

# CAT MAGAZINE

ISSUE 3 2015 WWW.CAT.COM

## MINING IN JORDAN

A DYNAMIC PARTNERSHIP DRIVES  
SUCCESS

DELIVERING VALUE TO THE JOB SITE

## EMSOLUTIONS

## CUSTOMER EXPERIENCE

WE ARE LOYAL TO YOU



جلاّد Jallad



الجّارات الفلسطينية  
Palestinian Tractor



الجّارات الأردنيّة  
Jordan Tractor



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### COLOPHON:

Above is just a taste of what's in this issue – you'll find plenty more news and views inside. If you have an idea for a story for a future issue, contact our publishers at [catmagazine@cat.com](mailto:catmagazine@cat.com)

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**DEAR READER,**

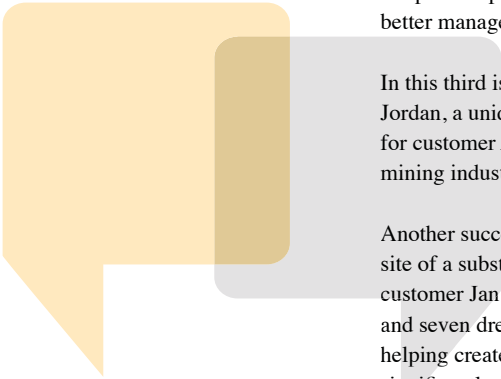
At Caterpillar, we recognize the importance of partnerships, especially when it comes to providing real advantages for our customers. Our latest partnership serves as a perfect example.

It is an alliance between Caterpillar and Modustri, a measurement tools provider for the heavy equipment industry. Together, we are developing a modern approach for Cat customers to measure part wear quickly, easily and more effectively than ever before. Not only easy to use, these tools will help customers to optimize parts performance and subsequently, to better manage fleet costs.

You will also read testimony from customers across the globe who are taking advantage of EMSolutions to streamline their operations.

So sit back and enjoy these articles and much more. I can't help but be proud of our amazing partnerships and the benefits they offer to our customers.

**Nigel Lewis,**  
**Vice President, Caterpillar**



In this third issue of Cat Magazine for 2015, in Jordan, a unique partnership is proving successful for customer Al-Own as their new venture into the mining industry continues to grow.

Another success story takes us to Egypt and the site of a substantial Suez Canal project. Here, Cat customer Jan de Nul has a fleet of 200 Cat machines and seven dredgers with Cat marine engines that are helping create a new section of the famous canal to significantly reduce transit time.

## WHAT INSPIRES OUR **Contributors**



**Amin Amireh,**  
**Jordan Success Story**

Amin began his career at Jordan Tractor in 1990 as a Service Engineer trainee. He quickly progressed to become Service Manager in 1998, Parts and Service Manager in 2004 and Country Manager in 2011. Amin expects his current position to become increasingly challenging with the expansion of Jordan Tractor's mining business, which will further differentiate the dealer from their competitors and help secure future opportunities.



**Mostafa Moussa,**  
**Suez Canal project**

Mostafa has been working for Mantrac Egypt as Construction Equipment Sales Manager and Mechanical Engineer since 2006. He was part of the committee that studied and helped plan the Suez Canal's new addition. After graduating, Mostafa joined a Jaguar, Range Rover, Maserati and Bentley dealer. As an avid basketball player, he was once a member of the Egyptian national team.



**Thomas Kohnle,**  
**Behind the Scenes**

Born in Würzburg, Germany, photographer Thomas Kohnle grew up in the picturesque town of Lohr am Main. After moving to Munich in 1983 and working as a set designer and freelance photographer from 1984 to 2003, when he began taking on commercial photography work. Thomas specializes in industrial and maritime photography and mainly works from Munich and Croatia.



**Trevor Baker,**  
**Writer**

Trevor's writing career has taken him from the US to Australia, Germany, The Netherlands and back. His work history includes companies such as Allianz Global, BMW, DHL, Hoover, Philips and Shell Oil. He also helped client Cozi establish an official Guinness World Record. Currently, Trevor is the writer for Cat Magazine. He earned a Bachelor of Arts in Journalism from the University of South Carolina.

FOR CUSTOMER AL-OWN,

# A **DYNAMIC** PARTNERSHIP DRIVES **SUCCESS**

*Today, Jordan-based contractor Al-Own provides a high level of service and innovation to the mining industry. It exceeds current standards, provides challenges for employees and prides itself on adaptability, exceptional workmanship and high productivity.*

Back in the early 1990s, however, the company now known as Al-Own didn't yet exist. Then, it was a small, local contractor in south Jordan with a few mid-sized machines that took on jobs handling mining materials.

Soon, and because of outstanding productivity, the company earned bigger and better mining industry work, including projects for the Jordan Phosphate Mining Company (JPMC). Then, in 2003, and well after establishing the company as Al-Own, JPMC gave the growing contractor its first long-term mining contract for performing work such as extracting overburden and phosphate.

## **TRUST AND CONFIDENCE**

Even though Al-Own is known for its ability to take on tough challenges, adapting to different environments and succeeding, these new, bigger challenges would be Al-Own's first in-depth mining work. Not only did Al-Own take on the work with determination and confidence, Jordan Tractor helped provide guidance, support

and training. Their partnership first began more than 25 years ago through product support for a single medium-sized wheel loader. Lately, the relationship has developed into a growing, 24-hour-a-day enterprise with Jordan Tractor supplying 49 mining machines over the last three years.

"When we first pursued our venture into this larger mining contract, we, along with Jordan Tractor, gathered a wide range of valuable information about mining operations. Their input helped us make truly informed decisions that are still having a positive impact on our productivity," said Mohammad Tarawneh, Al-Own CEO.

Just as important is the long-term commitment between AL-Own, JPMC, Jordan Tractor and Caterpillar to achieve specific business objectives and maximize the effectiveness of their collective resources. "It is critical for the Cat® team to ensure our dealer and customer have all the necessary tools and expertise to achieve a best-in-class mining operation in the long run," said Dieter Gessner,

Caterpillar Global Mining EAME-CIS General Manager. That required a partnership with a shared culture and without regard to organizational boundaries. "Our relationship is based on trust, dedication to common goals and an understanding of each other's expectations and values," Mohammad added.

From a dealer point of view, Christie Janho, Jallad Group CEO (covering Lebanon, Syria, Palestine and Jordan), had this to say; "Mr. Tarawneh was always interested in learning more about Cat products and services. He started to spend a lot of time with our sales team and implemented many of their recommendations, which improved his machine operations, uptime and maintenance practices."

With the development of the business, and especially mining, Al-Own needed more efficiency and comprehensive support to increase production and reduce cost per ton. "Together, our goal



**Abu Rasheed**  
(third from left),  
Mine Manager with  
the JTEC on-site  
support team.





**Dieter Gessner**  
Caterpillar Global Mining EAME-  
CIS General Manager

**Mohammad Tarawneh**  
Al-Own CEO

**Christie Janho**  
Jallad Group CEO

was to establish a first-class mining site and we've certainly achieved that."

#### **A PARTNERSHIP THAT'S PAYING OFF**

To support Al-Own's successful endeavor into the mining industry, Caterpillar and Jordan Tractor provided a full range of products and services, including operator, mechanical and product training as well as factory visits. A dedicated Caterpillar global mining team of experts, supported by Jordan Tractor, included a factory engineer, production expert, operation trainer and others. "We met with Al-Own's people on a regular basis to educate, train and review the situation and help make any necessary improvements. We also helped establish their Condition Monitoring Center and provided production studies. Personally and professionally, we wanted to be there every step of the way and we were always ready to go the extra mile," Amin Amireh Jordan Tractor, General Manager explained.

That level of initial and continuing support from Jordan Tractor and

Caterpillar has been effective. Not only is Al-Own achieving 75 percent above their productivity target, since 2013, the contractor has reached 94 percent machine availability for their Cat 6030 excavators and 777D off-highway trucks. Those impressive numbers are partially in thanks to Jordan Tractor, which is offering a full resident team on site and performing equipment management services that include preventative, predictive and corrective maintenance.

And, as a result of this successful partnership, JPMC has awarded Al-Own additional mining sites and increased volume goals. That led Al-Own to purchase equipment in addition to the four 300-ton 6030 shovels and ten 100-ton 777D trucks that are currently on site.

- Eighteen trucks will be operational soon
- Two more shovels are being assembled on site
- Twelve 777D trucks and two 6030 shovels have been ordered recently

And, thanks to a new oil shale project, Al-Own's mining fleet could extend even further with thirty 777D trucks and three 6030 shovels.

In fact, not too long ago, Al-Own had less than 10 percent of JPMC's production business. Currently, they have more than 50 percent and anticipate increasing that number as a result of Al-Own's ability to provide more robust support and productivity at less cost per ton than competitors.

"Our alliance with Jordan Tractor and JPMC is what made this partnership a success and what helped contribute to our growth," said Mohammad. We have the knowledge and tools needed to operate at peak efficiency at a modern, efficient site that has high standards. Together, we've created something special that no one would have expected at the beginning." ■

**Additional details at: [www.cat.com](http://www.cat.com)**



## **NEW DRAGLINE BUSINESS**

In a related story, and yet another new challenge for Al-Own, the contractor recently won a contract to operate four draglines. Two of the four are legacy Bucyrus machines JPMC acquired in the 1980s. Making that challenge more difficult is the fact that, when the contract was awarded, two of those draglines were not operational and had technical issues. This was due to age as well as an obsolete electrical system and technology.

However, and thanks to another Al-Own, Jordan Tractor and Caterpillar partnership, Al-Own now has one of these two machines back in working order. Jordan Tractor and Caterpillar are preparing further assistance to Al-Own regarding operational support, maintenance and troubleshooting to help ensure the draglines until complete upgrade and rebuild can take place.

A MEGA CONSTRUCTION PROJECT TO TRANSFORM THE SUEZ CANAL AND EGYPT

# "THE GREAT EGYPTIAN DREAM"

*In a land where massive, ancient feats of construction rule the landscape, a new feature is taking shape. It is an addition to one of Egypt's many famous landmarks, the Suez Canal.*

Known in Arabic as Qanāt al-Suways, the Suez Canal is the fastest shipping route between Europe and Asia. Depending on the route, the Suez can save ships as much as 9,887 nautical miles. Understandably, it is also one of the world's most vital and heavily used waterways. The 163-kilometer sea level passage runs north to south across the Isthmus of Suez in Egypt, connecting the Mediterranean and Red seas. It required the excavation and dredging of 74 million cubic meters of sediment over 15 years to complete.

To see grand, ocean-going vessels navigate through the vast Sinai Desert, even back in 1869 when the Suez opened, is a sight unlike any other. There are no canal locks, and, because of lengthy, narrow straights and eight bends, vessels must wait in passing bays for another to safely pass.

**THE EGYPTIAN GOVERNMENT LAUNCHES THE NEW SUEZ CANAL PROJECT**  
Fast forward to the year 2014. That is when the Egyptian government announced plans for a nearly \$8.5 billion (USD) project to upgrade and expand the canal. The project's goals are to increase the role of the Suez Canal region in international trading and to further develop the three cities, Suez, Ismaïlia and Port Said. Other projects include an industrial zone, fish farms, completion of the technology valley and building seven new tunnels.

Our focus is on construction of the "New Suez". Next to the existing Suez Canal, this bypass will be 24 meters deep, 240 meters wide and 72 kilometers long when complete. That is one-fifth the length of the original canal and requires 250 million m<sup>3</sup> of material to be dredged and removed.

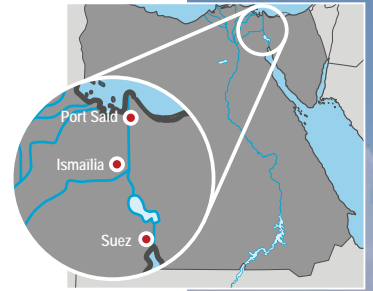
Of course, Cat equipment and machines are playing a vital role in helping complete this enormous project in less than a year. Completion was slated for August 2015, which would:

- Allow ships to sail in both directions throughout much of the new section
- Help decrease waiting time from 11 to 3 hours for most ships
- Nearly double capacity from 49 to 97 ships each day
- Increase revenues from \$5 billion to \$12.5 billion annually

**AN INTERNATIONAL TEAM OF CONTRACTORS**  
Of more than 40 companies selected to work on the new canal, headquartered in Luxembourg contractor Jan De Nul Group is one of six international dredging contractors. They are also part of the site's Challenge Consortium, a team of dredgers that is responsible for removing 194 million cubic meters of material in 10 months.

The dredging work started in November 2014. To reach the August 2015 deadline, 650,000 cubic meters must be dredged and hauled off every day. To help complete the job, Jan De Nul brought seven cutter suction dredgers. Each is powered by a Cat marine engine and serviced by Mantrac, Jan De Nul's local Cat dealer for 30 years.

For the removal and hauling of dredged material, Jan De Nul has a fleet of 200 Cat machines. Fortunately, Mantrac was able to prep the machines and complete the delivery before dredging began. The dealer also performed nearly 350 total operator and fleet management training sessions.



RECORDS:

Of the 24 dredgers on site, Jan De Nul's CSD Zheng He holds the record for the largest volume of dredged material.

One-day record: **215,027** cubic meters

One-week record: **1,110,117** cubic meters



1869

When the Suez opened, the canal's channel was just under 8 meters deep and 61 to 91 meters wide. It took 40 hours to pass through.

1939

The time it takes to pass through the canal is cut to an average of 13 hours.

1947

A ship convoy system was created: One northbound and two southbound per day.

1967

Still using the convoy system, transit increased to 15 hours. This reflects large growth in tanker traffic at that time.

1975

The canal was enlarged and since 1975 transit time has ranged from 11 to 16 hours.

2014

The new Suez bypass will be 24 meters deep, 240 meters wide and 72 kilometers long.





10  
months' time

200  
Cat machines

#### CAT MACHINES PLAY SPECIFIC ROLES

“Our wheel loaders and excavators are mainly used to couple, uncouple and move dredge pipes that are attached to each dredging ship. Those pipes are connected to a series of land-based pipes. Coupling points occur about every 500 meters. There can be as much as 1.5 to 2 kilometers of pipe connected to each dredger totaling up to 14 kilometers,” said Pieterjan Versteel, Manager Earthmoving Equipment at Jan De Nul.

Once material reaches the reclamation site, the dozers push material and water away. Even though the goal is to remove 650,000 cubic meters every day, the average is 1.2 to 1.4 million cubic meters. “Machine uptime is absolutely critical,” stated Pieterjan. “Our machines must be able to remove material the dredgers placed at the reclamation site. If the dozers can't constantly push it away, there will quickly be a huge pile of material and the dredger has to stop. We can't have that.”

#### WORKING THROUGH EXTREME CONDITIONS

Fortunately, work first began on the new canal bypass during cooler months. During summer months, temperatures soar. However, it is not the heat that is a challenge for Jan De Nul and its

#### TEMP BRANCH

Setup time: 27 days

Parts warehouse: 40 m<sup>2</sup>

Ground slab: 144 m<sup>2</sup>

(incl. on ground workshop)

Number of engineers: 8

Number of technicians: 8

Number of additional support people: 4



#### Jan De Nul's fleet includes:

- 1 x 422E backhoe loader
- 8 x D6R track type tractors
- 3 x D8R track type tractors
- 2 x 740B articulated dump trucks
- 2 x 345D hydraulic excavators
- 7 x 349D L hydraulic excavators
- 1 x 120K motor grader
- 6 x 980H wheel loaders

Jan De Nul brought seven cutter suction dredges to the site. Each is powered by a Cat marine engine and serviced by Mantrac.







34  
km in length

194 millions  
m<sup>3</sup> of sediment total

1.2-1.4 millions  
m<sup>3</sup> of sediment a day

machines. The contractor has experience working throughout the Middle East and the machines are fitted with proper cooling equipment. Rather, it is the salt water and sand that poses problems.

“Yes, the heat adds to the challenge, but the salt water and sand means there is much wear and tear on the undercarriage,” added Pieterjan. “We have to look for corrosion on areas like radiators and plan for undercarriage exchanges to maximize uptime and productivity. For a similar job, we replaced undercarriages about every 800 running hours. When machines work 24-hours a day, that is every six to eight weeks.”

Jan De Nul has a workshop on site, but jobs such as replacing a transmission or an engine overhaul must be performed in clean conditions. “Knowing the Caterpillar standards and set-up, Mantrac’s facilities were of great use to us,” said Pieterjan.

**BRINGING SUPERIOR SUPPORT TO THE SITE**  
Maintaining uptime for hundreds of machines is critical and a non-stop job. That is why Mantrac built a 1,000-square-meter, fully functional pop-up service and maintenance branch on site. Some of the work performed

there includes the undercarriage replacement mentioned previously.

“Setting up the temporary branch took only 27 days and it includes a 40-square-meter parts warehouse and a 144-square-meter on-site service workshop,” said Mostafa Moussa, Construction Equipment Sales Manager for Mantrac. “We also outfitted four containers that we use as road houses. Jan De Nul also requested that we set up the facilities in the middle of their work area to help avoid delays. These machines work 24-hours-a-day. It is up to our eight engineers, eight technicians and four additional support people, who are on site at all times, to make sure there is no machine failure on such a tight deadline.”

#### A BOOST FOR EGYPT, A BOOST FOR CUSTOMER AND DEALER

For the people of Egypt, this addition has the potential to boost the economy 100 to 150 percent. “The impact here will be tremendous, especially for the cities that line the canal,” Mostafa said proudly. “It also had a major impact on our business as well. We have increased the number of our machines by 400 and our ability to provide service and support in the coming years. We are just waiting for the huge industries that will be investing in the area.”

For Jan De Nul, the customer experience with Mantrac has been nothing but positive. Pieterjan says, “Mantrac has a good reputation in Egypt. They are a strong dealer. They might not have a lot of experience working in this type of application, but they worked hard and we are extremely pleased. We had several meetings at the beginning of this project and they did an excellent job delivering machines on time, helping us get started and delivering parts on short notice.” ■

**Additional details at: [www.cat.com](http://www.cat.com)**

# THE **BIG** PICTURE

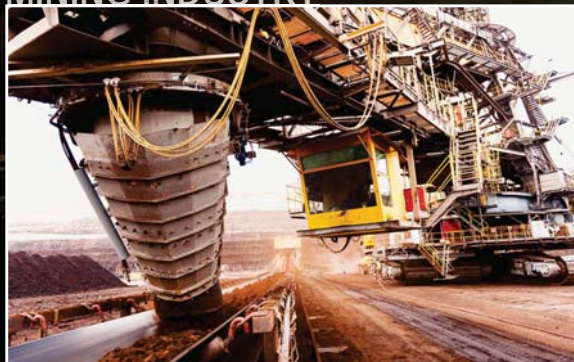
*At Cat Magazine, we're always looking for ways to add interest. So on these pages, we've broken away from our traditional article format and are proud to introduce what we're calling our Image Series. This first piece features the images of German photographer Thomas Kohnle.*



## MARITIME INDUSTRY



## MINING INDUSTRY



## ENERGY INDUSTRY



URE

INDUSTRY

CONSTRUCTION INDUSTRY

PCK REFINERY IN SCHWEDT,  
GERMANY.



A BRIEF BIOGRAPHY  
OF **THOMAS KOHNLE**

Thomas is from Lohr, a small town near Frankfurt, Germany. He began his career in Munich doing freelance photography on movie sets and as a photo journalist for Stern Magazine and BMW Magazine before he started with industrial photography.

He developed a love for big construction on a shipyard in Split, while he produced an image brochure for the anniversary of the shipping company Tankerska Plovidba from Zadar in Croatia, where he lived for a while. Today he works with global maritime, industrial and corporate clients, such as Odfjell, PCK Refinery and Wolf Klimatechnik.

Thomas' unique ability to create captivating, artistic imagery in a field that is often seen as unsightly has helped make him one of the best and most sought after industrial photographers. ■

Additional details at: [www.cat.com](http://www.cat.com)  
and [www.thomas-kohnle.de](http://www.thomas-kohnle.de)

MARITIME INDUSTRY

From a job for an annual report of Stena Bulk, a Swedish shipping company, at Brodosplit shipyard in Split, Croatia.



MINING INDUSTRY

From a job for the Federal Ministry of Economics and Technology at Vattenfall "Welzow-Süd" in Brandenburg, Germany.



ENERGY INDUSTRY

An exchange of fuel elements from a job for the Federal Ministry of Economics and Technology at the Grafenrheinfeld nuclear power plant in Grafenrheinfeld, Germany.



CONSTRUCTION INDUSTRY

An image for the Leonhard Weiss and Stolz Bau 2015 calendar at German Autobahn A3 between Frankfurt and Würzburg.



# SPOTLIGHTS



Brutal temperatures.  
Blazing sunshine.  
Moving targets.

## PERFECT FOR A ROUND OF GOLF



Watch "Driving Range" video:  
[youtube.com/  
watch?v=LzWwwd\\_\\_E-E](https://youtube.com/watch?v=LzWwwd__E-E)

Watch full behind-the-  
scenes video:  
[youtube.com/watch?v=r6jJjUINePc](https://youtube.com/watch?v=r6jJjUINePc)

*During this two-minute video, two professional golfers attempt to complete a one-hole course. The twist is that this course is literally being driven, making it a moving target, something the golfers had never experienced before.*


In the desert at the Caterpillar Tinaja Hills Demonstration & Learning Center near Tucson, Arizona Japanese golfers and twin sisters, Erimo and Marimo Ikeuchi, hit many balls on a one-hole course (including a fairway, hazards and green). Built on Cat® equipment, including a 772G, 775G and 793F off-highway truck as well as a 982M wheel loader and a CT660 on-highway truck, the course took three days to build. "We had some unique challenges building the course in the back of the trucks," said Bill Olson, Senior Demonstrator and Instructor. "We had to use our big 994 wheel loaders to fill the trucks up

and then the small skid steers and mini excavators to shape the course."

The one-of-a-kind course not only demonstrates the golfers' talents, but also the mobility of the equipment, especially as the 793F, with a full capacity of 250 tons of dirt, swiftly and safely maneuvers around and between the other machines. ■

**Follow the Built For It Trials series using: #BuiltForIt**





# A DIFFERENT BREED OF HYBRID EXCAVATOR

*Caterpillar launched a new hybrid excavator, the Cat 336F XE Hybrid. It is the newer, improved version of the 336E Hybrid, which is famous for burning up to 25 percent less fuel than the 336E and maintaining its industry-leading productivity.*

The 336F XE Hybrid began shipping from Japan in March 2015 and is Stage IV compliant. "This machine is full of exciting new technologies," said Vincent Lys, Excavator Product Marketing – Europe. "It keeps the revolutionary 336E Hybrid system, plus we've added two new major functionalities that increase efficiency on the job."

One of those functionalities is Cat Production Measurement. The technology shows operators exact bucket loads so truck loading can be optimized and overloading is avoided. "Not only does this help productivity, it's also a matter of safety. Some truck brakes are not designed to handle excess weight," said

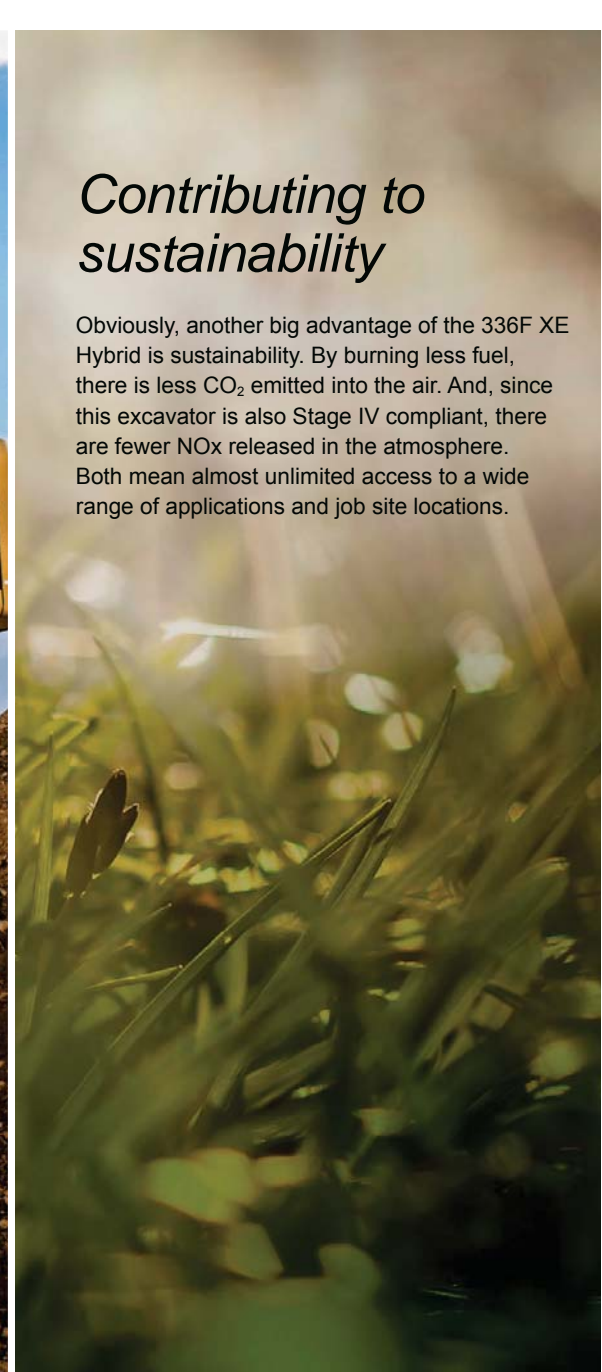
Vincent. "Too much weight on a truck reduces tire life and causes accelerated fatigue on structural parts. Additionally, this measurement system saves time since there is no need for the hauler to unload excess material and be re-filled to capacity. Daily production can be measured through VisionLink®."

Another important feature on the 336F XE Hybrid is Cat Grade Control, an embedded system that guides operators through the surface shaping process. The system knows exactly where the machine's bucket teeth are compared to what was programmed. In fact, it takes less than 30 seconds to program targeted depth and slope. That means there's no need for any GPS or UTS. This simple 2D system works on its own or with a laser. "Cat Grade Control is so easy to learn, we've started seeing rental companies using it in their machines. And, there are some major benefits, including no need for a grade checker around the machine. This way work becomes much safer, more cost effective and more productive," Vincent added.



## *Contributing to sustainability*

Obviously, another big advantage of the 336F XE Hybrid is sustainability. By burning less fuel, there is less CO<sub>2</sub> emitted into the air. And, since this excavator is also Stage IV compliant, there are fewer NO<sub>x</sub> released in the atmosphere. Both mean almost unlimited access to a wide range of applications and job site locations.



### **A HYDRAULIC HYBRID**

"We call these machines hybrid because power doesn't only come from the engine. They re-use some of the braking power." Vincent is referring to the end of an excavator's swinging motion. "The easiest way to explain it is like this. When the machine is stopping its swing cycle, energy is stored. Then, when accelerating, the machine reuses that stored energy. The result is greater fuel efficiency and lower engine emissions versus a standard excavator."

Caterpillar, however, has a different take on what a hybrid system should be. While the competition uses electric hybrid systems, Caterpillar is currently using hydraulic systems. "This hydraulic hybrid approach is simple, efficient, extremely reliable and durable," Vincent said confidently. "In addition, accumulator maintenance intervals are very long. This is nothing new for our technicians since hydraulic accumulators have been on machines for decades."

Vincent also went on to say that, contrary to competition, Caterpillar has decided to offer a hybrid system on a large excavator rather than on smaller machines. "The reason is simple. Fuel savings are much more significant when working a bigger machine hard than when performing light work with a smaller machine."

Accumulators are not the only components that help saving fuel on this machine. The 336F XE Hybrid hydraulic pump provides high displacement resulting in lower engine RPM. There's also the ACS valve, which is electronically controlled. One of the major advantages is that oil is a lot less laminated than on traditional valves. "We've experienced incredible fuel savings every time we have installed those ACS valves on our excavators. They are also available on the 374F and 390F," Vincent added. ■

**Additional details at: [www.cat.com](http://www.cat.com)**

# Customers *gain value* with Cat EMSolutions

*Equipment Management Solutions (EMSolutions) is a full portfolio of technology-enabled services that focus on maximizing customer fleet uptime and reducing operating costs.*

These services allow customers to monitor machines' location, utilization, performance and health through VisionLink® interface at any time. They are scalable, starting from remote fleet monitoring to full maintenance and

repairs managed by the Cat dealer. And, when it comes to added value, EMSolutions is helping customers make a real difference in four distinct areas: controlling costs, improving operations, managing



**John McAuliffe**  
Managing Director of McAuliffe Group, United Kingdom  
*Construction, Demolition and Material Management Sectors*

## CONTROL COSTS

"We can link actual fuel costs and fuel use to the many different types of work we do, which can affect fuel consumption by as much as 50%."

## MANAGE PEOPLE

"Technology has assisted with operator training by giving them physical evidence of how they drive and the impact it has on fuel consumption."

## IMPROVE OPERATIONS

"When mapping our business plan and growth over the next three years, we can determine certainty of uptime, production and outputs. That's information we've not had previously."

## REDUCE RISK

"The Level 4 service has been significant in helping us plan our growth by looking at machines and resources. We design our maintenance program better and around specific jobs. Sometimes that means doing maintenance after hours or on weekends so there is zero downtime."



people and reducing risk. The five levels of EMSolutions have been designed to address these needs, whatever the size, industry or capabilities of the customer.

Read what companies are achieving thanks to EMSolutions. ■

**Additional details at:**  
[www.cat.com/emsolutions](http://www.cat.com/emsolutions)



**Anthony McGiddy**  
Technical Manager of  
WBHO, South Africa  
*Construction sector  
(Building, Civil Engineering,  
Roads, Earthworks)*

### CONTROL COSTS

"With Product Link™, we understand what's happening with our machines. In the past, we might not take action on certain codes. But now we do and it's saved us a fortune."

### IMPROVE OPERATIONS

"On one big project, a fuel consumption study said 40 percent of our machines were idle. We sent un-needed machines to another project and saved around 20 percent in monthly fuel consumption."

### MANAGE PEOPLE

"With VisionLink, we can monitor fuel consumption. If it's elevated, we can see if additional fuel use is due to the operator or a problem with the machine."

### REDUCE RISK

"We've sometimes had overheating problems, but the operator continues his work. VisionLink notified us so we were able to stop and make repairs before bigger problems occurred."

# Caterpillar is loyal to you

For more than 90 years, Caterpillar has been known for caring for each and every customer with great attention. It is the company's heritage, and its people's passion. Cultivating trusted, loyal relationships with customers is just as important as the quality and reliability of Cat equipment.

This is why five initiatives are currently being deployed at Caterpillar to encourage and create a culture that guides behaviors and decision-making to make the company even more focused on customer satisfaction.

It is a commitment embraced throughout all levels of the organization by which Caterpillar and its people are working effortlessly on innovative ways to make the experience unmatched today and tomorrow. "All we have to do is execute and maintain an absolute focus on our customers. We are here to help them succeed. It is as simple as that," said Nigel Lewis, Vice President at Caterpillar.

Additional details at: [www.cat.com](http://www.cat.com)

## INNOVATION

Innovation is at the heart of everything Caterpillar does. Not just through technology, but also in the way the company thinks and conducts business. Keeping pace with, and in many cases, advancing technology, Caterpillar is delivering customer solutions that are more productive, efficient and reliable than ever before.

## THE CUSTOMER'S VOICE

Strong processes have been put in place to ensure that customer feedback is taken seriously, with their point of view in mind and to improve the experience. That way of thinking is already working. Many Cat products, services and processes have been improved as a result of customer feedback.





**CUSTOMER SATISFACTION IS EVERYONE'S RESPONSIBILITY**

At Caterpillar, Customer Experience Management is not a department. Actually, customer-centricity is becoming part of the company culture and a way of life. The company knows making a declaration is not enough. Everyone must take action to help customers succeed.



**EASE OF DOING BUSINESS**

By aligning their people, processes and technologies to help customers achieve their business outcomes Caterpillar and the global network of Cat dealers can help customers get the most from their products and services with the least effort on their part.



**EXPERTISE**

Caterpillar understands the importance of people, one of its best assets! This is why continuous support and training helps ensure dealers and customers have the know-how to best operate and service equipment.

Healthy  
equipment

Remote  
monitoring



Recommended  
actions

Periodic  
inspections



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