

**SAVING EVERGLADES**

The megaproject that will help restore a unique ecosystem.

**SAFETY HISTORY**

Our milestones – from the safety belt to artificial intelligence.

**A SECOND CHANCE**

Meet the young men in India that train to become excavator operators.

**RIGHT PARTNERSHIP**

A tailor-made solution with customer in Montenegro.



# SPIRIT

Volvo Construction Equipment Magazine, Summer 2020

## HOME SWEET HOME

Panama City is still being reconstructed two years after Hurricane Michael. Volvo CE and Cowin Equipment were ready to help.





# ADD SILENCE

Welcome

## TOGETHER WE BUILD TOMORROW

**V**olvo Construction Equipment's purpose to *build the world we want to live in* is about working together with our customers to turn this belief into a reality for people everywhere.

With our series *The Megaproject Listing*, we showcase that purpose. In the coming pages you can read about how we are helping to restore the gigantic vital Everglades ecosystem in Florida, U.S. It is a breathtaking area, home to alligators and rare bird species, and it is also an important source of income for tourism. Our role is to help build the C-43 water reservoir, that will be used to control the water levels in the area. It is part of a hydrological restoration project never seen before in the U.S. and dozens of Volvo machines are on-site.

Helping communities around the globe is already part of our core focus. However, our new initiative – *The Building Tomorrow Project* – takes it one step further. The Building Tomorrow Project is a new, global platform to amplify our existing social good projects, raise awareness and encourage more action around ongoing social issues. Recently, we were part of the re-building of homes in Panama City in Florida. Volunteers from both Volvo CE and Cowin helped building new homes for people that had lost everything after Hurricane Michael in 2018.

**During spring, the Covid-19 pandemic** changed – and continues to change – all our lives, both socially and economically. It has been a difficult situation for the whole world, it has destroyed the lives of thousands but it has brought us together in the millions. Volvo CE has been affected by the situation as well. Our top priority during the past months has been the health and safety of our colleagues, our customers and the general public. Hopefully, by the time this issues of Spirit drops, the world will slowly be getting back to normality.



**The magazine that** you are holding in your hands covers stories from around the globe with one common thread, truer and more important than ever: we keep building tomorrow.

Enjoy the read!

**Tiffany Cheng**  
Director, External Communications  
Volvo Construction Equipment

FOR MORE INFO



A world with less noise is a better world. So now we proudly present our new compact electric construction machines. They are here to Add Silence.

Prebook now at [www.volvoce.com/electromobility](http://www.volvoce.com/electromobility)

Volvo Construction Equipment  
Building Tomorrow



### SPIRIT

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# IN THIS ISSUE

Summer 2020

**06. AFTER  
HURRICANE MICHAEL**

Two years after the hurricane hit the Florida Panhandle, the need for restoration is still big. As a part of The Building Tomorrow Project, Volvo CE and dealer Cowin Equipment formed a partnership with Habitat for Humanity to rebuild homes.

**11. READY FOR A NEW HOME**

Kelly and her children saw their new house fall to pieces during Hurricane Michael. Now they can move into a new home. Volunteer hands helped them build it.

**16. STORIES OF GOOD**

At Volvo CE, our promise is to build the world we all want to live in. Read more about our stories of good and hope around the world, all part of The Building Tomorrow Project.

**18. BRINGING  
BACK THE EVERGLADES**

The build of the massive C-43 reservoir is part of the extensive plan to restore the waterflows of the Everglades in Florida after centuries of draining.

**26. MEET THE OPERATOR**

Ivey Spivey is the senior superintendent who started out as an operator. He is part of the big team building the C-43 water reservoir in the Everglades.

**29. TO BUILD  
ON SWAMPLAND**

A giant reservoir build faces several challenges. The soil is uneven, hurricanes lure and regulations need to be followed. Versatile equipment is one part of the solution.

**30. ECO RESTORATION**

Bringing back coral reefs in Bali, restoring the Patagonian grasslands and replanting forest in Madagascar. Indulge in more ecological restoration plans around the world.

**34. FRUITFUL BUSINESS**

Volvo CE customer Betax chose Volvo Financial Services as their financial partner. Now they are building the highways of Montenegro.

**36. ADDING SILENCE**

Learn about the ECR25 Electric compact excavator and the L25 Electric compact wheel loader and why we highlight silence as an important feature.

**40. PROACTIVITY AT ITS BEST**

A new initiative based on technology and proactivity improves the way dealers work with customers during the lifetime of their machines.

**42. THEY BECOME  
EXCAVATOR OPERATORS**

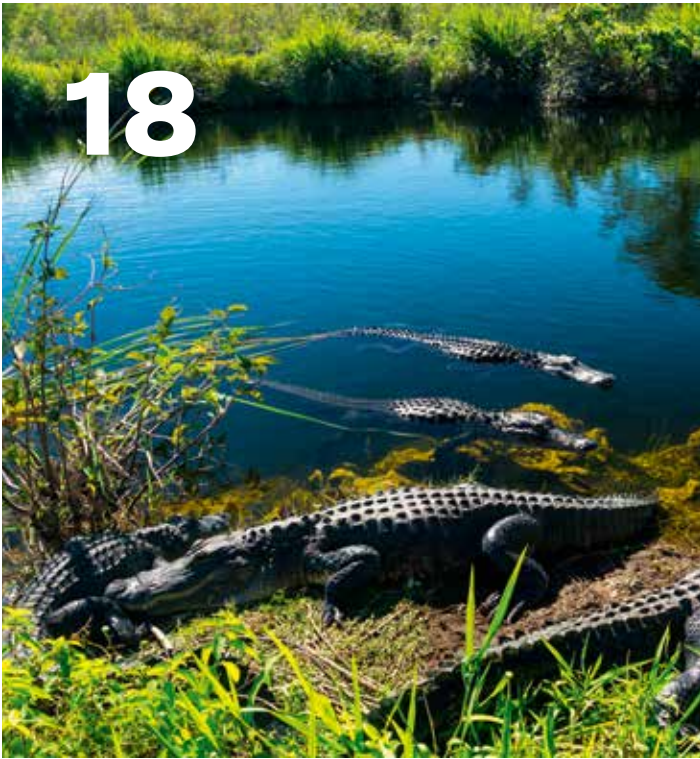
Meet T Prasanth and his classmates. They are all participating in Volvo CE's training excavator operator program for the underprivileged youth in India.

**46. OUR SAFETY JOURNEY**

Did you know that Volvo CE introduced the ergonomic and adjustable machine cab CareCab already in the early 90s? Read about that and more safety milestones.

**50. VOLVO CE UNIVERSE**

News from around the Volvo CE world. Follow us online and enjoy videos, articles and on-site images from the world's most fascinating construction sites.





# REBUILDING A CITY

Hurricanes show no mercy. Hurricane Michael was no exception when it reached Panama City, Florida, in October, 2018. Almost two years later, the recovery work is still ongoing and helping hands are much-needed. In a joint effort to support the local community, Volvo CE and dealer Cowin Equipment are teaming up with Habitat for Humanity to rebuild homes.

By **Kerstin Magnusson** Photos by **Blademir Álvarez**

If you search 'Panama City, Florida' on Google Images, you end up with two sides of one coin. The majority of the pictures show a town that is still in ruins after Hurricane Michael smashed buildings to splinters, tore off roofs and sent trees careening through walls. It still seems to be a city haunted by the devastation that the hurricane brought almost two years ago. On the other hand, both new and old photos and advertisements show a sunnier side. The beautiful beaches here are known world-wide. The fishing is excellent. Panama City is very much a beloved destination.

But that majority of the pictures haunt you. To understand the situation as it is now, one needs to go back to those October days in 2018 and take a closer look at actually happened.

"The hurricane actually developed very quickly, before it hit land. It was a Category 2 and increased to a 5 in just half a day," tells Lance Rettig, Executive Director, Habitat for Humanity of Bay County. Habitat for Humanity is a leading global nonprofit, with a long tradition of partnering with families and individuals in need of affordable housing.

Many families didn't evacuate since it didn't seem like winds would be that strong. Also, this community in Florida that experiences hurricanes almost annually, is a tough one. But the hurricane did strike, and it struck hard.

"A majority of the buildings in the not-so-affluent areas were older, from the 20's or 30's. Those couldn't withstand the winds and water as well as the newer ones," says Lance Rettig.





On October 7, 2018, Michael became a hurricane with peak winds eventually reaching 160 mph (260 km/h). Thousands of people in the city watched their homes destroyed by water, falling trees and strong winds. Nearly two years later, the recovery work is still ongoing. Why? Shouldn't the job be done by now? In the media, Hurricane Michael has often been called the "forgotten hurricane."

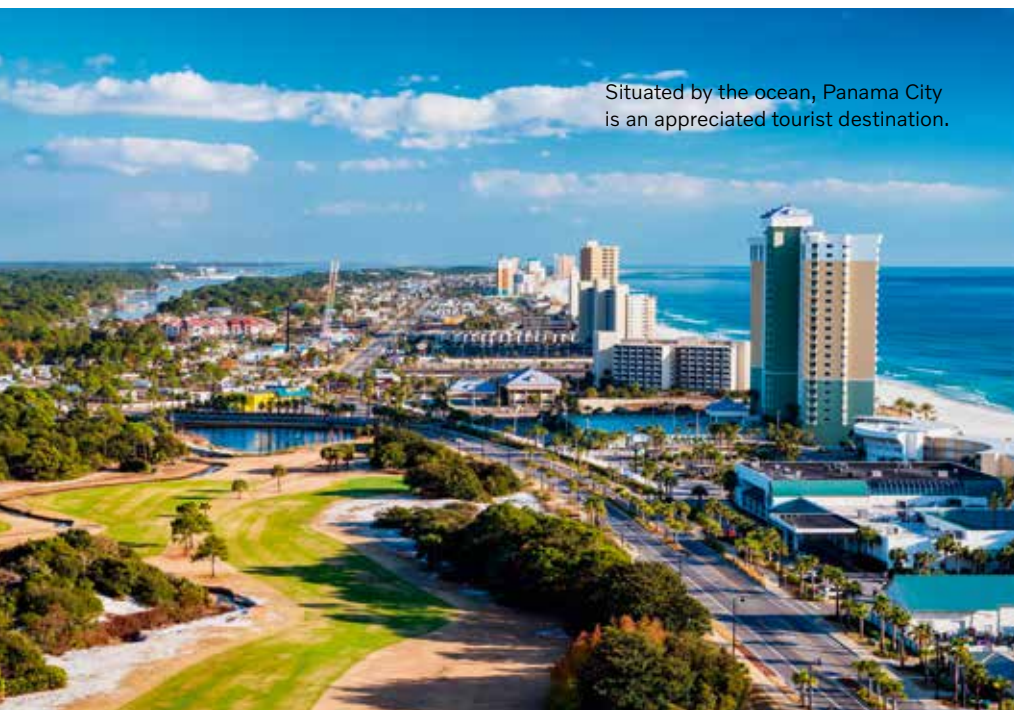
"We were sandwiched between a couple of other events. One was Hurricane Florence, others were political events and some other disasters, like the wildfires in California. People came down to help in the first months, but then it slowly was more or less forgotten," says Lance Rettig.



Lance Rettig

A random Google search, two years later, therefore still serves up images of wrecked homes. The need for restoration and rebuilding is still very high. Federal money has been granted to the city, but the work is still happening at a slow pace. That is why Volvo CE, along with its dealers

and employees, decided to partner with Habitat for Humanity to help with rebuilding efforts, and they now build homes alongside families in need of affordable housing in the Panama City area. The future homeowners themselves invest their sweat equity, volunteering on the build and paying an affordable mortgage for the homes they purchase.



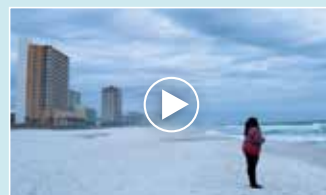
Situated by the ocean, Panama City is an appreciated tourist destination.



Debris is still lying around in and around the city.

#### THE BUILDING TOMORROW PROJECT

The Building Tomorrow Project is a global program that brings Volvo CE's social good activities under a single, cohesive platform to amplify our existing projects, raise awareness and encourage more action around ongoing social issues. We offer this global program to advance social causes in different locations where Volvo CE has employees, dealers or customers. Panama City, where we help build homes after Hurricane Michael, is one of the activities under The Building Tomorrow Project.



Watch the film from Panama City at [www.volvoce.com/building-tomorrow-project](http://www.volvoce.com/building-tomorrow-project)

Margot Gorman in blue t-shirt is helping rebuilding homes through The Building Tomorrow Project.



**Randy Rockwell, Vice President of Sales** from Volvo CE dealer Cowin Equipment points out that it was an easy decision to join in.

"Giving back to the community is important for us, and we are just happy to help. Most of our guys coming over from Cowin live on the Gulf Coast, so we have experienced hurricanes, we understand what that is about," he says.

Margot Gorman is one of the volunteers from Volvo CE. She is happy to pitch in with what she can: "I'm very glad to be here, I only wish that I could do more. I think it is very important to reach out a hand as an individual, and also as a company."

"The hurricane actually developed very quickly, before it hit land. It was a Category 2 and increased to a 5 in just half a day."

LANCE RETTIG



A new house on its way in Panama City.

#### HURRICANE MICHAEL'S EFFECTS ON SOCIETY (U.S. AND CENTRAL AMERICA)

74

Deaths attributed to the storm

1.3 MILLION

Homes and businesses without power during the hurricane

4.7 BILLION DOLLARS

Estimated cost of the reconstruction

60,000

Estimated number of homes destroyed

25 BILLION DOLLARS

Estimated amount in damages

Panama City was one of the hardest struck cities in the Gulf Coast region. Numerous businesses in nearby Panama City sustained major structural damage or were destroyed by violent winds. Many restaurants, gas stations, shopping centers, office buildings, retail stores, and hotels were completely leveled. In residential areas, homes and apartment buildings lost their roofs and exterior walls, and many trees were toppled, snapped, or completely defoliated. Vehicles were flipped and overturned.

Sources: npr.org, weather.gov

#### SAFFIR-SIMPSON HURRICANE SCALE

The scale classifies hurricanes – Western Hemisphere tropical cyclones that exceed the intensities of tropical depressions and tropical storms – into five categories, distinguished by the intensities of their sustained winds. Hurricane Michael was a Category 5.

Source: The National Hurricane Center and Central Pacific Hurricane Center



## A MUCH-NEEDED CONTRIBUTION

John Edwards is on-site in Panama City to literally put his hands in the dirt. He is one of the volunteers that is contributing to home builds after Hurricane Michael.

By **Kerstin Magnusson** Photos by **Blademir Álvarez**



**S**ince the hurricane, thousands of families are still without real homes and are forced to live in temporary housing or with friends and relatives. The need for volunteers is, to put it short, still high.

One of the volunteers in Panama City is John Edwards, Sales Manager from Cowin Equipment, a Volvo CE dealer in North America. Being a citizen of Florida himself, he can easily relate to what needs to be done.

"In the area I live in, we've actually gone through two hurricanes that have hit directly. But it was not on the same scale as Hurricane Michael, not at all," he tells.

**The news coverage** right after the hurricane made a lot of people, including volunteers, come to the affected areas to lend a hand. However, it didn't last long.

"Right after the hurricane, it felt like everybody came in to help. That lasted a few months and then everybody went back to their normal lives. But the people's lives here still were not normal. And they still aren't normal. People do feel forgotten," says John Edwards.

To put it short, volunteer work is more important than ever, even almost two years after the hurricane.

"Thank goodness that Habitat for Humanity and other groups are coming in, doing a lot of clean-up, rebuilding a lot of houses. But they are also rebuilding lives. And that is the important part."

**The actual work** on-site consists of really getting your hands dirty, something that John doesn't have a problem with.

"It has been great so far. I have been helping build walls and set walls and set the sheeting in place. I mean, we can't change what happened when Hurricane Michael came in, but what we can do is to help people get a fresh start. The community itself also has a special spark. Perhaps it is the southern mentality of always sticking together and helping each other. I think that has contributed a lot," he concludes.

"Thank goodness that Habitat for Humanity and other groups are coming in, doing a lot of clean-up, rebuilding a lot of houses. But they are also rebuilding lives. And that is the important part."



John Edwards, one of many volunteers rebuilding homes.

## A PLACE TO CALL HOME



Two years ago, Kelly and her four children had just moved into an area where they finally felt safe. Then the hurricane came. After several moves, she and her kids are now on their way to putting the key in the door to a new home they own. Safe again, at last.

By **Kerstin Magnusson** Photos by **Blademir Álvarez**



The Building Tomorrow Project: Kelly



The new house is in a safe area and the children can play outside.

The apartment that Kelly and her four children – ages ten, seven, six and four years old – live in is fairly small, but cozy. The oldest son has just spent the first night on his own, in his own bed, Kelly tells.

“While we are here, I’m hoping that I can get the kids the different things that they need before we move into our new house,” she says.

The temporary apartment lacks many of the things that you normally would see in a home where four young children reside. Most of the family’s possessions were lost during Hurricane Michael. Kelly takes a deep breath and explains the situation as it was before the hurricane struck in October 2018.

“We had just moved to a great house from a terrible apartment complex. There, you saw a lot of violence every day, and I couldn’t let the kids go out and play. This new house had a garden with a fence, it was great for them. They could play outside”, tells Kelly.

Then the hurricane came, and the house was hit hard.

“I’m a police officer so I’ve seen some things, but this, this was different. Old oak trees knocked to the ground, houses with the roofs off in two seconds and pine trees snapping just in front of you. But all of the time, I tried to stay positive and calm for the kids,” she remembers.

The childrens’ drawings decorate the refrigerator in the temporary apartment.



**They sought shelter** through the church they belonged to and stayed with a family from the church for a while. Then the moving carousel started.

“For a while, we lived in a teeny tiny camper with only one room. But, just imagine having four children in one of those. They didn’t have anywhere to play, and we were not allowed to have toys around the camper.”

The apartment they live in now came after the camper. An upgrade in terms of living standards, but Kelly can’t really call it a proper home. Through her partnership with Habitat for Humanity she will own her own home very soon. It will be in a safe area in Panama City. Hurricane season will come again, but a stable house in a safe neighborhood is still worth a lot for Kelly and her children.

“It will be nice to own a home. Just the fact that we don’t have to move again, it will be amazing. And I will feel proud of my kids, that they will live in an actual house,” Kelly shared.

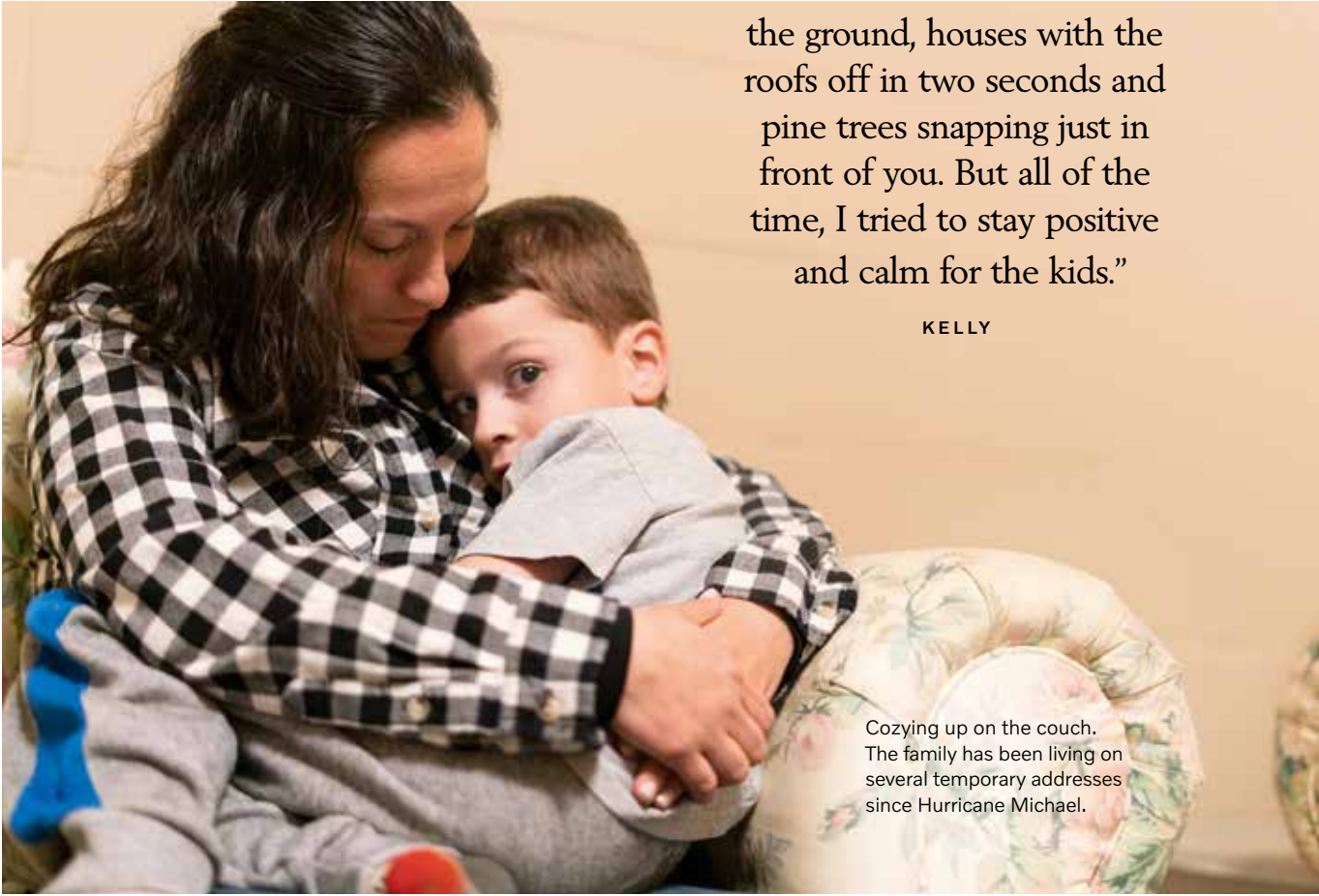
Kelly wants to offer her children a real home. The new house will mark a new era for the family.



“I’m a police officer so I’ve seen some things, but this, this was different.

Old oak trees knocked to the ground, houses with the roofs off in two seconds and pine trees snapping just in front of you. But all of the time, I tried to stay positive and calm for the kids.”

KELLY



Cozying up on the couch. The family has been living on several temporary addresses since Hurricane Michael.



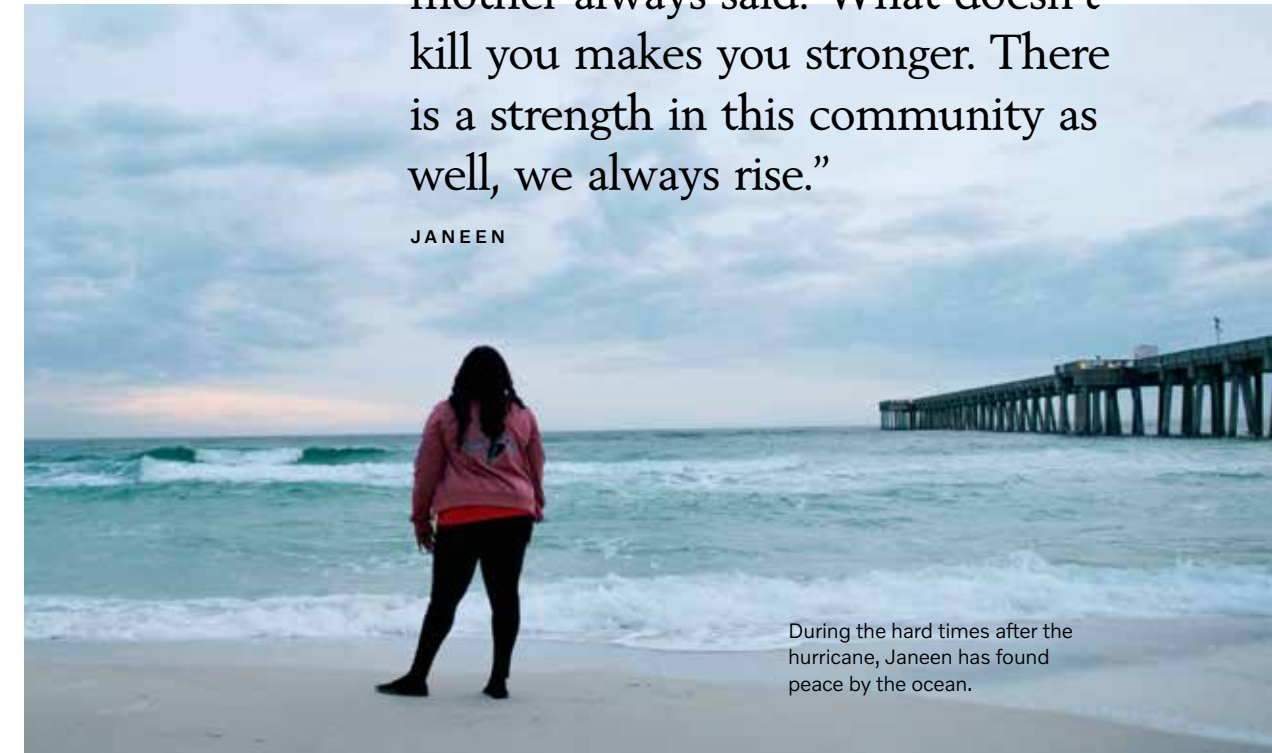
# NEW HOPE FOR THE FUTURE

In the course of just a few months right after Hurricane Michael, Janeen had lost everything. Now she sees a light at the end of the tunnel – a new home.

By Kerstin Magnusson Photos by Blademir Álvarez

“I prayed to God to keep me safe. I tried to remember what my mother always said: What doesn’t kill you makes you stronger. There is a strength in this community as well, we always rise.”

JANEEN



During the hard times after the hurricane, Janeen has found peace by the ocean.

In 2018, Janeen lived in an apartment in Panama City, facing busy days working as a director for an early education and care program. She got up in the morning, had breakfast, sat in her car and drove to work. Normal life. Everyday life. Until those devastating days in October the same year.

Being a resident of the Gulf Coast, Janeen had lived through hurricanes before.

“Days before Michael struck it was just a Category 1 on the (Saffir-Simpson) scale. Then it moved up to a 3. I mean, I’ve been through a 3. I can handle a 3,” says Janeen.

But Hurricane Michael made it up to a 5 on the scale just before it hit the coast, and Janeen’s apartment was struck hard. In the following days, she more or less lived in her car, even though that too had been hit by the winds and water – and a falling tree.

“I prayed to God to keep me safe. I tried to remember what my mother always said: What doesn’t kill you makes you stronger. There is a strength in this community as well, we always rise,” she says.

Since the hurricane, Janeen has been living in a temporary home. A while back she learned that she could be eligible for homeownership through Habitat for Humanity, working with volunteer builders, among them Volvo CE employees. As a part of a partnership with Habitat, homeowners invest their sweat equity, helping construct their homes they purchase through affordable mortgages. When we visited Janeen, her new home was in its initial phase, but even a foundation and a piece of land was enough for her to have faith and see a bright future ahead. Hurricanes may come along again, but Janeen feels confident her home, built to withstand hurricanes, will enable her to stay in her beloved hometown.

“What Habitat for Humanity and the volunteers do is just wonderful. They are not a handout, they are a hand up. They give you hope that you can own something,” she says.



# STORIES OF GOOD AND HOPE AROUND THE GLOBE

Acting on social issues has always been an important part of what we do at Volvo CE. Volunteer work in Panama City is just one project of many. We support education and play, act as volunteer firefighters and help rebuild communities after flooding. Here you can read more about them – they all fall under our common umbrella, The Building Tomorrow Project.

By **Kerstin Magnusson, Zachary Keller & Whitney Free**



### VOLUNTEERING AS A FIREFIGHTER

Rhys Eastham has both rescuing and saving in his blood. Alongside his day job as a Director of Uptime and Technical Services for Volvo CE, North America, he is working as a volunteer firefighter in Pennsylvania.

“In both my roles, it’s about serving people and quickly responding to the need of the moment. I’m always catching people in tough situations – at the fire department, it can be a matter of life and death. I’m grateful to be able to help out in that moment and to make an impact in someone’s life,” says Rhys Eastham.



Photo by Shutterstock

### SUPPORTING THE CITY’S MOST VULNERABLE CITIZENS

Pat Charron from Volvo CE dealer Great West Equipment is not only an appreciated professional in the construction business, he also helps to fight hunger and homelessness in his region, British Columbia, through his annual volunteer efforts. Pat was awarded the Volvo Building Tomorrow Award, which includes a donation to the charity of his choice. Pat chose to give back to the work he already supports, Cloverdale Community Kitchen’s “Coldest Night of the Year” that includes a long walk together and a hot meal for everyone.

### A RESTORED WATER POND IN INDIA

A couple of years ago, the situation for villagers in the Marathwada and Vidarbha regions in India was desperate. For a region in its fifth consecutive year of drought, rain was not the only thing evaporating from the land. Many of the cotton and pulse grain farmers of the region were forced to leave their homes, their land, and their way of life. Pramod Patwardhan, Director of SVP Mining, a Volvo CE dealer, took notice and teamed up with a customer to restore it.

By the time the job was completed, they had excavated approximately 200,000 cubic meters of earth, leaving a giant hole in the land 20–25 meters deep. When monsoon season came, the pond once again sustained the nearby villages, providing the once-dry wells with water.



Photo by Shutterstock



Photo by BuS project

### PHYSICAL EDUCATION TO BOOST LEARNING

In Hameln, Germany, the BuS project offers physical education classes for kindergarten kids in order to help them in their language learning. Volvo CE in Hameln has contributed to the initiative, as a part of a long tradition of contributing to charitable organizations on an annual basis. Ute Freitag, Internal Communications Manager, is one of the initiators from Volvo CE Hameln.

“The children are our future, and we are happy to be a part of a good education,” she says.



### AID AFTER WILDFIRES IN SOUTH KOREA

In 2019, the South Korean city Goseong was struck by devastating wildfires. Volvo CE and Volvo Trucks in the area sent a total of four employees who volunteered their time and paid local customers to provide and operate four excavators and two trucks to clean up and restore the area.

Thanks to the work of many first responders in the region, about 3,700 of the 5,000 displaced residents have since returned to Goseong. “It’s not a one-time activity. We are always willing to help,” says Shin Sungeun, Manager, Corporate Communications at Volvo CE.

Do not miss our longer story about the operator training initiative in India on page 42.



# RESTORING THE EVERGLADES – FOR A SUSTAINABLE FUTURE

In the heart of the south of Florida, a giant hydrological restoration project is taking place. The mission is to secure the water flows to a healthy level after decades of draining the land. The construction of the C-43 water reservoir is an important piece of the puzzle to restore the whole of the Everglades to its former glory.

By **Emina McCarthy** Photos by **Edin Chavez**





A rich wildlife. Alligators are thriving in the heart of this unique ecosystem.



Time for recreation. 1 million tourists visit the Everglades every year.

“It’s very important that we restore the Everglades so that we can have a source of drinking water to sustain not just our residents, but also the agriculture and commercial operations that we have around the areas.”

PHIL FLOOD, SOUTH FLORIDA WATER MANAGEMENT DISTRICT

**H**ealthy ecosystems are vital to all life on Earth. Yet in the last one hundred years, ecosystems everywhere have fallen victim to degradation, with severe consequences for the environment and consequently wildlife and humans.

One of the most well-known and unique natural regions in the world is Florida’s Everglades. The tropical wetlands form an ecosystem that is truly one of a kind, not to be found anywhere else on the planet, and home to a vastly rich plant- and wildlife. The rivers and estuaries in the area provide drinking water to more than 8 million people as well as support the agriculture in the area. The Everglades is also home to two Native American tribes. In addition, tourism is dependent on the ecosystem to work. More than one million tourists visit the Everglades each year.

But this unique area is now half the size it was a century ago and its biodiversity is threatened due to more than a hundred years of draining and the transformation of it into farmland. This is the reason why it is now also home to one of the largest ecosystem restoration projects in the United States.

**One of the** key components of the Everglades restoration is a megaproject consisting of building a



Volvo machines on-site building the giant C-43 reservoir, designed to save the waterflows of the Everglades.

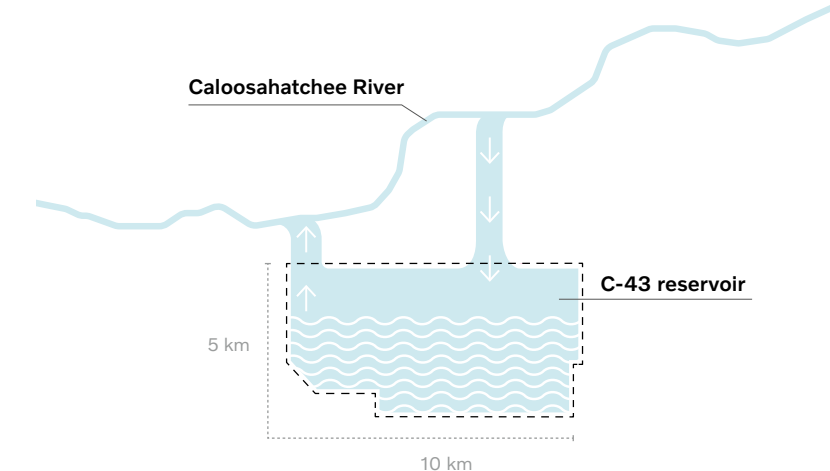
new water storage reservoir in the Caloosahatchee Estuary, the so-called C-43 reservoir project, where Volvo CE has dozens of machines on-site.

“We have other projects that we need to do in the watershed, but this is the keystone project to restore the health of the Caloosahatchee Estuary,” says Phil Flood from the South Florida Water Management District, which is in charge of the massive enterprise. Once completed in 2023, the reservoir will be the size of 47 square kilometers and be able to store over 200 billion of liters of local basin stormwater that are runoff and releases from Lake Okeechobee.

As it stands now, when the lake gets too full during the rainy season, the water runs down the Caloosahatchee River into the Gulf of Mexico. The nutrients in that water lead to harmful blue-green algae blooms and noxious red tides which kill off vast quantities of fish, manatees and plant life, in turn disrupting the balance of the entire ecosystem.

The idea is that the water from the lake would instead flow into the C-43 reservoir where it would

The water will be led down into the big reservoir, where it will be treated and then released again into the Caloosahatchee River during the dry season. When finished, the reservoir will be able to hold 200 billion liters of water.







Phil Flood

be treated and then released during the dry season, providing essential flows. The dry season is when water from the Gulf makes its way into the Caloosahatchee River, disrupting the salinity balance. The C-43 reservoir will rectify this.

“It’s very important that we restore the Everglades so that we can have a source of drinking water to sustain not just our residents, but also the agriculture and commercial operations that we have around the areas,” continues Phil Flood.

**Naturally a project** of this scope has its share of dilemmas, and logistic problems have to be solved along the way. When we visit the site, moving earth to build a narrow dam and a canal that encloses the reservoir is a large portion of the work. This type of construction leaves the machines in narrower and narrower spaces as they are digging.

“The site is an extensive place. And it is good for us when we store all the materials we need. But when we move earth and build the perimeter, we don’t have any use of the vast area. Right now, we are digging on a 60 meter wide area but very soon this area will narrow down and reach 4 meters. It is a very minimal space for the machines,” says Massimo Bugliosi, Project Director, Lane Construction-Salini Impregilo.



The Everglades in southern Florida spans over thousands of square kilometers.

“It is a special project for Florida and a special project for the environment. I’ve never worked on a project where the local residents are so happy about its progression. They will benefit a lot from it, and so will the nature and wildlife.”

MASSIMO BUGLIOSI, PROJECT DIRECTOR  
AT LANE CONSTRUCTION-SALINI IMPREGILO



## The Megaproject Listing: Everglades



Historic flow



Current flow



Restored flow

Before the ditching of the Everglades started in the 1880s the water flows were healthy (top picture). The ditching and draining have interrupted the natural waterflows (middle picture). After the restoration the flows will be re-created. The C-43 reservoir is one important piece of the puzzle.

He explains how they have solved the problem, and the key is for sure in the planning, and to have versatile equipment.

"You need to plan all the activities in the right sequence and be sure that this sequence works in the limited space you have. For this, the machines need to be very versatile. The Volvo machines work very well in narrow spaces," says Massimo Bugliosi.



Massimo Bugliosi

**The project** to restore the Everglades has been ongoing since 2000 when the U.S. Congress approved a strategy known as the Comprehensive Everglades Restoration Plan. The plan consists of, amongst other things, creating water preserve areas, removing barriers to sheet flow, managing Lake Okeechobee as an ecological resource and creating surface water storage reservoirs, which has been one of the main issues is the inflow of natural water after years of draining the swamps. The C-43 reservoir is an important piece of the puzzle in this regard. The subsequent environmental problems have had adverse effects on the quality of life, not just for wildlife and fisheries, but for the people of Florida as the decline in tourism has led to a downturn in the state's economy.

The C-43 reservoir project is certainly well on its way to change the lives of the inhabitants of Florida for the better and will boost quality of life for humans and wildlife alike. This ecosystem restoration venture is a huge step towards creating a sustainable future where human expansion no longer poses a threat.

"It is a special project for Florida and a special project for the environment. I've never worked on a project where the local residents are so happy about its progression. They will benefit a lot from it, and so will the nature and wildlife," finishes Massimo Bugliosi.



### RESTORING THE EVERGLADES

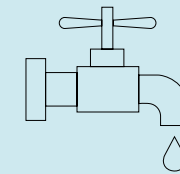
Watch the film from Everglades at [www.volvoce.com/spirit](http://www.volvoce.com/spirit)

Everglades,  
FLORIDA, USA

## The Megaproject Listing: Everglades fact file

6,000

The number of square kilometers that the Everglades covers



1882

The year the draining of the Everglades began

2023

The year when the C-43 reservoir is expected to be completed



1,000,000

The number of people from all over the world who visit the Everglades each year

42

The number of Volvo machines working the soil at the C-43 reservoir project construction-site

# THE MEGAPROJECT IN NUMBERS

The restoration of the Everglades has been an ongoing venture for the past twenty years. It consists of several projects, with the C-43 water reservoir as one of the most important ones in order to restore the water quality in the state of Florida. Here are some key figures that describe the scope of the Comprehensive Everglades Restoration Plan and the C-43 reservoir build.

By **Emina McCarthy**



350

The number of species of birds who reside in the Everglades



850,000,000

The amount of dollars the C-43 reservoir project is estimated to cost

200,000,000,000

Liters of water that the reservoir will be able to hold once finished

50

The number of unique reptiles who call the Everglades home



16,500,000,000

Estimated cost in dollars for the whole Comprehensive Everglades Restoration Plan



## A POINT OF PRIDE FOR A LOCAL PROFESSIONAL

The building of a huge water reservoir in the Everglades is a job unlike any other. Not only because of what it will mean to millions of Floridians but also due to its sheer magnitude and complex working conditions. Ivey Spivey from Lane Construction-Salini Impregilo is one of several hundred people working tirelessly every day to get it done.

By **Emina McCarthy** Photos by **Edin Chavez**



“Now I’ve been working in construction for 35 years and feel I’ve got a good system down. I enjoy it so much it doesn’t even feel like work, more like a hobby.”

IVEY SPIVEY, LANE CONSTRUCTION-SALINI IMPREGILO

Over one hundred years’ worth of residential and agricultural development in South Florida has had an adverse impact on the Caloosahatchee Estuary. The construction of the C-43 reservoir is underway in order to restore the region’s ecosystem, which is vital to the well-being of the state’s human and wildlife population. Amongst other things, the project consists of the construction of an earthen embankment dam with a perimeter of approximately 26.2 kilometers and a separator dam of 4.5 kilometers in length, as well as 18 water control structures.

Ivey Spivey is one of the many people currently working on the project. As Senior Superintendent he mainly manages multiple crews on-site, making sure that the job gets done and the daily expected amount of material is being moved. However, at times he works as an operator, which was also his first profession. Ivey Spivey knew early on that the business of construction would come to play a big part in his life.

“I started out on my family’s farm in southern Georgia and then I went to trade school to get my foot in the door. Now I’ve been working in construction for 35 years and feel I’ve got a good system down. I enjoy it so much it doesn’t even feel like work, more like a hobby,” he says and mentions that jobs have taken him all over the U.S., including Alaska.



Ivey Spivey works as a senior superintendent but started out as an operator. At times, he still takes a seat in the cab.

**The C-43 reservoir work site** is scattered with Volvo equipment, which is the key point for all heavy excavation and hauling and will eventually be deployed out on the dam and levy build. The equipment includes a mix of A45 articulated haulers and excavators, as well as several EC750E excavators and wheel loaders, with more on the way.

“Volvo is user friendly, very responsive and the machines are a great tool to have at your disposal when you’re working 10-hour days. It’s also important to be comfortable and the Volvo machines really are, even for a big guy like me. I’ve been running equipment for a long time and they’re at the top of their league,” he says.

With a construction project this size, work tends to be on Ivey Spivey’s mind a lot. There are many things to consider, for example heavy storms such as hurricanes, but also working through both rainy





01

“There’s never a dull moment out here. Even though there’s more than 300 people on-site, we all bond and work well together. I learn something new from my crew every day.”

IVEY SPIVEY, LANE CONSTRUCTION-SALINI IMPREGILO

**01** Ivey Spivey makes sure that the daily amount of earthmoving is done.

**02** The workday also consists of time by the computer.

**03** Starting out with farm tractors, Ivey Spivey has always felt comfortable around big machines.



02



03

and dry seasons and all the challenges that come with that. Planning and preparation go hand-in-hand in the construction industry, alongside safety and training – all important aspects in getting the job done.

The construction of the reservoir will create the ability to provide freshwater to the vital Caloosahatchee Estuary, which will not only reinvigorate the ecosystem of the Everglades but also make a huge impact on the lives of the millions of people depending on it for their survival. Bonuses include boosts to the state’s economy and improvement of the residents’ quality of life. For someone like Ivey Spivey, whose entire immediate family lives in the area, being involved in the project is a point of pride. In fact, so is working with a diverse crew of both men and women and people of different nationalities.

“There’s never a dull moment out here. Even though there’s more than 300 people on-site, we all bond and work well together. I learn something new from my crew every day,” he concludes with a smile.



Ivey Spivey

## THE CHALLENGES OF CONSTRUCTING ON SWAMPLAND

Tough regulations, uneven soil and risk for hurricanes. These all call for top-notch expertise, thorough planning and the right equipment when building the C-43 water reservoir.

By **Kerstin Magnusson** Photo by **Edin Chavez**

The one thing that really strikes you when overlooking the area that is home to the construction of the C-43 water reservoir is: it is vast. The actual size is over 47 square kilometers which basically makes it almost as big as Manhattan. The creation of massive eight-meter-tall wall embankments around the whole reservoir requires moving millions of tons of material, and it all needs to be done exactly the right way. The engineering work is crucial when you need to ensure that the walls withstand the pressures of billions of liters of water trying to break through when the reservoir is full.

After Hurricane Katrina, the U.S. Army Corps of Engineers revised its standards for the design and construction of dams, levees and reservoirs. Lane Construction-Salini Impregilo was chosen for the C-43 water reservoir project thanks to the expertise within the company – having worked on some of the largest waterway projects in the world, including the expansion of the Panama Canal and the Rogun hydroelectric dam in Tajikistan. The earthmoving is also of gigantic proportions – around 20 million cubic yards of material will be moved – which makes the expertise even more important.

The earthmoving also deals with a lot of different kinds of soils that need layering for the dam walls in a specific order to add integrity, including a layer of soil bentonite 4 meters thick. This area of Florida also sits at or below sea level, adding drainage challenges to the excavation work.

“You need to plan all the activities in the right sequence and be sure that you use the right equipment for every layer of soil and

for every part of the build, which is complex. It calls for exact planning,” explains Massimo Bugliosi, Project Director, Lane Construction-Salini Impregilo.

Another challenge is something that no one can control. The weather in South Florida is at times rough – and hurricanes come to visit annually. There is no doubt that the Lane Construction-Salini Impregilo team is aware of this – and takes precautions.

“The risk of being delayed or impacted by a hurricane is a fact. We calculate for it, and keep a strict planning schedule,” says Massimo Bugliosi.

“You need to plan all the activities in the right sequence and be sure that you use the right equipment for every layer of soil and for every part of the build, which is complex. It calls for exact planning.”

MASSIMO BUGLIOSI



Expertise and good planning are key to meet the challenges on-site, alongside the absolute need for the right equipment. Lane Construction-Salini Impregilo has chosen Volvo CE haulers and excavators for the extensive job.

“We ended up choosing Volvo equipment because it is versatile and can handle the mixes of different kinds of soil and for any kind of situation. Basically, we feel more comfortable knowing that we have the best equipment with us on this job,” finishes Massimo Bugliosi.



# 6

## ECOLOGICAL RESTORATIONS WORLDWIDE

The United Nations General Assembly has proclaimed the third decade of the 21<sup>st</sup> century as the Decade of Ecosystem Restoration. But the work around the globe has been ongoing for quite some time already. Here are 6 examples of important ecosystem restoration projects in modern time – besides the Everglades.

By Emina McCarthy



### 01 / QIAOYUAN WETLAND PARK, CHINA

In the early 2000s, the government of the coastal city of Tianjin in China hired Kongjian Yu, founder of the Beijing design firm Turenscape to transform a 0,2 square kilometers extremely polluted illegal dumping ground. Alongside his design team, Kongjian Yu came up with a solution that resulted in the Qiaoyuan Wetland Park which opened in 2008. Innovatively, the park features micro-topography via a naturalized landscape of ponds which all vary in size and depth, where nature does all the work collecting acidic rainwater, neutralizing alkaline soil, repairing urban brownfields and ultimately reintroducing the structure of the native wetland which is pre-dominant in the area. At the same time, it also features walkways and viewing platforms for visitors.

The project has been a huge success, proving how nature can indeed revitalize a refuse heap and turn it into a pragmatic recreation area.

### 02 / ELWHA RIVER, U.S.

The largest dam removal project in U.S. history was completed in 2014 when the two dams of the Elwha River in Washington were dismantled. For over a hundred years, they had been blocking migration of salmon upstream, disrupting the flow of sediment downstream and flooding culturally significant sites. With the removal of the dams, the river is once again playing host to a large number of different fish, a new estuary is taking shape, revegetation is thriving, and a formerly submerged native American ceremonial creation ground has been exposed once again.

This is indisputable proof of the enormous impact river restoration can have on the well-being of all living things across the board.



Photo by Shutterstock



03 / PATAGONIA GRASSLANDS, CHILE

The 1,6 million square kilometers of Patagonia's temperate grasslands in Chile support a unique biological and cultural heritage. In 2004, the NGO Conservación Patagónica bought 898 square kilometers, that formerly served as an overgrazed ranch, in the Chacabuco Valley with the aim to restore the grassland ecosystem by rewilding. The valley's grasslands were never suited for raising livestock and the vast amount of grazing resulted in an onslaught of invasive species and desertification. In order to salvage the Patagonian ecosystem, almost all sheep and cattle were sold off and over 400 miles of fencing has been removed and recycled. Restoration ecologists and conservationists continue to develop management plans for the area regarding reseeding and erosion control practices. The combination has led to wildlife returning to the area with the repopulation of the native guanaco herds, which have risen from a population of a few hundred to an estimated size of several thousand.

The newly lush grasslands now serve as inspiration for the continued restoration of the land and creation of a national park.



Photo by Shutterstock



04 / NUSA ISLANDS CORAL REEF, INDONESIA

The Nusa Islands Restoration Project began in 2018 as an attempt to reverse the degradation of reef areas along the northern coastline of Nusa Penida in Bali, Indonesia.

The same year, an area of degraded reef was picked out for the pilot study with the aim to determine which restoration techniques would be best suited for the unique environmental conditions around the area. A site plan developed which focuses on the use of modular coated metal frames and rubble fencing for substrate stabilization and a floating coral nursery was created to provide healthy parent stock for the transplants – without the need to harvest from surrounding reef or the use of unhealthy coral colonies.

Site monitoring has been continuous since 2011 and a dedicated team of biologists, interns and volunteers from Blue Corner Marine Research are working fastidiously to ensure that the restoration of this unique coral reef is successful.



Photo by Shutterstock

06 / FANDRIANA-MAROLAMBO FOREST LANDSCAPE RESTORATION, MADAGASCAR

The Fandriana-Marolambo landscape in Madagascar is the home to iconic moist forests, rich in unique plants and wildlife, including eight species of lemurs which do not exist anywhere else on the planet. Deforestation due to agriculture was a huge threat but thanks to a forest landscape restoration project native trees are making a comeback and the biodiversity is thriving once again. The region is also home to 150,000 people from three ethnic groups and with the help of WWF better agricultural practices have developed resulting in an increase in food security and income. The people have also been educated in community-based forest management and have now fully taken over from WWF. Furthermore, the Marolambo National Park has been established granting further protection to the forest areas.

In order for the forests to continue thriving it is vital that the surrounding community continues to play an important part, as one cannot live without the other.



Photo by Shutterstock

05 / MONJEBUP FAUNA ECOLOGICAL RESTORATION, AUSTRALIA

Australia's Monjebup North area is considered a global hotspot for biodiversity, under threat from large-scale land clearing carried out in the mid 20<sup>th</sup> century. The area is home to unique and diverse fauna and flora, making ecological conservation a top priority which is why it was purchased by Bush Heritage Australia. An extensive restoration program began in 2011 with several different techniques being used, including the development of habitat debris piles to encourage the return and occupancy of fauna, ground-dwelling reptiles, marsupials and native rodents.

By 2018, 2,500 hectares of Monjebup North had been revegetated. With the recent year's fires ravaging Australia it is perhaps more important than ever to shine a light on ecological conservation and its many benefits.

Sources: International Union for Ecosystem Restoration, American Society for Landscape Architects, National Geographic, Society for Ecological Restoration, Blue Corner Marine Research, Patagonia Park, The Guardian, WWF, Decade on Restoration.



All eyes on our customer: Montenegro

# FINANCIAL KNOW-HOW THAT MAKES A DIFFERENCE

Construction company Bemax is a heavy player in building Montenegro's infrastructure. To meet demands and grow, they needed someone to understand their plans and needs. Enter Volvo Financial Services who have worked closely with Bemax for five years. It has resulted in 126 Volvo units sold, which are now building the highways of Montenegro.

By Kalle Malmstedt



The result of the cooperation between Volvo Financial Services and Bemax: opportunity to build more functional highways in Montenegro.



“One of the decisive factors to choose Volvo was the possibility to purchase equipment combined with a competitive and flexible financial solution. Volvo representatives demonstrated sincere interest in our business activities and our growth plans,” says Veselin Kovačević, owner and Managing Director of Bemax. He continues:

“They met with us on several occasions and as they learned about our existing and new projects, they suggested the best suited products, and advised us on the most optimal credit structure.”

The cooperation started in 2015 when Bemax placed the first order for 12 Volvo A30G Articulated Haulers, to be utilized on the first section of the highway connecting Port of Bar in Montenegro on the South with Boljare, Serbia. Since then, the cooperation has grown with Volvo Financial Services as a proactive, close partner.

“It's a great honor and privilege working with Bemax. It's particularly rewarding that they are gradually changing their fleet of almost 400 units to becoming more and more Volvo dominant.



Mimi Ilioska

They use our financial services, and also the full scope of aftermarket services in the local dealership in Montenegro,” says Mimi Ilioska, Director Cross-Border Finance at Volvo Financial Services.

**Volvo Financial Services'** work was vital in securing the partnership, which so far has generated business in the form of 126 Volvo units – and counting. In the end of 2019, Volvo Financial Services provided additional financing for 45 Volvo Trucks and a credit line to facilitate Bemax's needs for Volvo CE or Volvo Trucks units during 2020. The key to this fruitful partnership for both companies, says Mimi Ilioska, was a focused commercial team customer centric approach and flexible financial solutions.

“A majority of the tenders for new projects are announced with very short lead time. When a company like Bemax is selected for a particular project, they need to be ready to start and have appropriate equipment available at very short notice,” says Mimi Ilioska.

“So, we always plan ahead. We meet with the customer regularly, learn about their potential needs, discuss the best possible financial structure tailored to specific equipment or projects and make sure they have financing available in time.



“One of the decisive factors to choose Volvo was the possibility to purchase equipment combined with a competitive and flexible financial solution. Volvo representatives demonstrated sincere interest in our business activities and our growth plans.”

**VESELIN KOVAČEVIĆ,  
OWNER AND MANAGING  
DIRECTOR OF BEMAX**

We always have a pre-approved credit line that they can utilize with financial terms that are in line with the needs for the specific project. We are here to earn the customer's business, so we do everything we can to make that happen.”



# ADDING SILENCE – NEW ELECTRIC MACHINES ON THE MARKET

By **Kerstin Magnusson**

The unveiling of the ECR25 Electric compact excavator and the L25 Electric compact wheel loader last year has moved to the next level. Now, it is possible to prebook the electric machines through an online portal, which will give customers the opportunity to get in line for the first time to prebook one of Volvo's new electric compact machines.

Volvo CE marked its first commercial electric offering with the launch of the 'Add Silence' awareness campaign. The campaign centers around one of the most significant – and sometimes overlooked – advantages of electric construction machines: a reduction in damaging noise pollution.

“When it comes to electromobility, it is easy to focus on only CO<sub>2</sub>. But research shows that noise is equally important. We need to make concerted efforts to tackle both of these emissions if we want to build a more sustainable tomorrow,” says Melker Jernberg, President at Volvo CE.

Read more about the machines, the portal and why electric compact excavators and loaders are thing of the moment on the coming pages.

## ECR25 ELECTRIC – MAIN SPECIFICATIONS

Indicative runtime	Up to 4 hours
Off-board fast charging	80% recharge in 1 hour
On-board 230 VAC charger	5 hour recharge
Operating weight	2,730 kg / 6,019 lbs
Breakout force	22.3 kN / 5,020 lbf
Maximum digging depth	2,761 mm / 9'1"
Maximum dump height	2,957 mm / 9'8"

## L25 ELECTRIC – MAIN SPECIFICATIONS

Indicative runtime	Up to 8 hours
Off-board fast charging	80% recharge in 2 hours
On-board 230 VAC charger	12 hour recharge
Operating weight	5,000 kg / 11,023 lbs
Full-turn tipping load	3,300 kg / 7,275 lbs
Standard bucket capacity	0.9 m <sup>3</sup> / 1.2 yd <sup>3</sup>
Fork payload 80%	2,000 kg / 4,409 lbs
Breakout force	54.5 kN / 12,252 lbf
Dump height	2,500 mm / 8'2"

## ELECTROMOBILITY BY VOLVO

### ADD SILENCE

The absence of a noisy engine enables steady focus on the job.

### ADD CLEAN

Taking up the fight against pollution with zero emissions.

### ADD COMFORT

A comfortable, quiet and premium cab experience.



## THE ONLINE PREBOOKING

The production of the first two electric models has just started. Customers have the possibility to prebook them in the following countries: France, Germany, Great Britain, the Netherlands and Norway. The customers that are not based in those countries can sign-up on the page anyways to be first to know when prebooking starts in their country.

Read more on Volvo CE's global website:  
[www.volvoce.com/electromobility](http://www.volvoce.com/electromobility)



# THE MINI MACHINES THAT MEAN BIG BUSINESS

At the center of some of the most influential technological transformations in recent years, compact machines have proved to be a breeding ground for innovation and application versatility. A prominent factor to the machines' popularity is the rise of electromobility – reducing emissions and noise.

By **Daisy Jestico**

“The customer demand for sustainable products are increasing and we, at Volvo CE, have cared for many years on developing and driving a focus on this area.”

HELMUT BROY, COMPACT WHEEL LOADER BUSINESS PLATFORM LEADER AT VOLVO CE.

**T**he rise in electromobility is really redefining the market in major ways when it comes to compact equipment. Manufacturers have invested heavily in developing electric solutions in this sector, not least Volvo CE – who as the first OEM to commit to moving its compact product line from diesel to electric in Europe is arguably leading the industry revolution.

“It’s easy to understand why this segment has been so attracted to electromobility,” says Helmut Broy, Compact Wheel Loader Business Platform Leader at Volvo CE.

“Cities want to – and need to – drive down their emissions and as regulations become more prevalent our customer base is increasingly looking for electric machines to meet these requirements. Compact machines are built for inner city work and if you add in zero exhaust fumes and a quieter, safer work environment, you have a complete package perfectly suited to urban applications. The customer demand for sustainable products are increasing and we, at Volvo CE, have cared for many years on developing and driving a focus on this area.”

Electric machines are bringing with

them altogether new segments for the business – and even traditional customers are showing signs of being more open to this new technology. Elodie Guyot, Electric Compact Excavator Project Manager at Volvo CE, who oversaw the launch of the ECR25 Electric, says:

“Since we announced the launch of our new machines we have been getting increasingly diverse requests from the market. Landscaping and utility works are typical applications for compact excavators, but we are now also receiving requests for other job sites such as indoor demolition or tunneling maintenance.

It is these new applications which benefit from zero exhaust fumes and low noise, providing a far more pleasant work environment.”

The ability to innovate in this segment is a testament to the reliability synonymous with Volvo compact machines. This machine reliability, with a long-lasting life span, is why the rental model works so well in the compact market, which holds a much higher percentage in the market compared to other product lines, such as general purpose excavators. And the introduction of electromobility is likely to see the rental business become

even more widespread in the future.

“Compact equipment is right at the heart of these changes in the market,” says Helmut Broy.

“It’s not possible to just release new products to the market and leave it be. We need to develop, lift and innovate.”

For Volvo CE, this means setting up customer pilots to test the real-life applications of these electric compact machines, which are now currently underway.

Elodie Guyot adds:

“When it comes to testing the potential for new innovations, it’s very important to start with segments that are very visible.

The L25 Electric compact wheel loader and the ECR25 Electric compact excavator offer zero exhaust and low noise.

And then it becomes easier to shift electric technologies through to other areas.”

The prominence of the compact machine market, therefore, makes it the perfect place to bring electromobility to the forefront.





Brian Farrell at Volvo Construction Equipment & Services in California has improved his service to the customers through the new initiatives.

## PROACTIVE TECHNOLOGY BRINGS DEALERS CLOSER TO THEIR CUSTOMERS

Imagine if you could combine all the down-to-earth know-how of your local dealer with the high-tech wizardry that modern, connected machines can offer. Too good to be true? Don't you believe it.

By **Brian O'Sullivan**

**W**hen machines play an integral part in the success of your business, your local equipment dealer is much more than just another supplier. They are a key business partner that strives to help you do more, for less, and more profitably. That is the thinking behind a whole raft of initiatives dreamed up by Volvo CE to help dealers use connected machine technology to drive down the cost of ownership and improve productivity. One such initiative is to improve the way dealers work with customers during the lifetime of their machines. It consists of a more proactive and digital approach to identifying customers' needs. The new processes merge successful aftersales best practices from our global dealer network with connected machine data and internal expert know-how.

"The result is a set of initiatives designed to give our dealers actionable and traceable triggers to reach out proactively to customers in need with the right offer at the right time," says Mihail Ivanov, Product Manager Proactive Sales at Volvo CE. "These prompted interactions are helping make things easier for customers, and their businesses run more smoothly."



Mihail Ivanov

**One dealer where** this is delivering positive outcomes is at US dealer Volvo Construction Equipment & Services in California. Here, every customer gets assigned their own specific person at a dealership. A trigger in the software prompts an action.

"Our aftermarket organization changed from being completely reactive to very proactive," says Brian Farrell, Aftersales Manager.

One of the cool things about the initiative is that it is a co-operation between Volvo CE, the regional organizations and the dealers. So successful has the pilot project been in California, the plan is to expand the initiative across Volvo CE's dealer network.

"There are lots of instances where we have improved our service to customers, but one that comes to mind is an undercarriage inspection that we did for a customer," continues Brian Farrell.

"The trigger that we received through the system prompted us to go and proactively inspect their machine, and it turned out that they needed an undercarriage overhaul very badly. That saved the customer countless hours, if not days of downtime."

Doing business with Volvo has never been easier.

"The result is a set of initiatives designed to give our dealers actionable and traceable triggers to reach out proactively to customers in need with the right offer at the right time."

**MIHAIL IVANOV, PRODUCT MANAGER  
PROACTIVE SALES AT VOLVO CE**





# EXCAVATOR DREAMS

T Prashanth is well on his way to become a skilled excavator operator – with the world as his work field. He is one of many young Indian men that are participating in Volvo CE's training courses in Hyderabad. We paid a visit to where it all takes place – among machines, teachers and classmates.

Text and photos by **Sanjiv Valsan**

**N**ineteen-year-old T Prashanth's family belongs to what the Indian government officially calls the 'Below Poverty Line' population, indicating a yearly household income below \$382. His father ekes out a living as a janitor in an office in Dubai, while his mother makes traditional hand-rolled Indian cigarillos (bidis) on daily wages, one of the lowest paying jobs in the market, which does not quite make ends meet.

Like many school dropouts in rural India, Prashanth had no saleable skills with which he could get himself employed. When he learned about Volvo CE's free of charge Junior Excavator Operator (JEO) training course, being conducted at the GMR Varalaxmi Foundation (GMVF) near the Hyderabad airport, he immediately applied and joined.

"I've always loved automobiles and machines, so this goes well with what pays well abroad. It's amazing that I get to handle this huge machine," smiles Prashanth.

Initially, he did not think he would see through the three-month long course in Hyderabad.

"I had the impression that I'd try it and maybe drop out, but this was so much better than expected."

**Given the JEO** course's track record of having secured excavator operator jobs for almost 100% of all its students till date, Prashanth is now confident of getting work, since trained operators are in short supply in India and abroad.

One of the trainers on-site is P Sambashiva Rao, called Samba Sir by his pupils.

Quite the dropout-turned-operator success story himself, the 35-year-old has seen tough times. As a child, he too quit school after the eighth grade, since he was too poor to study further, and worked as a daily wage manual laborer.





After graduation, T Prasanth will be able to work as an excavator operator across the globe.

**THE JUNIOR EXCAVATOR OPERATOR PROGRAM**

The intensive, free of charge, residential program for unskilled dropouts and socially disadvantaged and underprivileged sections – is a Corporate Social Responsibility (CSR) collaboration between Volvo CE India and GMR Varalaxmi Foundation, the CSR wing of the GMR Group. At the end of the course, trainees get a credible certificate recognized by the Government of India's Ministry of Skill Development and Entrepreneurship, based on which they begin their first job as an operator.

“For me, every young boy who comes in with nothing and leaves as a responsible man supporting himself is like a son I am raising.”

**P SAMBASHIVA RAO**

one who's underprivileged and with no livelihood or saleable skills learns excavator operation and joins a job, already knowing everything about a big, expensive

Then one day, when a contractor arrived at his village for loading work with his excavator machine, Sambashiva asked him about how this line worked, the pay and working conditions. He soon became an excavator operator assistant and joined the JEO program as a teacher in 2012. Up until now, he has trained no less than 400 students.

“For me, every young boy who comes in with nothing and leaves as a responsible man supporting himself is like a son I am raising.”

The three-month course in Hyderabad has a full schedule every day, and leaves nothing to chance.

“This is really a game-changer for the students,” Vijay Simhan, Manager Training at Volvo CE India explains:

“In just three months, some-



During the three-month intensive course, there is also time to play.

machine. We believe that knowledge is performance, and that's what counts even here – because with knowledge, he basically becomes employable.”

One of the employable is definitely Prashanth, who also sees other advantages in having participated in the course.

“I have made so many friends, they are all supportive and they have become like my new big brothers.”

# MORE TRAINING IN WORKSHOPS

Volvo CE also conducts one-day and five-days workshops as a part of the company's CSR programs for existing excavator operators in the industry who have learnt on the job. The training takes place in Bangalore.

**R**ambriksh Bhuiyan, a 36-year-old self-taught excavator operator from Jharkhand in Northern India, joined the workshop mainly for the certificate and free insurance, but ended up learning the computerized utility features of Volvo's new machines, which are absent in the older ones he was used to, and also safety practices around machines.

As a child who could not afford to study further, Bhuiyan left school after the second grade and worked at a bakery for eight years, before starting as a helper in 1999, and slowly became an excavator operator.

“Only if you're passionate about the job and the machine you can do this; I love it so much that I couldn't think of doing anything else now,” he says.

The purpose of the workshops is not only about the certificates, but first and foremost about learning to handle the

machines correctly and in a safe, and sustainable, manner.

“On Volvo machines we have around 8–10 different modes relating to hydraulic power output and engine power, corresponding to higher or lower power required to handle different terrains, applications and materials and corresponding fuel consumption. Mode selection errors are what we correct most among self-taught operators, because using the right modes on the job results in a big reduction in fuel consumption, costs and carbon footprint,” says Vijay Simhan from Volvo CE.

“Everything is interconnected. Without a knowledgeable operator, you're going to abuse the machine, increase downtime, expend more on fuel and carbon footprint, increase pollution... and it proves costly. A good operator is an environmentally friendly operator,” he adds.

**THE BANGALORE WORKSHOPS**

The workshops are offered to existing excavator operators. The training and subsequent certification is meant to give workers official recognition for their existing knowledge and present them options in upskilling and filling skill gaps in design concepts, machine safety, technology, maintenance procedures and safety. The training is in line with the directions of the Government of India's 'Skill India' initiative and Recognition of Prior Learning (RPL) program. Post workshop, successful participants get free insurance for three years, a certificate recognized by India's Ministry of Skill Development and Entrepreneurship, that aids employability.



Simulators give the operators a real life experience.



Rambriksh Bhuiyan from northern India started out as a baker, and is a self-taught operator.



In focus

# SAFETY IN OUR DNA

Safety is built into every design element of the Volvo CE machines. We want to make sure that the working shift ends without a hitch. And the safety focus has always been with us. From the development of the three-point safety belt to the Care Cab and the breathtaking solutions that the future holds. Join us on an odyssey with some of the safety equipment milestones throughout time – a lot of them our own inventions.

By Kerstin Magnusson

1950s



## THE THREE-POINT SAFETY BELT

"The basic principle behind all design work is, and always must be, safety." Already in 1927, Assar Gabrielsson and Gustaf Larson, visionary founders of the Volvo car business, made the statement what would mark all Volvo brands for the future. Over the years, Volvo has developed many new safety innovations that reflect this guiding vision. A classic example, adopted not just by the Volvo Group as a whole but by the world, is the three-point safety belt invented in 1959 by the Swedish engineer Nils Bohlin – then working at Volvo. For extra safety, Volvo CE has since made the seatbelt orange and highly visible. We have also added orange safety rails in our machines, to avoid slip and fall accidents.



## ROPS AND FOPS APPROVED CABS

This is a landmark in our work to improve operator safety. In 1972 we introduced cabs that protect the operator through Roll-Over Protective Structures (ROPS) and Falling-Object Protective Structures (FOPS). ROPS is made by bars that attach to the frame of the machinery that maintain a space that is large enough for the body of the operator in the case of the machine rolling over. FOPS is a mesh sheeting structure attached to the tractor to protect the operator from branches, rocks, bales and other falling objects.



1970s



1980s



## QUICK RELEASE HYDRAULIC HITCH

An operator may have to change the bucket on his excavator up to 30 times per day. When we introduced the Quick Release Hydraulic Hitch, the danger of manually removing buckets belonged in the past.

## THE COMFORT DRIVE CONTROL

Intensive work exposes the operator to the risk of muscle strain, a safety risk in itself. The Comfort Drive Control was introduced in our cabs, that enables the operator to steer and shift with small and light movements. CDC cuts the load on shoulders, back and arms in half.







1990s



**SPEED LIMITER**

The Speed Limiter option now becomes available for articulated haulers and wheel loaders. It automatically regulates machine speed, eliminating the chance of the operator exceeding the pre-set speed limit.

2000s



**CARE CAB**

By definition, a better working environment improves an operator's productivity, reduces fatigue and boosts safety. With the introduction of the Care Cab in 1991, Volvo CE was once more ahead of the game. The Care Cab is easy to access, comfortable, ergonomic, air-conditioned and adjustable.

**OPERATOR TRAINING PROGRAMS**

We introduced our training courses for operators, designed to boost the operators' skillset and helping them to unlock the full capability of their machinery. Since the start, we have had a big focus on safety. The programs are still carried out to ensure safe machine operations through hands-on learning and real-life scenarios.



**CARETRACK**

Our telematics system CareTrack is developed to work with the onboard electronic control system. It soon became standard on most machines. CareTrack increases security mainly through service reminders and – not to forget – error alerts. Safety reports are also a part of the system, based on data coming from the different machine computers and then being tracked remotely through CareTrack.



**VOLVO SMART VIEW**

Real-time 360-degree view. To ensure safe rotation in confined working areas, we launched our industry-leading Volvo Smart View that offers perfect control. Front, rear and side cameras work together to provide a real-time, overhead view of the excavator during operation.

2010s



**ON-BOARD WEIGHING**

An application that can be used via the digital system Volvo Co-Pilot. It increases jobsite safety through notifying the operator if the bucket load exceeds a set limit. The app also offers a full view of the surroundings when reversing. Certain functions are also disabled when speed exceeds 10 km/h.



**THE FUTURE**

**ARTIFICIAL INTELLIGENCE**

In 2018, Volvo CE and customer Colas started developing a people detection system that will greatly improve safety at construction sites. The concept uses Artificial Intelligence (AI) to alert the operator when a person is detected in the vicinity of the machine. It incorporates different warning systems, both for the operator and for people in the area surrounding the machine. It is designed to monitor a construction machine's 360-degree surroundings and forewarn the operator of any potential collision with a pedestrian or another vehicle.

Currently this work is part of a research project, but the results are positive so far and hopefully the system can be used by customers very soon.





# THE CORONAVIRUS: THE IMPACT ON CONSTRUCTION AND MANUFACTURING

The global spread of the previously unknown disease Covid-19 caused chaos to every aspect of our daily lives. With hopefully the worst now behind us, we look at the prospects for brighter days ahead.

**I**t is amazing how quickly things can change. As the world took down its Christmas decorations and over a billion people prepared to celebrate the Lunar New Year, the world economy was in pretty good shape.

Yet here we are, a mere eight months later, dusting ourselves down after one of the most cataclysmic and bruising events in history. Its name is, of course, the unexpected and unwelcome arrival of the coronavirus pandemic.

Within weeks of its existence being discovered, a pandemic was declared and the world rapidly went into lockdown, and it became clear that the Covid-19 virus would dramatically change our daily lives, both socially and economically.

Global construction activity slowed dramatically, with thousands of building sites shuttered. But where possible, work did continue. If government restrictions allowed, essential infrastructure repair and maintenance carried on, as did quarrying and mining activity. The global construction industry carried on as best it could.

Manufacturing, and particularly the manufacture of construction equipment, was also badly interrupted. In such a globalized business, supply chains unraveled, and the availability of raw materials and components dried up. In a bid to limit the spread of the virus, Volvo Construction Equipment, and other leading OEMs, closed their factories for prolonged periods.

Just because manufacturing was paused, that did not mean Volvo CE could not do its utmost to keep employees safe and limit the impact of the disease on society. This included, as part of the Volvo Group, donations to the International Red Cross, support for food banks, sponsoring laptops for children with no computers at home (so they could learn online during school shutdowns), and sourcing or producing thousands of face masks, protection glasses and face shields for healthcare workers.

**Supporting our customers** and helping to protect their businesses was also a high priority.

Where it was permitted, our dealer network remained open, supplying parts and service assistance to keep machines up and running. Where parts were not available from the factory, Volvo CE used its existing component inventory at dealers to reroute parts to customers in need. And in collaboration with sister company Volvo Financial Services, the financial burden of the shutdown was lessened wherever possible.

Now that the epidemic looks to be passing, the outlook for the industry is much brighter. With governments around the world committed to spending billions on stimulus programs, a large proportion of this will be spent on infrastructure improvement. Investing in major building projects is a classic instrument of economic revival, which in turn spills out into the wider economy, boosting gross domestic product.



Medical face shields have been one of the key components at hospitals worldwide during spring. Volvo CE helped manufacturing them.



During the coronavirus outbreak, Volvo CE employees have helped in the production of medical equipment.

**While 2020 will** be remembered as a human tragedy and economic dislocation of historic proportions, a united response has shown that, when society works together, it can achieve amazing things, even in the most difficult of situations. The construction industry, Volvo CE and its customers, have all played their part in lessening the impact of the virus, and are now willing to redouble their efforts to ensure a swift recovery.



## VOLVO AUTONOMOUS ELECTRIC HAULER WINS AWARD

The TA15 – created by the engineers at Volvo CE and part of the TARA mining solution from Volvo Autonomous Solutions – has won the coveted red dot product design award 2020 – the most globally-recognized mark for industrial design quality.

The revolutionary TA15 autonomous electric hauler from Volvo wowed a panel of design experts in Essen, Germany, to win a red dot award – a seal of high design quality from the world's largest and most distinguished design competition.

The Red Dot Product Design Awards 2020 honors outstanding industrial design and celebrates the design teams behind the products. The Volvo TA15 was entered into the Smart Products category – a new entry for 2020 – where it was awarded a 'red dot' prize for commercial vehicles.



## SPIRIT ONLINE

The magazine you are holding in your hands is just one part of Spirit. On our global website [volvoce.com](http://volvoce.com), you will find more exclusive content from films to articles from around the world.



# BUILDING TOMORROW



At Volvo Construction Equipment we are driven by the idea that through imagination, hard work and technological innovation we will lead the way towards developing a world that is cleaner, smarter, and more connected. We believe in a sustainable future. And with the global construction industry as our arena, we work together with our customers to turn this belief into reality for people everywhere.

Together we're building the world we want to live in.

[www.volvoce.com/buildingtomorrow](http://www.volvoce.com/buildingtomorrow)

**Volvo Construction Equipment**  
Building Tomorrow

