DroneDeploy Social Impact Report 2022

Capturing reality for a better tomorrow
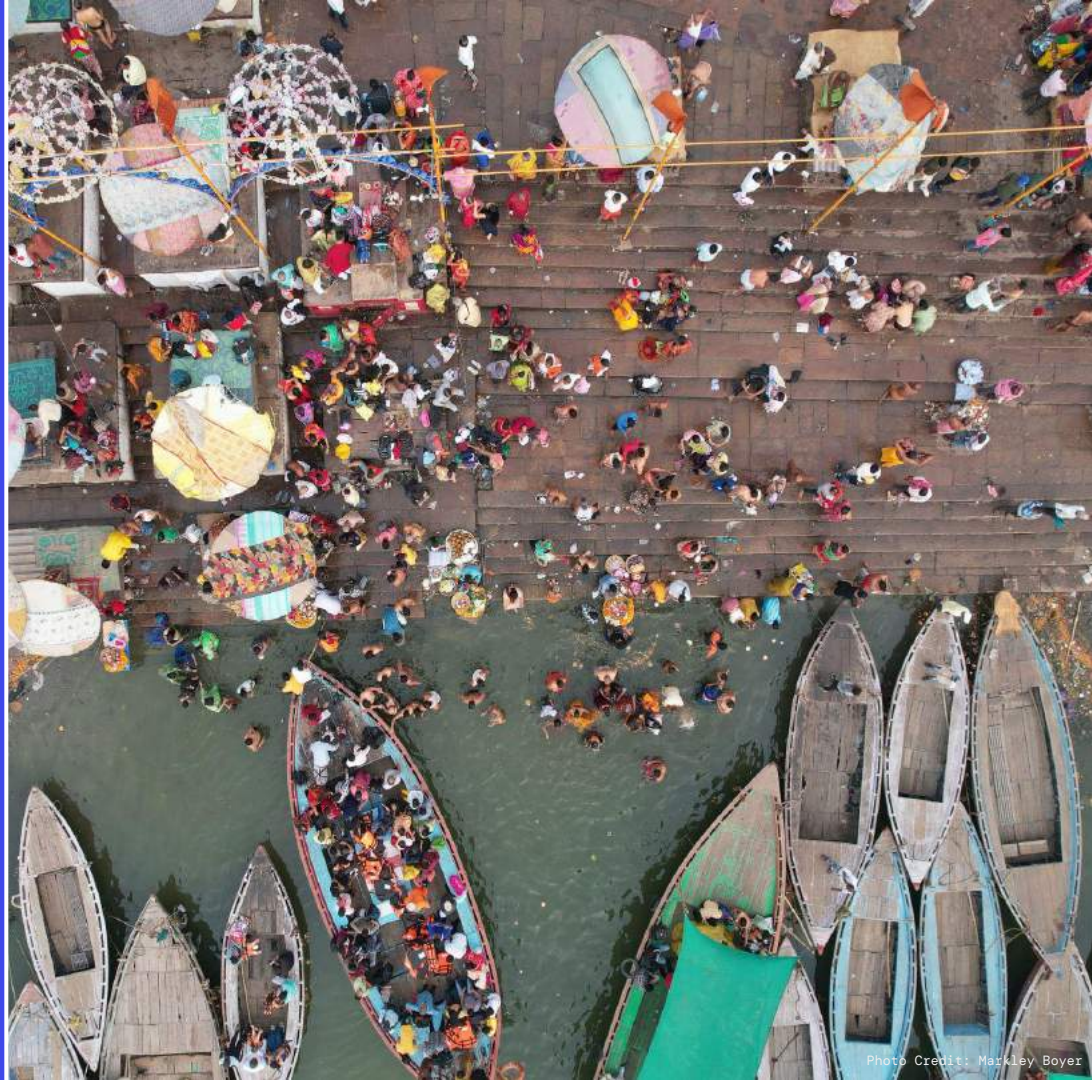
DroneDeploy

Table of contents

Introduction

A message from our founders

Our work puts technology and power into the hands of decision makers at a local scale.

Reality capture technology is becoming a critical tool to document, understand and interpret our physical environment. As our industry's field of work and influence grows, the question of "whose reality are we capturing?" becomes increasingly important.

Traditional documentation methods don't provide a single source of truth, but a set of observations filtered by the lens of the observer. O**ur technology allows anyone to take a photo, create a map and share that across the world, capturing an objective view of all aspects of a location.** As we expand reality capture technology, our mission at DroneDeploy.org is to provide the tools for everyone to capture their reality and use this power and knowledge to shape the future. We see this story playing out around the globe in local communities.

DroneDeploy.org has the incredible opportunity to empower new voices as they capture their reality for good. In this report, we highlight how our impact partners are using incredible insights from reality capture technology to fight for their resources, livelihoods and communities.

Thank you for supporting our company's journey and our impact work.

Jono Millin
Co-founder, DroneDeploy;
Founder, DroneDeploy.org

About DroneDeploy.org

Turning insight into action.

Our mission at DroneDeploy.org is to provide the tools for everyone to capture their reality and use this power and knowledge to shape the future. Our partners are using reality capture technology to improve lives by increasing safety, efficiency and impact. **Dronedeploy.org** has three focus areas where are product delivers: community engagement, crisis response, and wildlife conservation.

This report showcases our partners' inspiring work, using DroneDeploy to make a difference across nonprofits, community organizations, search and rescue groups, and in the classroom.

Together, we're harnessing reality capture for a better tomorrow.

Conservation
People are able to understand their environment and better manage and protect resources.

Crisis
People are able to prepare and respond to disasters faster and with precision.

Community
People are able to use reality capture to educate and advocate for their community needs.

Social impact highlights

5.1 MM

Images processed for good
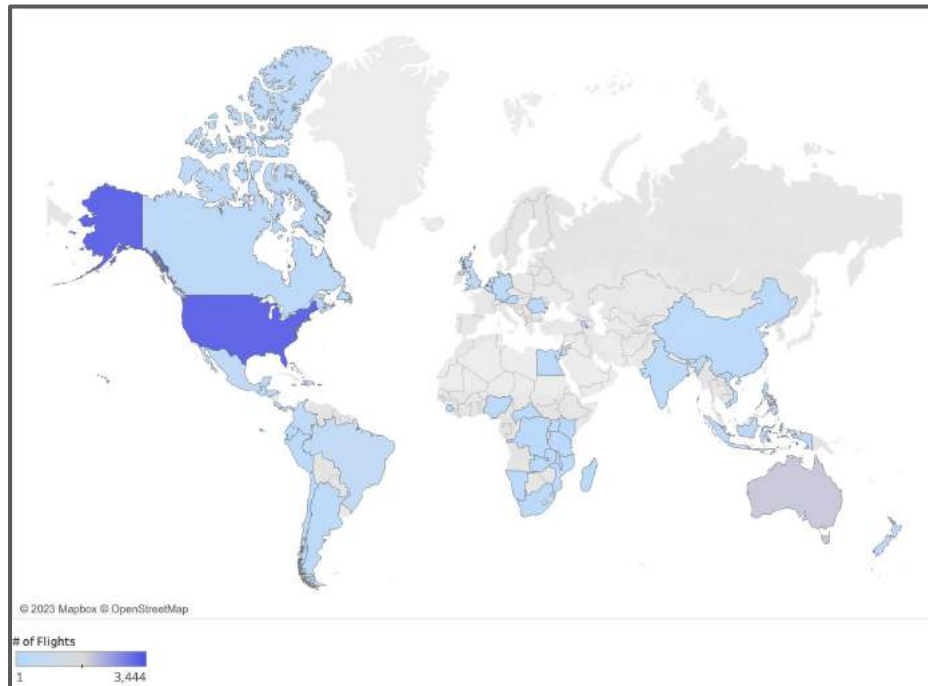
+ 84%

YOY Increase in flights

+ 38

New nonprofits supported
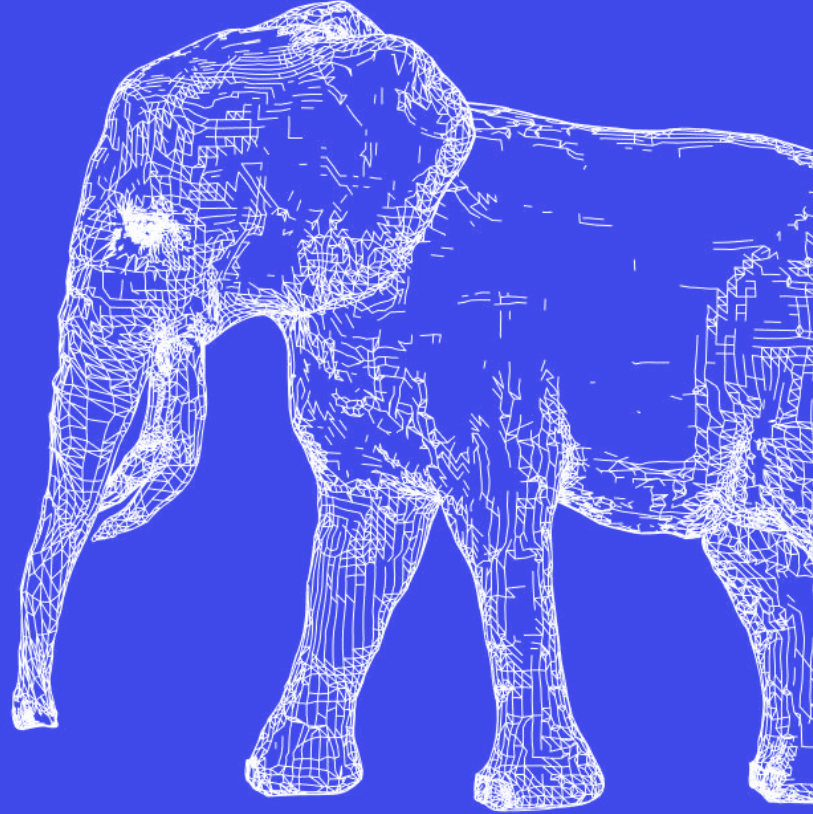
↑ 112%

YOY Increase in images processed

Social impact highlights

- **138** nonprofit partners
- **61** countries captured
- **25K** flights executed
- **$992K** in product donated
- **15K** maps created
- **12M** acres mapped

© 2023 Mapbox © OpenStreetMap

# of Flights

1   3,444

Impact areas

Our impact focus

DroneDeploy.org partners with nonprofit organizations across the world working in conservation, crisis response and community engagement. We are proud to offer free or discounted access to our software, training resources and support to aid these organizations in furthering their missions.

01

Conservation
People are able to understand their environment to better manage and protect resources.

02

Crisis
People are able to prepare and respond to disasters faster and with precision.

03

Community
People are able to use reality capture to educate and advocate for their community needs.

01
Conservation

Conservation

Management of landscapes, wildlife and cultural resources for conservation and sustainable use is critical as we face increasing pressures on our natural environment from climate change and land use change. Reality capture can help.

Capturing data in remote locations

Photo Credit: CitizenScience GIS

Documenting changes

Photo Credit: Deschutes Land Trust

Supporting community-led conservation

Photo Credit: Osvaldo Gajardo / WWF-Brasil

Conservation

Capturing reality in remote locations

Many of the areas in most need of documentation and management are the hardest to access. Large landscapes, remote islands and treacherous steep terrain all hinder our ability to understand complex landscapes. DroneDeploy provides equitable pricing based on nonprofit location and size to prioritize mapping in remote areas.

Documenting changes in the physical and natural world

Drones are increasingly used to document changes in the physical and natural world, providing new perspectives for environmental monitoring and research. Tracking changes over seasons, years and through restoration projects gives greater transparency on conservation practices and their impact on the environment.

Supporting community-led conservation

Reality capture greatly benefits indigenous and community-led conservation efforts to protect natural and physical assets. In environmental conservation, the tools allow for monitoring wildlife, detecting illegal activities and mapping land-use change. This empowers communities to protect their traditional territories and preserve their cultural heritage.

Partner Spotlight:
Elephant conservation in Malawi

Malawi holds 70% of the African continent's elephant population. Wildlife Neighbors is improving monitoring.

In the 1970s, approximately 1,200 elephants populated Kasungu National Park in Malawi. By the early 2000s, only 120 remained. Since 2015, the park has been working to make the park safe for elephants to be reintroduced. Thanks to the park's extraordinary conservation success, not a single elephant poaching incident has occured since 2018.

This summer, **150 elephants were relocated back into the par**k. Monitoring and management is incredibly important for this new population. Since July, the park rangers have been **using drones and DroneDeploy to enable better park management**.

There are two ways drone flights are used for park management: **monitoring human activities** and **monitoring the habitat and wildlife.** For human activities, encroachment on the boundaries of the park can be a major issue.

Using progress flights, the rangers can see if people are building structures or farming nearby, or if elephants are moving outside the park and raiding neighboring farms. For habitat monitoring, the rangers use drone maps to look at the effects elephants are having on the park's ecosystem, ensuring they are not overgrazing or having a negative effect on the ecosystem.

The rangers are exploring new uses of reality capture tools to monitor the elephants themselves. Using DroneDeploy, they can find and identify herd locations and behavior, and even measure the size of individual elephants. Together with DroneDeploy developers, we are also testing AI tools to count individuals.

WILD LIFE
NEIGHBORS

"DroneDeploy's social impact program has provided incredible value for our small team working to protect wildlife in Malawi. It has allowed us to put the technology into the hands of more people, allowing them to be more efficient and effective in their work."

Catherine Sibale

Photo by: Chris McCarthy

Partner Spotlight:
Community forestry in Vietnam

Vietnam is a global wildlife hotspot. Flora & Fauna is preserving habitat.

Incredibly rugged mountain ranges house much of the biodiversity in Vietnam. The Cao Vit Gibbon is one of the endangered species that call this area home, and forest rangers together with local communities are working to protect its critical habitat.

The Cao Vit Gibbon was believed to be extinct until its rediscovery in 2002. Today, there are approximately 80 individuals remaining, all in a single location at the border between Vietnam and China. The challenge now is to protect the population from danger and restore the degraded forests they live in as quickly as possible.

Fauna and Flora International (FFI), together with the Forest Protection Department rangers and local communities, have been working hard to plant native trees, including fruit trees that the gibbons like, as well as encourage natural regeneration. However, **the mountainous terrain is difficult to traverse and the teams have limited resources.** This made it hard to monitor restoration progress and plan locations of new activities.

The team has been trialling new methods of mapping and monitoring the quality of the Cao Vit Gibbon's habitat in the remote and rugged mountains of north Vietnam.

The field team now uses high-resolution mapping and 3D terrain models from drones. Each mission covers 15-30 ha. They process the orthomosaics in DroneDeploy, which **speeds up the workflow** considerably and **gives a high-quality result** that can be used straight away to see the changes in habitat quality and connectivity for the gibbons, and to plan new restoration sites.

The team is turning to action with the insights generated from DroneDeploy. They are able to better direct the restoration work, as well as direct the community patrol teams to areas that need protection from grazing and tree cutting. FFI is now expanding its use of DroneDeploy into other sites in Vietnam, including for the detection and prevention of illegal deforestation in the Hoang Lien Mountains and the mapping of seagrass habitat for green turtles in Nui Chua National Park.
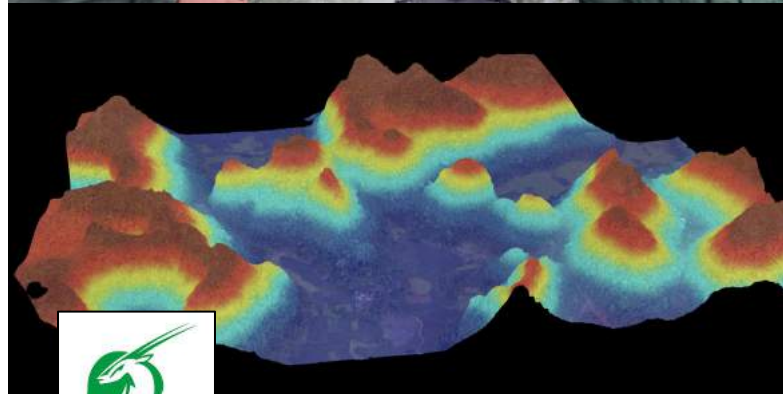

FAUNA & FLORA INTERNATIONAL

Photo credit:
Hoang Van Tuan (Top)
3D Elevation map in DroneDeploy (Bottom)

"We've found DroneDeploy immensely useful for quickly generating insights from our abundance of drone data that we can turn to actions on the ground, such as identifying where our restoration efforts are most needed or where critical habitats are that need protecting."

Oliver Wearn

02
Crisis

Informing crisis response

We continue to face record numbers of natural disasters, impacting the world's most vulnerable populations. Reality capture can help throughout the cycle of disaster and crisis response, leading to improved outcomes.

Improving safety in crisis response

Responding with speed and precision

Building community resilience to crisis

Informing crisis response

Improving safety in crisis response

Search and rescue teams use drones and robots to collect reality capture data in areas that are too dangerous or difficult assess on foot. After a disaster, infrastructure and access routes can be assessed visually with drone maps. Response personnel use drones and robots to reduce their own exposure to risk and danger while providing life-saving aid.

Responding with speed and precision

Reality capture can help emergency responders assess damage, locate survivors and plan rescue missions in a safer and more efficient way. By providing real-time and highly detailed information, reality capture technology helps emergency responders to quickly conduct damage assessments, deliver aid and locate survivors.

Building community resilience

Many areas of the world have no useable or recent baseline data on assets and infrastructure. Using reality capture technology, communities are able to survey and map out homes, critical assets and roadways. This data is used when disaster strikes to assess damaged areas, measure how many people were impacted and plan response work.

Partner Spotlight:
Finding missing persons

Search & Rescue teams are finding new perspective with reality capture.

Nearly half of all search missions by Hjálparsveit skáta í Reykjavík, an Iceland search and rescue organization, use DroneDeploy as an integral part of their operations in searches for missing person searches. The software allows them to **gain situational awareness** in new environments and **methodically search areas** for missing persons.

Ólafur Jón Jónsson (Óli), a volunteer with Reykjavik Search and Rescue (REY-SAR), purchased a drone solely as a hobbyist in 2015, inspired to pursue a personal passion. Soon after, he began to notice the parallels in his doings as a drone enthusiast, and his operations as a search and rescue volunteer. Convinced of the technology's real-world applications, Óli started experimenting with his drone in callouts and lobbied his friends and colleagues to join in. This single drone began to attract attention and demand for it grew with the discovery of its capabilities, increased experience and familiarity.

Over time, and with many on-hand demonstrations, Óli's team embraced his passion project. Flying the drone themselves and seeing the value-add that came from **efficient photo collection and map creation** convinced them to implement the technology. David Oddsson, Drone Operations Manager and member of the organization's board, stated, "Óli has contributed a lot to changing the perception of our group. He pushed very hard to use drones from the beginning. These persistent efforts resulted in faster, more efficient search and rescue operations for all."

Today, an entire drone team at Hjálparsveit skáta í Reykjavík works with on-the-ground operators to **quickly and safely complete missions**. Óli told us that drones are deployed whenever they can be, weather permitting. Drones are now an integral part of nearly all callouts, providing a wide range of services and capabilities.

Search teams at work
Photo Credit: Óli Jónsson

"People are usually the weakest link because we get easily distracted, but we mitigate that with automation. DroneDeploy provides us with that capability along with ease-of-use and rapid deployment."

Ólafur Jón Jónsson (Óli)

Drones provide new perspective
Photo Credit: Óli Jónsson

Partner Spotlight:
Supporting Hurricane Ian relief

Over 100,000 homes were damaged by Hurricane Ian in September and October of 2022.

Nearly half of all search missions

The storm was the fifth strongest to ever hit the United States. Hurricane Ian caused severe wind and flooding damage, loss of life as well as significant property damage totalling over $40 billion.

Drone Cadets collaborated to develop the Career Pathways Pipeline into the drone industry. The consortium was given a rare chance to respond to Hurricane Ian. They deployed to Fort Myers Florida and surrounding areas to provide aerial support for damage assessments, which identified how much and how severe structural damage was. This information is critical for insurance claims and rebuilding.

Faustino Taguja was one of the pilots who how responded as part of Drone Cadets programming. He used DroneDeploy to quickly process the data for disaster mapping purposes. Tahuja was able to identify an area of interest to capture, set up a mapping mission on DroneDeploy's mobile app, capture the data, upload it to Drone Deploy and receive a 2D or 3D map of the area in a matter of hours.

Drone Cadets also participated in multiple missing person searches in Florida after the hurricane. The team used drone maps to assist in the search process. The speed of data acquisition significantly increased how quickly aid was able to reach impacted communities.

Hurricane Ian Damage

03
Community

Community engagement

Our work is most effective when done in collaboration and partnership with others. We seek to uplift innovation and leadership, inspire new voices in our industry and place deep roots in the communities we live and work in.

Supporting STEAM education

Photo Credit: Citizen Science GIS

Developing place-based partnerships

Inspiring community leadership

Photo Credit: Markley Boyer

Community engagement

Supporting STEAM education

STEAM (Science, Technology, Engineering, Art and Math) education is critical to building the workforce of the future. Through DroneDeploy's Education Program, we offers discounted access to our software, training materials and curriculum resources to help educators incorporate drone technology into their lesson plans as well as after school and community outreach programs. DroneDeploy also has a focus on closing the gender gap and diversifying through supporting STEAM education partner programs.

Developing place-based partnerships

DroneDeploy is developing place-based volunteering partnerships by encouraging its employees to give back to the communities in which they live and work. The company supports various volunteering initiatives, such as beach cleanups, park restorations and STEAM education programs in local schools. By partnering with local organizations and nonprofits, DroneDeploy is leveraging its resources and expertise to make a positive impact in the communities where we operates.

Inspiring community leadership

DroneDeploy inspires community leadership by providing a powerful and accessible tool for individuals and organizations to collect, analyze and act upon geospatial data. Communities can make informed decisions, solve complex problems and drive positive change. With its user-friendly interface and comprehensive features, DroneDeploy's software empowers individuals to understand their world. By democratizing access to geospatial data and analysis, more individuals can become community leaders and make a meaningful impact.

Program Spotlight:
Giving back to our communities

Our impact in 2022:

Our company values are integrated into community engagement. We **#BuildTrust** through volunteering in communities we live and work in. We **#MakeitHappen** through giving and donation events all year long. We **#Simplify** through the **WePledge program**, making it easy for employees to give back 1% of their time and resources to causes that matter to them.

113

Nonprofits supported through giving and volunteering

$24,772

Donated through the WePledge program

280

Volunteer hours

Employee Spotlight:
DroneDeployees Making a Difference

Inclusion advocate,
Rob Corbett

Product Support Specialist, Rob Corbett, has merged his personal and professional background to bring drone flights to everyone. "I saw such value in what drones had brought to me and my students, how drones can serve someone with disabilities in such a great way," he explained. **"I wanted to bring inclusion into the UAS space by bridging the human/tech interface gap."** Rob volunteers with a variety of nonprofits including the Wounded Warriors Project, where he teaches veterans and their families about how to fly drones for fun, and for future work opportunities.

Shelter volunteer,
Marissa Konicke

Senior Product Manager, Marissa Konicke, volunteers every month at Austin Pets Alive! When the organization started, the save-rate at shelters was 45%. Now, the overall save rate in the city of Austin has increased to over 95%. **The organization has saved over 110,000 pets since 2008 and placed 10,533 pets into adoption in 2022 alone.** As a volunteer, Marissa helps with essential operations at the shelter, specifically the Dog Enrichment program.. The Enrichment program is important for dogs at the shelter as they need to stay entertained and interested on a daily basis.

Career mentor,
Joe Mente

Director of DevOps & IT, Joe Mente, serves as a Volunteer Technical Mentor at Hackbright Academy. Hackbright is a gender equality coding bootcamp that **has trained over 1,000 women, allies and non-binary people** to date. As a volunteer mentor, Joe leads lectures and discussions for each graduating class. He also helps with interview preparation such as whiteboard, technical topics and coding challenges and provides 1-1 mentoring and support to academy participants. "My goal is to help them be great programmers, and perhaps spark an interest in Operations."

Partner Spotlight:
Employment services in South Africa

43% of youth in South Africa are unemployed. YES is helping change that with job training.

Nearly half of all search missions
YES (Youth Employment Service South Africa) worked with Mzansi Aerospace Technologies and the City of Ekurhuleni to map a large informal settlement.

The YES program offers paid on the job training for youth in South Africa as they work on government and community needs projects. Youth trainees learn not only how to fly a drone, but also how to analyze the data collected using the DroneDeploy platform. The program with the City of Ekurhuleni trained over 40 young adults through a project collecting data on informal settlements.

The trainees in the program learn about issues in their own communities and are empowered with new technologies to help in addressing needs.

The Housing Development Agency is tasked with the upgrading of informal settlements, and works in conjunction with the city governments' housing departments. For many of the informal settlements in the country, there are no street addresses and the Housing Development Agency does not have a clear picture of what a community looks like or how many people live there. Soweto, is one of these informal settlements. Current estimates are that over 1 million people live in the area. What we expect to see from processed data includes flood lines, encroachment of environmentally sensitive areas, planning data for services and public safety, etc.
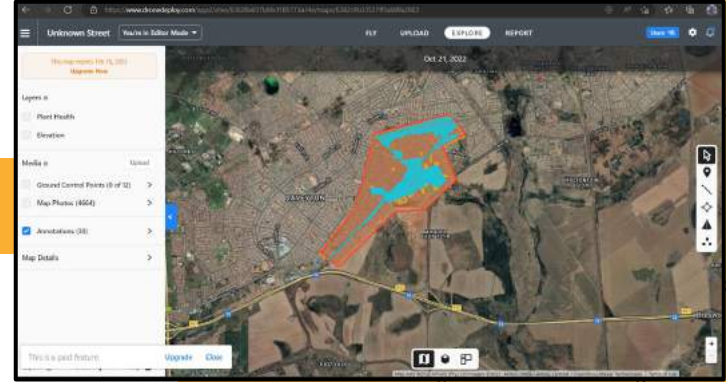
Photo Credit: YES

"What has impacted me the most is actually getting experience. There are not many opportunities for youth in our country to learn new skills. I am not only getting paid, I am also getting trained on something I really enjoy."

Anele Nala

Diversity, equity & inclusion

DEI @ DD

23%

Female
Energize Benchmark | 30%

21%

Underrepresented Minorities (UMG)
Energize Benchmark | 32%

Goals

Diversity | Programmatic targeted & balanced hiring

Equity | Build internal mobility and achieve pay equity

Inclusion | A safe and inclusive environment where all DroneDeployees thrive

Partner Spotlight:
Inclusion in the drone industry

Robotics students from a local high school joined the DroneDeploy conference in Austin Texas.

Highlights from our 2022 partnerships
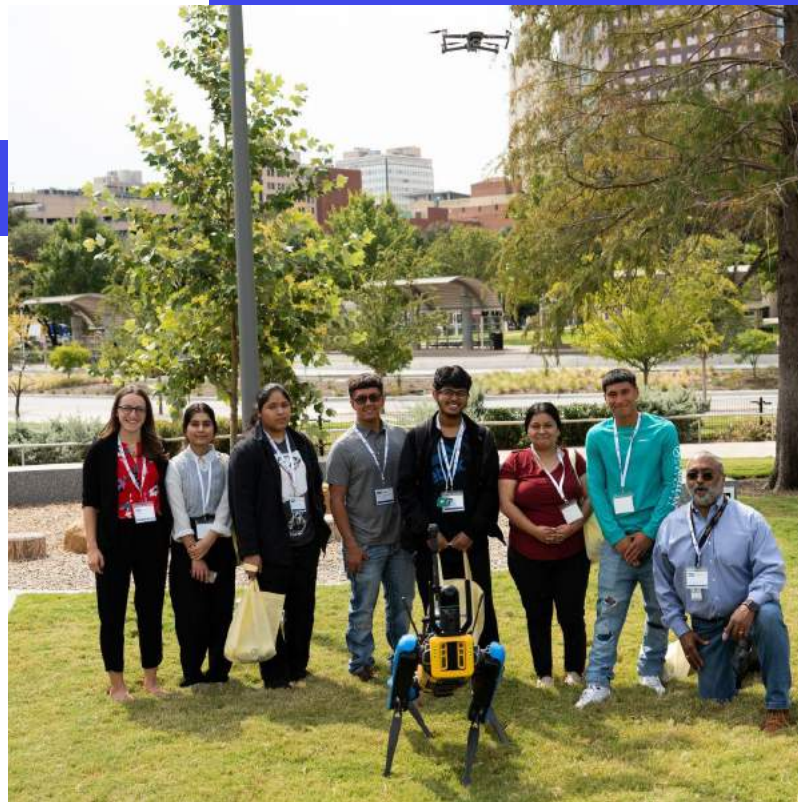
neuro DIVERSITY works

Nearly 20% of the population is neurodiverse, yet there is an 85% under/unemployment rate in the neurodiverse workforce. DroneDeploy is supporting Neurodiversity Works, which prepares students with autism spectrum disorders for careers in the drone industry.

OUR GENETIC LEGACY

DroneDeploy partners with the DRONe Project (Descendants Recovering our Names) which seeks to create a new generation of BIPOC female innovators in the field of digital historic preservation and drone technology, empowering them with the skills to become high-income earners via a paid workforce development program.

COLONEL ALLENSWORTH STATE HISTORIC PARK

DroneDeploy mapped Colonel Allensworth State Park. The town was the first in all of California to be founded, financed and governed by African-American individuals. DroneDeploy mapped the park for the Friends of Allensworth Nonprofit. The data will be used to monitor plant health and building upkeep needs.

Sustainability

How DroneDeploy is reducing emissions

Enabling climate action with Reality Capture

DroneDeploy is a cloud-based platform, which means our customers are able to reduce the environmental impact of their operations significantly. Intensive computing processes such as photogrammetry are data intensive. Our cloud infrastructure is carbon neutral. In addition, cloud infrastructure uses 77% fewer servers for the same tasks as desktop-based activities. This translates to an 84% reduction in power and an 88% reduction in carbon emissions.

Reality capture technology often replaces heavy equipment, and they also reduce work travel. Having a digital twin means fewer trips to the field. Business travel often accounts for upwards of 80% of business emissions, making it one of the largest contributors to corporate carbon emissions. We analyzed our own platform and usage to identify industry-specific emissions quotients. We then calculated all project data by industry on our platform to identify emissions saved.
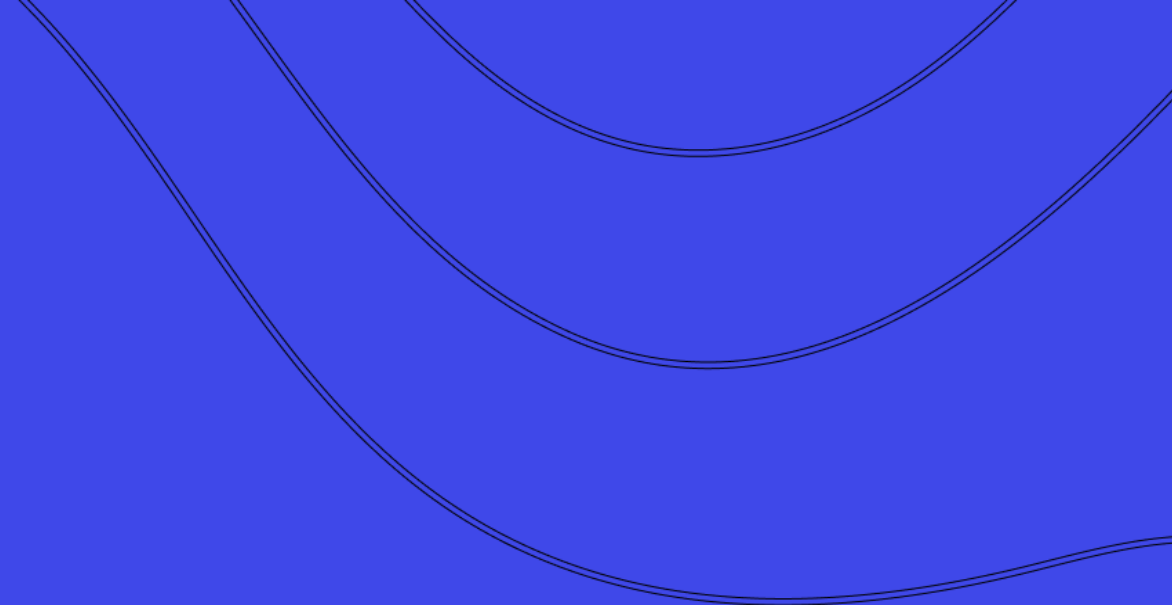
In 2022, our platform helped avoid **29k* tons of CO2 emissions.** That's equivalent to taking **6,304 cars** off the road for a year!

Onsite Technology uses DroneDeploy with their ground robotics to automate commercial solar inspections.

Appendix

Appendix

Thank you to our impact program partners !

Dates covered
Unless otherwise noted, all data and facts cover the calendar year of 2022 (January - December).

Sustainability data
Emissions study is based on a 10-mile driving trip saved for every daily viewer of an industrial project.
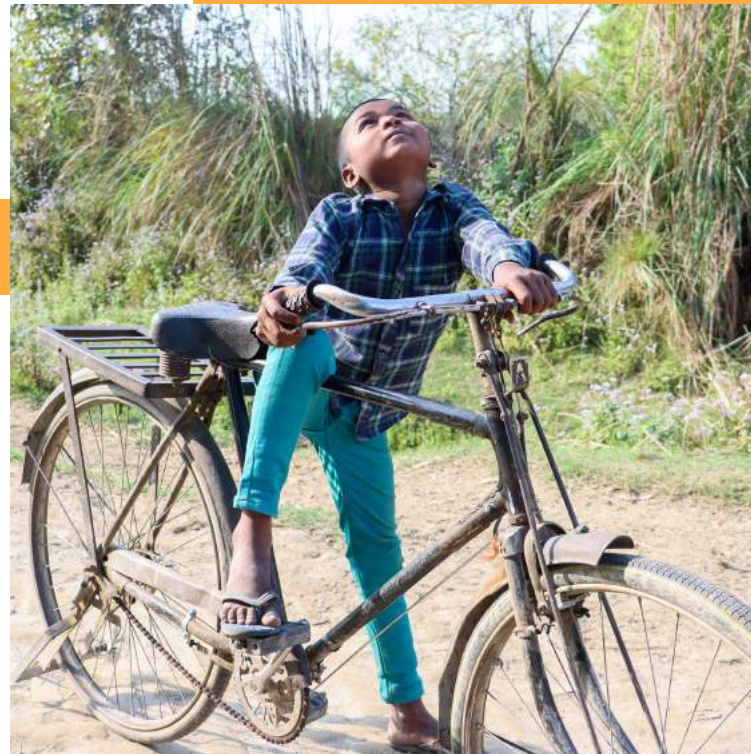
All program usage data is calculated yearly.

Diversity, equity, and inclusion data

All employee demographic data is pulled from ADP database as of Dec 30, 2022.

Volunteering and Giving
Volunteering hours and funds donated are tracked in our employee giving internal system Millie. All data is pulled from the system as of Dec, 30 2022.

A child watches a drone fly overhead along the Ganges River
Photo Credit: Markley Boyer

About DroneDeploy

DroneDeploy is the leading enterprise-grade drone data company. Trusted by brands globally, DroneDeploy captures every dimension of job sites, structures, and assets, and transforms it into meaningful insights for industries including construction, energy, and agriculture. Through interior and exterior data capture, DroneDeploy enables professional mapping, 3D modeling, and reporting on any device, anywhere in the world. To learn more, visit www.dronedeploy.com and join the conversation on Twitter @DroneDeploy.