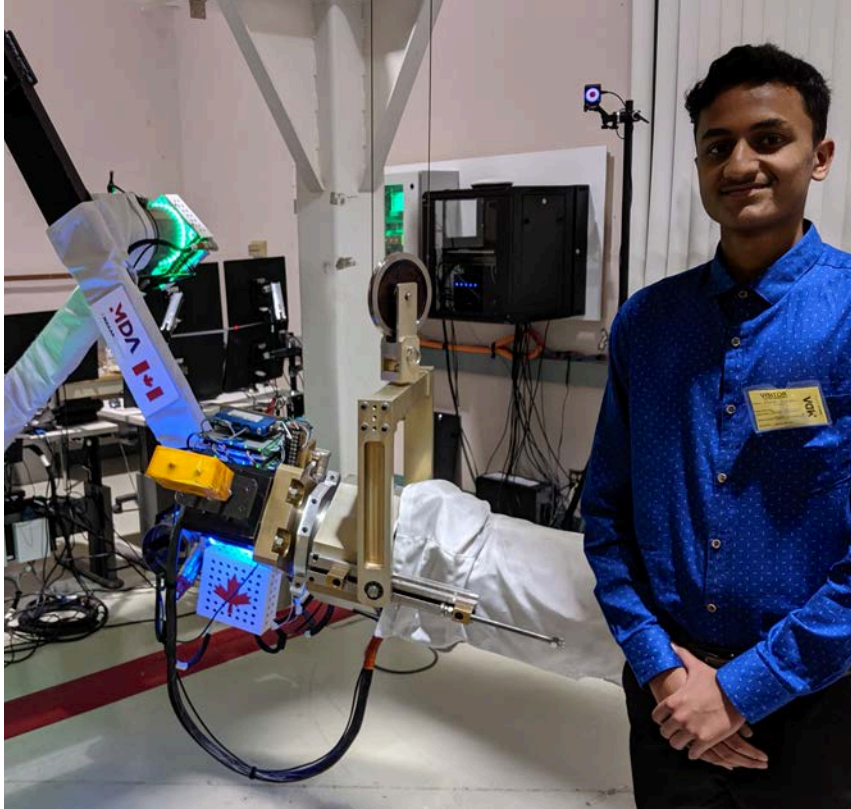
- MDA ran two capstone projects in 2019 for Engineering Science students at the British Columbia Institute of Technology and Simon Fraser University (SFU). These practical, engaging and highly entrepreneurial development projects provide university students with a forum to tackle engineering problems of their own choosing in a dynamic and innovative way. MDA team members propose projects, mentor the teams, evaluate projects and host project presentations.
- Every summer, the European Space Agency (ESA) hosts an international competition where teams of high school students compete to build data-collecting probes. In June 2019, students from St. Thomas More Collegiate made history as the first Canadian team to participate in the competition. These students worked with MDA engineers before competing and representing Canada in Italy.
- MDA helps the SFU Aerospace Club, a group of 100 students who work on designing and building satellites, rockets and autonomous drones. MDA provides assistance during workshops, design team projects, research and development seminars and competitions. Students present their projects to the professionals at MDA for feedback and advice.



MDA participated in the three-day outdoor Eureka Festival promoting science in Montreal.

COMMUNITY

Education



WE ACT LIKE OWNERS

FUNDRAISING TO MAKE A DIFFERENCE IN OUR LOCAL COMMUNITIES

Supports NGOs working on disaster relief, chronic illness, maternal health, education, food security and economic equity

IMPACT

Maxar team members are encouraged to organize and participate in fundraisers that help the communities where Maxar has a footprint. Here's a sample of the activities organized by team members across our office locations.

CENTRAIDE (UNITED WAY)

MDA's Montreal office held a two-week fundraiser in November 2019, which included a book sale; bake sale; a honey, garlic and maple syrup sale; a silent auction, and monetary donations. The team raised approximately \$26,000 Canadian dollars (CAD) for Centraide.



BIKE MS

Maxar's Colorado offices participated in the Bike MS race in June 2019, benefiting the National Multiple Sclerosis Society. The 22-member team, some pictured on the right, raised \$12,837 and beat their fundraising goal.



\$78K+

U.S. dollars raised
by team members

MAKE-A-WISH FOUNDATION

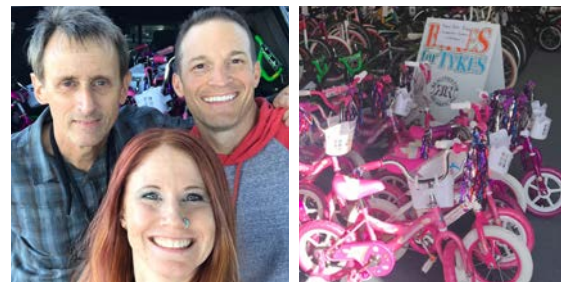
In the summer of 2019, the Palo Alto office organized the second annual Maxar Car Show, which benefited the Make-A-Wish® Foundation. Make-A-Wish aims to make a wish come true for every child diagnosed with a critical illness, giving them the opportunity to look outside their illness and restore a sense of childhood and normality for the family.



Some of the winners of Maxar's 2019 car show, which brought in \$6,000 for Make-A-Wish Foundation.

TOY DRIVES

Multiple Maxar offices collected toys for children during the holiday season. The Palo Alto office collected 410 toys for families in the San Francisco Bay area. The MDA office in Richmond, Canada collected toys for the Richmond Christmas Fund and supplies for the Langley Animal Protection Society. Colorado team members built bicycles for children through the Bikes for Tykes holiday event. And the Westminster and Longmont, Colorado offices gathered toys for the Emergency Family Assistance Association (EFAA) organization.



Maxar Internal Operations team members in Colorado built 22 bicycles for children in foster care during the holidays.

HURRICANE DORIAN FUNDRAISER

Maxar's East Coast U.S. offices raised funds for relief efforts in the Bahamas after Hurricane Dorian. Team members were encouraged to wear their favorite sports team jersey to the office and donate to Team Rubicon and World Central Kitchen, a non-governmental organization devoted to providing meals after natural disasters. The Tampa location hosted a cornhole tournament and happy hour to further bolster their fundraising efforts. The team members raised almost \$1,700.



Maxar employees celebrate the first and second place teams in the cornhole tournament during the Hurricane Dorian fundraiser.



MAKING SERVICE PART OF OUR COMPANY ETHOS

Maxar team members spend workdays in the community

IMPACT

Maxar supports team members volunteering in the community as a team-building activity. These are some projects Maxar employees worked on.

LEADERSHIP PROGRAM FULFILLS MAXAR'S PURPOSE

Maxar's Human Resources department ran an eight-week leadership program for individual contributors called the Impact Program. The program required community service that the cohort members chose. In 2019, 19 participants spent at least 76 hours in the community on projects, like:

- Team members spent a day at Temple Grandin Equine Center building an arena, outdoor fencing and moving dirt. Temple Grandin Equine Center, an initiative of Colorado State University's College of Agricultural Sciences, provides patients with access to equine-assisted therapy. The center said it would have taken their staff three weeks to finish what Maxar employees accomplished in a day.
- Team members organized and assembled 119 kits for the homeless. They fundraised, planned and assembled the kits, which included things like hygiene kits, granola bars, water bottles, sunscreen, lip balm and wool socks. Volunteers distributed the kits to fellow team members to hand out during their commutes to the office. Maxar team members were so enthusiastic about the kits that the Impact team created a second set to be handed out in the community.



Maxar team members helped build an arena and outdoor fencing at Temple Grandin Equine Center in Denver, Colorado.

COMMUNITY

Volunteering

HABITAT FOR HUMANITY

Twenty-five Maxar team members in Colorado volunteered for Habitat for Humanity, a nonprofit that constructs homes for local families.



Maxar team members helped pour concrete driveways, replace flooring and frame homes at Habitat for Humanity sites.

NORTHERN VIRGINIA FAMILY SERVICES

More than 20 Maxar employees from the Herndon, Virginia office volunteered at the Unstuff-a-Truck event at the Northern Virginia Family Services, which provides food for families.



Maxar employees from the Herndon, Virginia office volunteered before Thanksgiving at Northern Virginia Family Services.



WE WORK BETTER TOGETHER

LOOKING AHEAD TO 2020

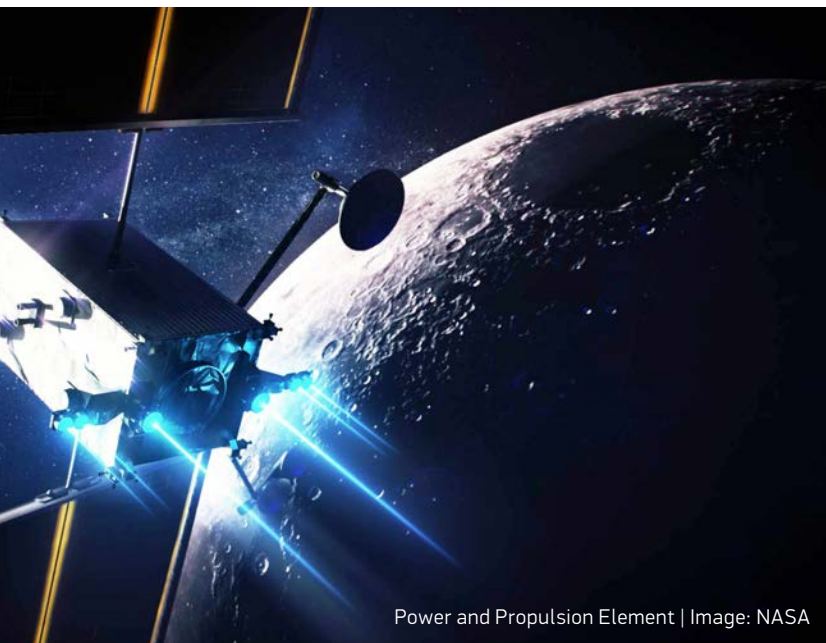
Maxar recognizes our technology is a powerful tool to address complex global challenges, and that tackling these challenges requires cooperation and commitment. As we look back on the past year and plan for the next, we know our impact is greater because of our many partnerships—with customers, thought leaders and organizations across the globe. Our partners share our excitement about what our technology can do, and that shared view of the possibilities inspires us to be bold and daring.

Underpinning these efforts is our belief in the power of democratizing the use of Earth observation data. We are witnessing a paradigm shift where our data provides value across a much wider array of stakeholders than ever before. Whether you're a government leader, business leader or philanthropist, access to space-based technologies is a game changer. The more we can broaden our reach and embed our technologies across workflows, the greater our impact.

In 2020, we're going bigger. We're mapping every building and road in sub-Saharan Africa. We're building a solar electric propulsion system that will allow astronauts to orbit around the moon. We're designing forest fire monitoring satellites. We're delivering critical data to stop Ebola. We look forward to sharing stories of these projects and more in next year's Impact Report.



AW3D Telecom
Land Use Land Cover
Boston, USA



Power and Propulsion Element | Image: NASA



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2020 IMPACT PROJECTS

- Power and Propulsion Element for NASA's Lunar Gateway
- WildFireSat by MDA, a Maxar company, for the Canadian Space Agency
- DigitizeAfrica in partnership with Ecopia.AI, the Bill & Melinda Gates Foundation and Sustainable Development Technology Canada
- Humanitarian Grand Challenge to support the ongoing Ebola response in the Democratic Republic of the Congo and Uganda in partnership with Humanitarian OpenStreetMap Team
- Famine Early Warning System Network (FEWS NET) in partnership with Chemonics to develop machine learning approaches to estimate cropped area on smallholder farms in sub-Saharan Africa
- Monitoring The Ocean Cleanup's system cleaning up the Great Pacific Garbage Patch
- National Renewable Energy Laboratory (NREL) as part of their Innovative Site Preparation and Impact Reductions on the Environment (InSPIRE) project to use very high-resolution imagery and GBDX to evaluate low-impact development solar installations



Thank You

Thanks to the Maxar employees who worked on this report: Nicholas Arens, Turner Brinton, Kristin Carringer, Nancy Coleman, Deland Craven, Heidi Daniels, Doug Engelhardt, Matt Hallas, Barbara Hey-Smith, John Hofius, Jake Koplen, Omar Mahmoud, Jen McCuiston, Madison Musgraves, Chris Orndorff, Rhiannan Price, Gord Rigby and Stephen Wood. And most important, thanks to Maxar employees around the globe whose contributions to our CSR efforts highlighted in these pages are making this a better world.



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