

# Volvo Group magazine 2.2016

## BEYOND WORDS

WHY LANGUAGE IS A HOT  
TOPIC FOR BUSINESS

## CUSTOMERS RULE

THE NEW STRATEGY  
SHOWS THE WAY

## ELECTRIC INNOVATION

NEW TECHNOLOGY CUTS  
WASTE FROM IDLING ENGINES

“Mutual trust  
is incredibly  
important.”

Erik Uhlin, Volvo CE  
Eskilstuna, Sweden

# GREEN MACHINES

Volvo CE in groundbreaking project to  
develop electrical solutions for quarries



# How we move forward

**W**e made great progress last year with improved performance in all business areas. Our brands really connect with people in our markets. We have a number of innovative and new products and service solutions that are well received by our customers. This is a great launch pad for when we move forward with a new organisation and a clear set of aspirations.

We want each brand to be a leader in customer satisfaction in its segment and for the Volvo Group to be the most admired employer in our industry. This will give us the profitability to invest in new products, innovations and most importantly in people.

Based on our new values; Customer Success, Trust, Passion, Change and Performance, it is time for a new era to begin. Let's make sure we embrace it.

We're going to make sure that we systematically try to improve everything we do. In our customer relations, in product development, in the plants, in the aftermarket, in the offices and in our workshops. To succeed we need to develop the quality in all areas of our business and to simplify decisions and actions!

We are going to make sure that we have world-class delivery precision and parts availability. Customers expect that.

We are going to make sure we have the best product at every time for our customers, with continuous introductions. Customers do not wait.

We are going to make sure that we have world-class customer understanding in

every part of the value chain. Customers will be impressed.

It is fun – really fun – to experience how you improve performance day-by-day. And when you have fun others will want to join in. Customers will love the results but also the efforts they see we are making.

I want us to put the Volvo Group in such great shape that we all wake up on Monday mornings and wonder – why don't we have 100 per cent market share?

In order to create an environment in which continuous improvements really make a difference, transparency is key.

We must be able to talk about real problems and how we solve them. I want everyone who sees something that is not going according to plan – to act. If we miss a deadline, the project is not green and on track just because we change the deadline. In a continuous improvement organisation we must love a deviation since it is the start of an improvement and a better solution for our customers.

This is why Trust is such an important value. Trust goes both ways.

I trust you to tell me the truth. You can trust me to treat you fairly when you do.

**MARTIN LUNDSTEDT**  
PRESIDENT AND CEO,  
VOLVO GROUP



*"I'm honoured. Our industry will continue to take its responsibility for reducing CO<sub>2</sub> emissions from new vehicles."*

**MARTIN LUNDSTEDT**  
AS HE BECAME  
ELECTED CHAIRMAN OF  
THE EUROPEAN AUTOMOBILE  
MANUFACTURERS' ASSOCIATION  
(ACEA) FOR 2016.

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14

## One Group, many languages

**SPECIAL** Collectively, the Volvo Group's global team speaks a rich and diverse range of languages and each one is a valuable asset.

### 10 Customers in focus

Ian Fairbairn and Vit Hrabanek, General Manager of company Helicar in the Czech Republic, discussed the importance of customer relations at the recent Volvo Group Leadership Summit.



10



30

### 30 Cleaner transport for Scotland's capital

Volvo 7900 Hybrid buses have become a common sight on the streets of Edinburgh and will be joined by the new 7900 Electric Hybrid in 2016.

### 34 Saving fuel at a standstill

GTT's DESTA project has successfully developed a system that can reduce fuel consumption during engine idling by up to 70 per cent.



34



44

### 44 Electromobility pioneers

Electric Site, a new collaborative project with Volvo CE and other partners, has the ambitious goal of developing a full electrical solution for working in quarries.

#### ALWAYS INSIDE

- 6 START
- 47 INSIGHTS
- 51 THE COLUMN



Per-Lage Götvall (second left) and students from the Mälardalen University in Sweden, watch their robot in action.



## A glimpse into the future

**ROBOTS AND DRONES** could be the future of refuse collection – at least according to a new concept developed by the ROAR (Robot-based Autonomous Refuse handling) project. In a recent demonstration performed by students and GTT personnel, a robot successfully collected and emptied bins into a refuse truck, with help from a drone on the truck's roof.

"We predict a future with more automation, and trucks will increasingly need to work together with other machines," says Per-Lage Götvall, Project Manager for robot development in the Volvo Group.

"By developing these prototypes, we now have a better idea of how to create systems for automated machines to cooperate. Along with

the network we've created with our academic partners, this knowledge will be invaluable in our future research."

ROAR is a collaborative project between the Volvo Group, Chalmers University of Technology and Mälardalen University in Sweden, Penn State University in the US and waste recycling company Renova.



PHOTO: COMMERCIAL MOTOR

## Renault Trucks T 520 – the best cab for sleeping

**A TRUCK IS SO** much more than just a transportation vehicle. For the driver it is also an office and a home away from home. UK magazine *Commercial Motor* decided to put seven trucks to the test to find out which had the best sleeper cab. The trucks tested were DAF XF, MAN TGX, Volvo FH16 Globetrotter XXL, Renault Trucks T 520 maxispace, Iveco Stralis, Mercedes Actros and Scania R730. And the winner: The Renault Trucks T

520 maxispace. "It was hard to find anything to criticise, however deeply you looked. It was obvious from the attention to detail that its designers had actually taken the time to discover what matters to a resident driver," was the test verdict.

Although defeated by its sibling, the Volvo FH impressed with its attention to detail and, in particular, its excellent balance of storage and living space.



## Renewable diesel approved for Mack trucks

Following extensive truck and engine testing, Mack has approved the use of renewable diesel fuel in all Mack engines. Renewable diesel fuel delivers performance similar to diesel refined from petroleum but with several additional customer benefits, including reduced greenhouse gas and particulate emissions, as well as reduced maintenance costs.



PHOTO: COLOURBOX





PHOTO: JULIA BÄCK JONSSON

The garbage-collecting robot is so far just a concept but the knowledge and experience gained through its development will help GTT with future automation projects.



## Robo Cop Challenge

Through the Robo Cop Challenge, teams in Gothenburg and Lyon were invited to program a robot to tackle an obstacle course, complete with bad guys to destroy and civilians to protect. The competition is part of GTT's ongoing efforts to promote innovation.

"To really innovate, we need to go beyond the tools, using our own code to program something different," says Fredrik Svensson, Technology Specialist and Software Engineer.

Fredrik Svensson has also organised a series of so-called "Hack Days", during which team members may spend a few hours a month working on a project that uses their technology specialisation to create an innovation that is not directly related to their work.

8.2  
per cent

is the Volvo Group's operating margin for the full year 2015 (excl. restructuring charges).

The corresponding figure in 2014 was 3.0 per cent.



PHOTO: MALIN BERTINSSON

## Suspended table makes assembly work safer

Inspired by their colleagues in Umeå, Team 6B at cab trim at the GTO Plant Tuve in Gothenburg, proposed a suspended table to make assembly work safer and more ergonomic. The table makes it possible to have tools and materials close by and all air hoses are fixed to the side of the table instead of becoming a tripping hazard. In addition, the number of steps taken during assembly is cut by 73 per cent.

Michael Andersson and Ahmet Magomadov,

previously from the Umeå Plant, explained the benefits involved to their new colleagues. The Tuve Plant was able to inherit the equipment from Umeå, as cab assembly closed there last summer. "We are already noticing that work has become far better ergonomically," comment Anders Fredriksson and Bilal Daouk.

The smart proposal has won an award as part of the Tuve Plant recognition programme "Framgången" (The success).



PHOTO: JUHA ROININEN

The PL4608's lifting capacity and stability are perfect for handling large, heavy pipes with ease.

## CAREFULLY LAID PIPES

Volvo CE pipelayers were used on both sides of the border to allow gas to flow from France to Belgium for the first time. The 36-inch diameter pipe runs for 74 km and this joint operation enables the transmission of eight billion cubic metres of natural

gas between the two countries.

As with any pipeline, archaeologists were given access to the site before work began. Given the geographical location and the region's history, both historical records and on-site detection methods

determined the need for specialist demining operations. Archaeological studies were also conducted to ensure that any buried, unexploded munitions – mainly remnants of World War I – were safely recovered.

## Volvo Bus Australia – Supplier of the Year

Volvo Bus Australia delivered more units in 2015 than the previous year, making Volvo the market leader despite fierce competition and a declining market. In addition, the team won the Bus Industry Confederation's 'Supplier of the Year Award'. It was presented to Volvo Bus Corporation

and CMV Truck & Bus, through their commitment to Women on Board activities and encouragement of diversity and new initiatives. "Volvo prides itself on continuous improvement with a strong customer focus. We will continue in 2016," says Sean Copeland, General Manager Volvo Bus Australia.

Another achievement was the build and delivery of Volvo Bus Australia's first doubledecker, the B9TL.

John Louder, Branch Manager CMV Volvo Bus & Coach, Wayne Patch, Chairman of the Bus Industry Confederation and Sean Copeland, General Manager Volvo Bus Australia



PHOTO: ABC MAGAZINE

## Safe as the Bank of France

Renault Trucks recently delivered several armoured T 430s to the Bank of France, each equipped with a number of specific solutions required by this kind of assignment.

"For example, we protected the vehicle with a special kind of armour plating and also altered the wheelbase to make it as manoeuvrable as possible," explains Bruno Carrara, sales manager for Renault Trucks.



PHOTO: RENAULT TRUCKS



# Thank you for the feedback!



## How about the editions?

Several participants question the reasoning behind having three magazine editions; Sales, Technology and Operations. The aim is to include stories closer to your work – which many have requested – so that the magazine feels more relevant; for example, stories from Operations for colleagues receiving the Operations edition.

There are three dedicated stories for each edition. In this issue they can be found on pages 26–29, 34–37 and 44–46. The rest of the content is the same for all employees. All editions and languages are available on Violin.

## Mix of content

The *Volvo Group Magazine* is one of several communication channels. We want the content to provide a context and be experienced as relevant, trustworthy, inspiring and easy to grasp. Some topics are not optimal for the magazine due to the long lead times and the global spread. The content and how it is communicated is balanced from issue to issue.

**TOWARDS THE END OF 2015**, employees took part in focus groups to evaluate *Volvo Group Magazine*, after the three first issues had been published. Thank you for providing the editorial team with so much valuable input!

You have praised the magazine for being a relevant source of information, uniting the many areas of the Group, providing clarity and showcasing best practices. You have also told us that some content is too far away from your daily work and that the magazine is sometimes too positive in spirit. And a lot more pros and cons.

**Some of your improvement ideas have now been implemented starting with this issue:**

- ▷ Page 2 is dedicated to our CEO Martin Lundstedt. His column is important and read by many people, so more space is dedicated.
- ▷ The size of the text font has increased.
- ▷ We now include a quiz on the last page and the chance to win prizes.
- ▷ You want to read more about the industry and our competitors. We have asked Business Intelligence to share some insight (see pages 38–39).
- ▷ You want to read and learn more about our customers. We agree and will continue to share stories about our customers in different parts of the world.
- ▷ You want a better on-line experience. A flip version in some languages is the first step.

**THE DEVELOPMENT OF** the magazine is on-going and your opinions and comments are valuable input in this process, so please continue to send your thoughts to [groupmagazine@volvo.com](mailto:groupmagazine@volvo.com)

You are also welcome to join our readers' panel for more continuous feedback.

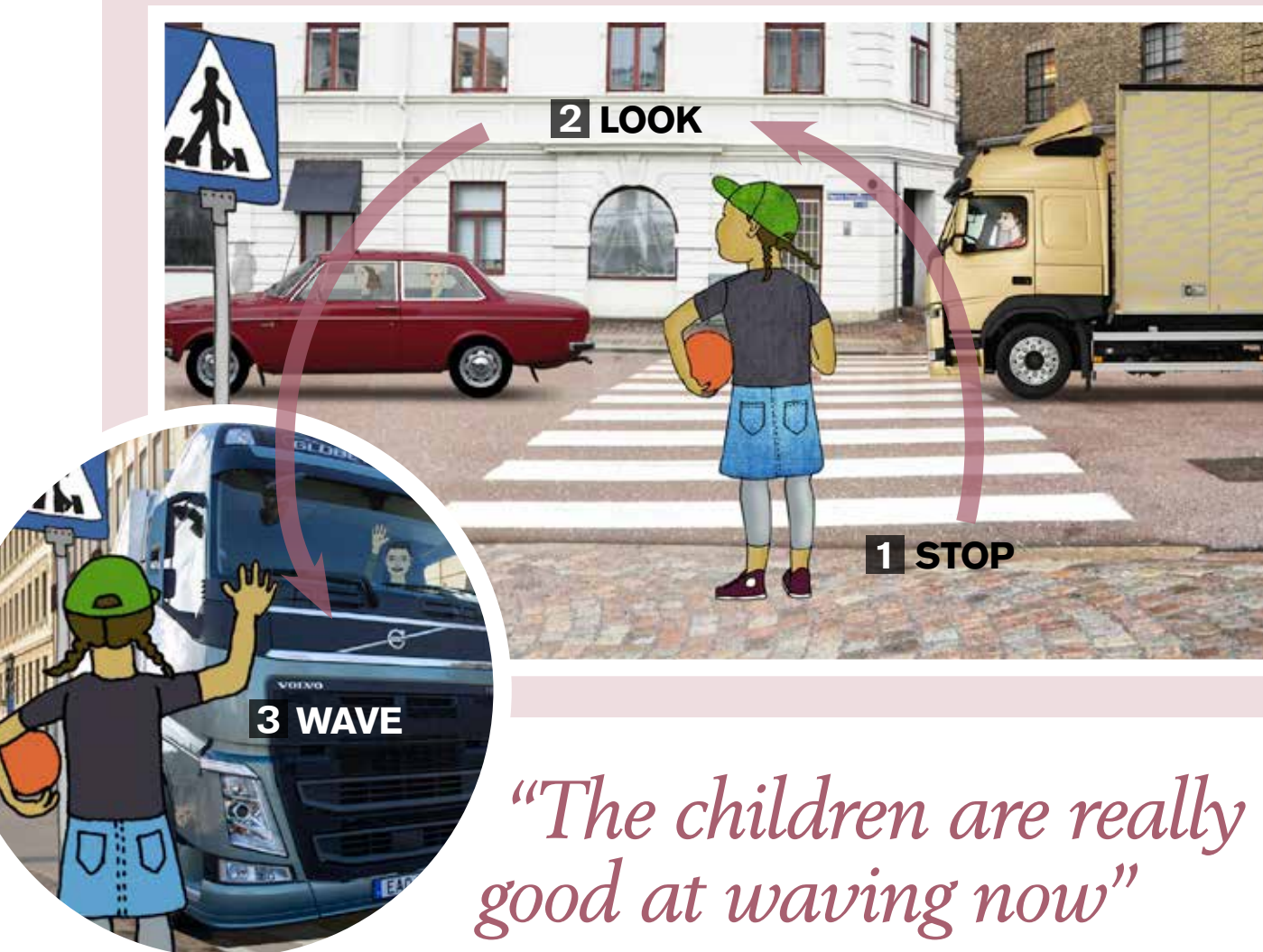
ANN-MARI ROBINSON,  
EDITOR-IN-CHIEF

132  
colleagues, at

13  
sites, in

8  
markets took part in  
focus groups





*“The children are really good at waving now”*

**THANKS TO HAULAGE** company owner Patrik Björkman and the Volvo Group’s “Stop, Look, Wave” campaign, more than 2,500 children in southern Finland now know how to behave around trucks.

Patrik Björkman owns 30 trucks and his company BB Kuljetus, based in the city of Borgå, ships goods to around 2,000 customers every day. He and his drivers often witness children who do not really pay attention when interacting with road traffic. Patrik Björkman himself has a son, who has started school and has to make his way through traffic.

“My concern for him, together with the things I see as a driver, meant that I knew I wanted to do something practical,” he says.

Patrik Björkman got in touch with his Volvo dealer to ask for help and discovered the global “Stop, Look, Wave” campaign aimed at schoolchildren all over the world. Last autumn, he visited 15 schools, teaching children how a truck operates and what truck drivers can and cannot see from their drivers’ seats.

The children learned how important it is to stop at the side of the road, make eye contact with the driver and make yourself visible by waving before crossing a road. “It’s fantastic. The children are actually really good at waving now.”

The good initiative quickly spread to media and to other haulage firms.

SUSANNE HANSSEN

**Finnish children learning how to behave in traffic.**





## Quality award to GTO Curitiba

Volvo Group internal awards are presented annually to teams that have made exceptional achievements in the areas of Quality, Safety and Environmental Care.

"We are really proud and this strengthens our sense of belonging. We definitely feel we are on the map and generate knowledge," says Fábio Warnecke, acting Director Logistics Services, Curitiba, Brazil.

He received the 2015 Quality Award, together with his colleagues Luiz Bohatch, acting VP GTO Powertrain Production, and Jorge Marquesini, VP GTO Cab & Vehicle. The award was given to the whole GTO Curitiba site – which is regarded as an organisation with outstanding accomplishments in quality, customer satisfaction and competitiveness.

"Quality, continuous improvement and employee engagement are embedded in our environment," says Jorge Marquesini.

**Read more: About Curitiba and the work behind the Quality Award in Volvo Group Magazine #3.**



PHOTO: EMERSON SANDERS



Do you want to learn more about Quality and how you can contribute? Take this five minute e-learning: [www.volvogroup.com/qualityfilm](http://www.volvogroup.com/qualityfilm)

The 2015 Safety Award was given to the "Stop, Look, Wave" campaign and the 2015 Environmental Care Award was given to the "Construction Climate Challenge" initiative, referred to as the CCC programme.



This smart trailer makes it possible to obtain more accurate comparisons in tyre testing.

PHOTO: PONTUS JOHANSSON

## Testing tyres with a smart trailer

Since rolling resistance accounts for around 30 per cent of a long distance truck's fuel consumption, Volvo Group wants to provide customers with the best possible tyres for every application.

To evaluate and compare different tyre brands for rolling resistance, a custom trailer built by engineers at GTT is used at test tracks.

"The trailer is equipped with

an accurate force sensor placed so that the air resistance is not included in the force measured. This makes it possible to obtain more accurate comparisons between different manufacturer's tyres on real asphalt with different loads," says project manager Per Larsson, GTT.

With these measurements, it is easier to recommend the optimum tyres for every customer, based on their own operations and driving conditions.

## VGU ACADEMIES IN PLACE

The Volvo Group University is now fully operational and offers training for all Volvo Group employees, to meet business needs. The globally accessible portfolio covers all major competence areas in the following eight academies:

- ▷ Volvo Group Fundamentals
- ▷ Leadership & Management
- ▷ Sales & Marketing
- ▷ Operations
- ▷ Engineering & Purchasing
- ▷ Project Management
- ▷ Process & IT
- ▷ Finance and HR

Employees can browse for training in Navigator, the Volvo Group's system for managing training.



PHOTO: SÖREN HÅKANLIND

# PASSION FOR CUSTOMER SUCCESS

The meeting with the customer determines everything. The Group's new strategy turns the spotlight on customer relationships that build success. The vision is to be the most desired and successful transport solution provider in the world.

TEXT ANN-MARI ROBINSON PHOTOS CICCI JONSON

“**L**ogistics is the backbone when it comes to driving welfare and prosperity in society. We see that the demand for transport will increase for our customers and for our customers' customers and this will have to be done in a sustainable way. We want to be part of building this future,” says President and CEO Martin Lundstedt.

“Everything starts and ends with retail; that's where we meet our customers and listen to their needs and wishes. Our customers must succeed

if we are to succeed. That's why our customers' success is vital for us.”

Long term the Group strives to have leading customer satisfaction for every brand in their individual segments, to be the most admired employer in our industry and to have industry-leading profitability.

“Profitability gives us the freedom to design our own destiny. The Group has achieved the size and scale but not the profitability. The period we are leaving behind us has been important and has focused very largely on brand positioning,





“One of the main reasons we value the relationship with Mack is their dealer network and the proximity of those dealers to our site.”

**Marty Tufte, Corporate Fleet Director, Waste Management, Phoenix, USA**



“I value my relationship with UD Trucks like a marriage. I’m in for it for the long haul, due to the reliability and low cost to operate.”

**Trys Schroeder, Member, TM Crane & Transportation Projects CC, Johannesburg, South Africa**



“What we value most in Renault Trucks is their reliability. It’s a safe, robust truck. The driver knows exactly what to expect.”

**Miriam Moreira, Quality Manager, PML Transportes, Vila Do Condo, Portugal**

cost efficiency and product renewals. The time has now come to move into a new phase with improved performance and organic growth,” says Jan Gurander, Deputy CEO and CFO.

For this reason, the Executive team has mapped out the Group’s direction using a number of strategic priorities. For example, heavy trucks are identified as an important pillar for the Group. The strategy also recognises the importance of strengthening Volvo Trucks’ position as a leading global truck brand in the premium segment. Securing profitability by finding better, less expensive solutions when it comes to product development, purchasing and production and avoiding expensive quality shortcomings which impact customer satisfaction are other strategic priorities.

**COMMON VALUES MUST SPREAD** throughout the Volvo Group and help realise organisational objectives and strategic priorities. It is a question of increasing customer focus, trusting each other and the decisions that are made, feeling passion, pride and engagement in everyday work, recognising the opportunities change offers and delivering results which in turn create future possibilities for the Group.



Five common values that summarise Volvo Group culture: Customer Success, Trust, Passion, Change and Performance. Participants at the Leadership Summit list what they perceive as strengths.



"Everything starts and ends with the customer," says Martin Lundstedt. Here together with customers from different parts of the world who were invited to the Volvo Group Leadership Summit to share their expectations of the Group.

Martin Lundstedt and his team have agreed on these values following a long process in which hundreds of managers have taken part in discussions. These values express the desired corporate culture and represent a revitalisation of what was previously known as The Volvo Way.

"These values are the outcome of the way we act every day, what is core to us and what unites us as employees. It's important to have fun as well and feel joy about coming to work. I believe these values will contribute to that," says Martin Lundstedt.

The new strategy was presented during the Volvo Group Leadership Summit in February. Managers are encouraged to discuss the contents with their teams and, through dialogue, determine what this strategy means for their teams.

"We are sitting on a gold mine – we have the products, the employees and the brands. We are strong and we are global. Now it's about uniting in our efforts to do what we do a little bit better every day. For both our customers and for ourselves," says Martin Lundstedt. ☉



"We expect from Volvo that they continue with all these brake and assistant systems that help to avoid accidents. As well we expect future improvements in fuel consumption."

**Hans-Peter Dreier, CEO, Dreier AG, Suhr, Switzerland**

**!** Read more about the new strategic direction on Violin.



THIS IS HOW MISSION,  
VISION, ASPIRATIONS AND  
VALUES ALL FIT TOGETHER



## Decisions closer to the customers

With the aim of becoming an even better business partner for customers, a new Group structure is in place since 1 March.

Separate sales organisations have been created for each of the four truck brands. "We will gain a simpler organisation in which decisions are made more quickly and in closer cooperation with the customer," says Martin Lundstedt.

Group Trucks Technology (GTT) and Group Trucks Operations (GTO) will remain, while Purchasing becomes its own division, Group Trucks Purchasing (GTP).

"We want to combine the best of two worlds: synergies by

having global organisations for manufacturing, product development and purchasing but still clear leadership and responsibility for each brand to make sure that customer needs are understood throughout the entire organisation," says Martin Lundstedt.

New forums have been introduced to create a more customer-oriented operating model – quarterly business meetings with all areas, monthly sales and volume-planning meetings, monthly quality

follow-ups with speedy decision making and monthly product meetings with customer needs topping the agenda.

The Volvo Group now consists of three truck divisions, ten business areas and four Group functions. The business areas are accountable for their individual performances. The highest Group management team, the Executive Board, includes the truck business and Volvo CE. All the business areas are included in the wider management team.

*Ska vi  
ta en fika?*

**Howzit!**

Cosa possiamo  
fare per aumentare  
le entrate?

Как тебя зовут?

当然

;) )

*Comment  
traduire notre  
savoir faire  
en anglais?*

نتمنى لكم اجمل رحلة

I am the new VP  
working with VPS  
at GTP. Contact  
me ASAP.

**Let's make  
a plan!**

¡Buenos días!  
¿Cómo puedo  
ayudarle?

?

お会いできて嬉しいです

**"Nu har vi nått ett  
turnaround-läge!"**



# GLOBALLY SPEAKING

A global company is also a multilingual company. Meeting customers in their own language and communicating clearly in a global world is a competitive advantage. To understand each other and the market – language is key.

TEXTS: LINA TÖRNQUIST, LINDA SWANBERG AND ANDREAS KARLSSON



Jabulani Mkhwebane is the transport manager for SMP CUB Logistics, a medium-sized haulage company based in Johannesburg. The company has a fleet of 116 trucks, mostly Volvos. When something goes wrong, Jabulani Mkhwebane has contact with Uptime Solutions. He thinks it is good to get help in his native Zulu.

# SUPPORT IN *Zulu* 24/7

In South Africa, there are 11 official languages. The team at the Uptime Solutions Centre in Johannesburg speak them all to meet the needs of customers in every region of the country.

TEXT & PHOTOS ANDREAS KARLSSON

**J**ABULANI MKHWEBANE nods thoughtfully. Yes, every minute one of his 116 trucks is stationary costs him a great deal of money. Finding parts and service technicians is not always easy, so the support he receives from Uptime Solutions is decisive.

He is the transport manager at SMP CUB Logistics, based in Johannesburg, South Africa. The company's trucks operate throughout the region, mostly transporting coal.

Jabulani Mkhwebane has more or less daily contact with the coordinators at Uptime Solutions.



**THIS IS UPTIME  
SOLUTIONS  
CALL CENTRE,  
JOHANNESBURG**

▷ The Johannesburg office is primarily responsible for South East Africa:

South Africa, Namibia, Zambia, Zimbabwe, Botswana and Mozambique. It will now handle Angola, Somalia, Sudan and Ethiopia and also assists a number of other African countries.

## 11 official languages

▷ Since the first democratic constitution was adopted in 1996, South Africa has had 11 official languages. They are usually divided into European and African languages.

▷ The first colonial power in South Africa was the Netherlands and a South-African variant of Dutch, Afrikaans, is therefore spoken in the country. The other European language is English, as England replaced the Netherlands as the colonial power.

▷ The nine most common African languages enjoy the status of official languages. Zulu and Xhosa are by far the largest, followed by Northern Sotho, Tswana, Sotho, Tsonga, Swazi, Venda and Ndebele.

▷ Even though English is the fourth largest language (after Zulu, Xhosa and Afrikaans), it is the most widespread and functions as the administrative language.

JOHANNESBURG  
SOUTH AFRICA

"The problems can be both large and small. The drivers call me and I then handle the contact with Uptime Solutions. Even if I speak English, it's nice to be able to discuss matters in my mother tongue, Zulu, when the questions get complicated," he says.

What Jabulani Mkhwebane appreciates most is that the Uptime Solutions' staff do not merely solve his problems, they also keep him informed every step of the way.

"They work quickly and I constantly receive updates so that I can inform the driver and make alternative plans when necessary. This really helps our operations," he says.



Caroline Gillmer, head of operations, and Beyers Brooks, support coordinator, discuss how they can solve an issue with a stationary truck.

**UPTIME SOLUTIONS' OFFICE** for Southern Africa is located in the Volvo Group facility in a Johannesburg suburb. A total of 11 coordinators work in shifts around the clock, 365 days a year. Almost all communication takes place in one of the four most common languages in South Africa: English, Afrikaans, Xhosa and Zulu. The team speaks all 11 official languages in South Africa, plus some of the languages that are used in neighbouring countries.

"One new feature this year is that we will start helping customers in Angola, Somalia, Sudan and Ethiopia and this is going to place new demands on the team," says Caroline Gillmer, Head of Operations at Uptime Solutions.

The work calls for a high level of stress management. Coordinators need good simultaneous language skills, strong social competence and the ability to speak as many languages as possible. The internal training programme includes technical product training and learning advanced software tools. Caroline Gillmer explains that it takes about six months for a coordinator to be fully trained.

"An in-depth experience of life and working professionally is a huge help in this job. It's hardly surprising that there are not many young people working here," she says.

**BEHIND TWO LARGE** screens sits Yolandi Ntuli, one of the most experienced team members. Her fingers quickly tap out words on the keyboard, as she switches between English and Zulu on her headset: "I love going the extra mile to ensure that >



**Yolandi Ntuli has been a coordinator at Uptime Solutions in Johannesburg since 2009. Her main languages at work are English and Zulu.**

a broken-down truck is repaired as quickly and smoothly as possible. It's incredibly important that the team speaks so many languages, since we are often in direct contact with the drivers. We need their help to describe the problem and this often has to be done in the driver's mother tongue."

Yolandi Ntuli works for the most part in English and Zulu, the largest African language in South Africa, but she can also manage a few others. "I didn't have an automotive engineering background. But today when I hear a driver describe his problem, I often have a fairly good idea of what's going on. It's great to be the person who helps solve a problem," she says.

Africa poses challenges that cannot be found anywhere else in the world.

"Let's make a plan" is an expression that

**"I love going the extra mile to ensure that a broken-down truck is repaired as quickly and smoothly as possible."**

**YOLANDI NTULI, COORDINATOR AT UPTIME SOLUTIONS**

characterises work at the Johannesburg office. Support coordinator Beyers Brooks recounts the story of a workshop technician who arrived at a truck that had broken down in the middle of the night on a deserted road in a South-African national park. When he got out of his vehicle, he could hear rustling in the bushes and, as he knew that there were both lions and other wild animals close by, he decided to wait until dawn before daring to repair the truck.

**ANOTHER CHALLENGE RELATES** to the huge distances in Africa. In South Africa, it is usually possible to organise quick assistance, but, in distant parts of Namibia, Zambia or Mozambique, it can be more difficult. Mobile phone coverage is often lacking in many remote areas, making the work even more complicated. Nevertheless, the team have a target that it should take no more than six hours from the first call until the truck or bus is back on the road. This target is met in 74 per cent of all cases – and often the issue is resolved much faster. ☉



## "Translators have to know the industry"

**JUNE WANG, TRANSLATOR FOR DFCV'S PRESIDENT OFFICE, SHIYAN, CHINA**

### "TRANSLATING BETWEEN

English and Chinese can be tricky because there is not only a difference in language, there is also a difference in culture. The older generation has been educated to be modest and not

too direct. We also incorporate old sayings and poems when we speak. Understanding the Chinese language is about understanding Chinese culture.

"There are also other differences. The number system, for example. In Chinese, the base unit is 10,000, instead of 1,000. This means that, when we are translating large numbers

such as millions and billions, we may need to re-calculate them in our head.


"To be a good translator, you have to have a good memory and be smart. Most importantly, you have to have a good background knowledge of an industry.

"How easy it is to translate what someone says depends a lot on their logic. If a

speaker has a very active mind, and jumps from one subject to another it can be difficult to follow. I would suggest that, if you use a translator, you spend a few minutes with them, so they can get to know the way you speak and think."

PHOTO: NICKE JOHANSSON



A full-page photograph of two women standing against a vibrant red wall. The woman on the left has blonde hair, wears glasses, a grey top, and a dark cardigan, with her hand on her hip. The woman on the right has short blonde hair and is wearing a dark blazer and trousers. Both are smiling at the camera.

More of the employees in the Volvo Group are going to improve their English. This year, the Volvo Group University is starting a virtual language education programme.

TEXT LINDA SWANBERG PHOTOS HANNES OJENSA

# A big drive to improve English

**MORE ENGAGEMENT**, greater creativity and, in the longer term, increased productivity. These are some of the things Pernilla Wikforss and Marit Andréasson at the Volvo Group University, VGU, are hoping this educational programme will produce.

“Increasing language skills and competence offers enormous benefits. Today, language problems frequently occur in people’s everyday work and many skilled employees fail to use their full potential,” says Pernilla Wikforss.

She believes that improved language skills will make people more creative and give them the courage to say what they think and feel. It will lead to innovation and improved

“We want to offer our employees the best possible educational solution,” say Marit Andréasson, Learning Programme Manager and Pernilla Wikforss who was the Vice President for Volvo Group Fundamentals Academy until recently, before joining HR Centre of Expertise Sweden.



“All the courses will be clearly linked to the needs and work of each individual co-worker.”

**MARIT ANDRÉASSON**, LEARNING PROGRAMME MANAGER,  
VOLVO GROUP FUNDAMENTALS ACADEMY

solutions, while reducing the amount of work that is needed.

In 2015, VGU mapped the language courses that were available and the needs and requirements in different parts of the world. Right now, most language courses are run locally, frequently with a teacher on site. In VGU's new programme, the training will be Group-wide and quality assured, as well as including virtual solutions. This will enable the students to choose when and where they participate. All they need is a computer, tablet or mobile phone. “We want an educational programme that is flexible and the same for everyone. At the same time, all the courses will be clearly linked to the needs and work of each individual co-worker,” says Marit Andréasson.

Evaluation is an important part of the project and these evaluations will be made together with

the participants' teacher and immediate boss.

“As always at the Volvo Group University, it's important to measure the results and see changes. We will also be focusing on business benefits. This is a major investment and it's important to identify the positive outcomes,” says Pernilla Wikforss.

**THE FIRST PILOT** courses will begin in the second quarter of this year. The Volvo Group University expects 15,000–20,000 co-workers to require training in English over the next five years. Some 4,500 of them are industrial workers.

“The target is to enable more people to feel that they have mastered the language they speak with customers, suppliers or colleagues. Only when people feel secure in this area will they reach their full potential as co-workers,” says Marit Andréasson. ☺

## “Wheelchair basketball opened up my world”

**GODELIEVE VAN KERKHOVE**,  
INVOICES HANDLER AT VOLVO  
GROUP LOGISTICS SERVICES  
DISTRIBUTION CENTER, GHENT,  
BELGIUM

“**EVERYTHING CHANGED FOR** me when I met my husband. He is a wheelchair basketball athlete. At first, I would just join him to watch the games, but I am not a passive person, so very soon I was managing the club team.

“Wheelchair basketball opened up my world. By chance, I had the opportunity to volunteer during the Atlanta Paralympics

in 1996. It's a unique event. It brings people together and allows people to understand each other. For many people it's the highlight of their life.

“I've always enjoyed learning languages and at the games five of the 20 teams spoke Spanish. Since it's a language I couldn't speak well, I immediately decided to learn. I wanted to be a better volunteer at the next Paralympics. Ahead of the next games in Sydney, I studied Spanish at evening school. In total, I've studied the language for six years.

“Later, I signed up as a volunteer for the Beijing Paralympics and for that I studied Chinese. For the games in Rio this year, I have been studying Portuguese for three years.

“I've always enjoyed learning languages. It contributes to my personal feeling of well-being. There's so much to learn about how to communicate with people with disabilities. We can talk about change management, but many wheelchair athletes are masters at change management. They



show you that it's possible to have a normal life even if you are missing a leg, if your eyes don't see what others see. It's taught me that you've got to look beyond your own boundaries.”

PHOTO: SIMON VAN BOXTEL





Today, only Jörgen Bylund and Klas Kaiser are attending the lesson with teacher Sophie Henriksson, since their colleagues at the Pilot Plant in Gothenburg, Sweden, are on a business assignment abroad.

# Going back to school

Once a week, Jörgen Bylund and Klas Kaiser leave work at the Pilot Plant to go back to school. They are aiming to improve their skills when it comes to speaking English.

TEXT LINDA SWANBERG PHOTOS ROBIN ARON OLSSON

**THEIR TEACHER,** Sophie Henriksson, welcomes them to the small meeting room at the GTO Plant Tuve in Gothenburg, Sweden. After a short chat about the weather, the lesson moves on to a discussion of an article about hackers and cars – a topic with no direct connection to their work but still with some relevant points.

“This group has asked for slightly more general lessons. The aim is to practise speaking English and we have a lot of discussions,” explains Sophie Henriksson.

She comes from the UK and is one of the teachers in the team involved in language teaching for the Volvo Group’s co-workers in Gothenburg.

All the teaching is adapted to match the participants’ needs and wishes. Some are given individual lessons, while others study in larger groups.

Jörgen Bylund and Klas Kaiser are normally accompanied by two colleagues, but on this particular week they are on a business assignment abroad. One of the tasks assigned to the Pilot Plant has been to support

the construction of other plants, so language is key.

“We have travelled to basically the whole of the world. Even if interpreters are available, it’s much easier if everyone has a common language, like English. Sometimes, however, even that doesn’t work and then it’s a question of pointing!” says Klas Kaiser.

He and Jörgen Bylund have now started their fifth term of English classes.

“I have learned an enormous amount and I am now used to speaking English. >



Discussions become lively when Sophie Henricsson holds an English lesson with Klas Kaiser and Jörgen Bylund.



Monica Jakobsen Gemanius, manager of the Pilot Plant, can see many advantages to having employees learn English during working hours.

I can turn off the sub-titles on my TV and still understand,” says Jörgen Bylund.

“In the past, I often found it difficult to find the right words and I was afraid of speaking English. That is no longer the case,” says Klas Kaiser.

The whole lesson takes place in English; reading aloud, complicated numbers and spelling are interspersed with jokes and laughter. Sophie

Henriksson only needs to make the odd interruption to explain a word or correct their pronunciation.

**AROUND 20 PEOPLE** work at the Pilot Plant and many of them take part in English courses of some kind.

“This is a global organisation which is involved in many projects all over the world. For us to be successful, it's important that our co-workers feel

comfortable speaking English,” says Monica Jakobsen Gemanius, head of the Pilot Plant.

**IN ADDITION TO** improving language skills, the teaching also has other positive effects.

“We can see that it really generates engagement and is a part of personal development. That's also important,” says Monica Jakobsen Gemanius. ☺

## “I’m not afraid to make mistakes”

**DIETER DE WAELE**, DRIVER DEVELOPMENT AND SUPPORTING SERVICES, GOTHENBURG, SWEDEN

“**MY LANGUAGE SKILLS** were the reason I found my way to the Volvo Group. I was born in Flanders and Dutch is my mother tongue. I trained as a translator – I studied English, Russian, German and French – but I have never actually worked as one! When I completed my studies, I got a job at Volvo Action Service in Ghent. In 2010, I moved to Sweden to

take on a four-month temporary job and I enjoyed it so much that I came back.

“I quickly decided to learn Swedish. My boss said I could devote several hours a week to studying. There are no short cuts when it comes to learning a new language.

“I asked my colleagues to speak Swedish during our breaks, even if I couldn't understand what they were saying! It was hard going to begin with and there was the odd misunderstanding, but it's a

really good way to learn.

“I think grammar is important, but I'm not afraid to make mistakes. Even though I would like people to correct me, not many people do, because they are kind and don't dare to.

“The people in my team come from France, Italy, Sweden and the USA. Those of us who work in Gothenburg speak virtually nothing but Swedish. When we have meetings with our colleagues in Lyon in France, we speak English. On those occasions



PHOTO: JULIA BÄCK JONSSON

when people can speak their native language, I think they should. Language is the most important part of any culture and we can learn a great deal from one another through it.”

# LANGUAGE IS A HOT TOPIC FOR BUSINESS

Can a company be held back by the language it uses? Professor Mary Yoko Brannen makes the case that language is a critical strategic question for global companies.



Mary Yoko Brannen

## Why is language an important issue for global companies?

"The promise of the multinational is to learn from dispersed knowledge across the globe and

to use this knowledge to improve the company's operations. To do that one must understand local context and for that language is essential."

## Your research shows that language can be crucial to strategic success.

"How companies use language has a direct impact on their strategic direction. We researched a global telecom company, for example. They had developed a very narrow vocabulary, with a lot of jargon. It made it difficult for them to collaborate with other companies and it delayed their entry into the smartphone market."

## And it's becoming a hot topic for business?

"Yes. One reason for this is that the language of global business is changing rapidly. English has been a de facto lingua franca for global business, but now it is in

serious decline. Within the next five years we expect that the language-scape of global business will have changed. I predict the emergence of other lingua francas such as Mandarin, Spanish, Russian and Portuguese, alongside English."

## What advice do you give global companies with respect to language?

"I advise a two-pronged strategy. One, having a corporate language dictionary in the firm's home language base with no more than fifty key words that are simple, clear and concise reflecting the firm's core competences. Two, use a multi-lingual strategy, making critical material available in alternate languages, such as by translating summaries. Companies can also make use of people who I call 'boundary-spanners': these are individuals who are able to translate from one context to another."

## What's best practice? Name an organisation that is dealing with this well.

"One good example is TESCO (a UK retail chain). It published an in-house dictionary called 'The Jargon Buster', which explains acronyms and allows for a quicker learning curve for new employees."

LINA TÖRNQUIST

## Mary Yoko Brannen:

**Title:** Jarilowsky CAPI East Asia Chair and Professor of International Business at the University of Victoria, Canada.

**Background:** born and raised in Japan and educated in the USA, Japan and France.

**Want to read more?** Mary Yoko Brannen is co-authoring a book with Terry Mughan titled *Language Strategies for Global Business*, to be published in 2016.



**"It's ok not to be perfect at all times"**

EMI IKEDA, COMMUNICATION MANAGER FOR VOLVO GROUP LOGISTICS SERVICES, AGEO, JAPAN

"I NEVER SAW myself as a language person but I've always liked technology. When I was young, I thought that in the future you could get a chip implanted and learn a language in five minutes, so I didn't make too much of an effort. Today my mindset is different: I feel that by knowing English you can connect to the whole world. It's a huge opportunity.

"Around 70-80 per cent of my work today is in English. The attitude I try to have is: I am not a genius, I am not perfect but I can still communicate with people. That's more important than getting everything correct.

"Something that helps when you have a meeting with someone who doesn't have English as their top language is to make a presentation with a clear outline of the topics that are being discussed and if possible to send out pre-reading material. This helps them follow the conversation.

"Getting to know people always helps, too. When I became friends with a colleague from Thailand and understood Thai culture a bit better, it was easier to understand her way of thinking."





## “Languages bring new perspectives”

**VAHID FAGHIH**, QUALITY SUPERVISOR FOR THE GTO PLANT IN WACOL, AUSTRALIA

**“I’VE BEEN WORKING** at the Wacol site in Australia for the past five years. It’s a very unique place. There are around 30 or 40 nationalities here. One day, you might talk to someone who is Turkish-French and then someone from Chile. Gathering these different languages and nationalities brings awareness about new perspectives and ways of seeing things. I’ve never heard someone being criticised because of their nationality: all cultures are welcome.

“Throughout my life, I’ve always needed to speak different languages. I was born in Northern Iran, where the majority of people are Turkish. At home, we spoke Azeri-Turkish and I learnt Farsi in school. We lived in the USA for a year when I was in school, so that’s when I learnt to speak English. Later, I studied Quality Management in Gothenburg and worked at the Volvo Group, so I picked up a lot of Swedish. Communicating in another language means you have to operate outside your comfort zone – I think that’s a very useful skill.

“From here, we work with sites in several countries in Asia, so we need to communicate across different cultures and language levels. My best advice is always to be clear. Make sure that everyone is on the same page. Be patient and define your expectations.”

## FACTS & NUMBERS

### BAD ENGLISH

The name Leif Johansson (CEO 1997–2011) gave to the Volvo Group’s corporate language. What he meant was that many employees have English as a second language. They often find it easier to understand English that has more straightforward grammar and vocabulary.

# 5

## tips to presenting your ideas to non-native speakers

Many employees and customers have English as a second or third language. Here are a few tips on how to make it easier for everyone to understand you.

**TIP #1** Speak slowly. (It’s easy to forget if you’re nervous.)

**TIP #2** Repeat your main ideas using different words. Some people will not understand a specific word but may understand alternative phrasings.

**TIP #3** Use commonly known words to make your point.

**TIP #4** Avoid idioms and acronyms where possible.

**TIP #5** Think about your audience and adapt the material to them. Do some basic cultural research and choose images your audience can relate to.

## So many different types of English!

English is a language, but it is also a collection of dialects. Terminology can sometimes vary widely between different English-speaking regions.

The US term *pick-up truck* is called *bakkie* in South Africa and *ute* in Australia. Here are a few common driving terms that differ between the British Isles and North America.

**Truck** (US) is **lorry** (UK)  
**GPS** (US) is **satnav** (UK)  
**Hood** (US) is **bonnet** (UK)  
**Overpass** (US) is **flyover** (UK)  
**Freeway** (US) is **motorway** (UK)  
**Drunk driving** (US) is **drink driving** (UK)  
**Blinkers** (US) are **indicators** (UK)  
**Detour** (US) is **diversion** (UK)



“Volvo Group” in English Braille

# VOLVO

is Latin and means “I roll”. The unique font is still almost identical to the emblem on the radiator of the first Volvo vehicles in 1927.



PHOTOS: COLOURBOX

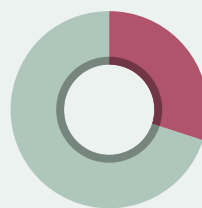
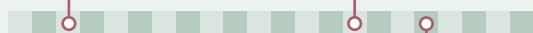
## GLOBALISATION

... at the Volvo Group really took off at the end of the 1990s when Leif Johansson took over as CEO. The first foreign acquisition was the excavator manufacturer, Samsung, in 1998. In 2001, Renault VI and MACK were acquired.

**1999** Almost half the employees, 47%, worked in Sweden.

**2011** Europe, including Eastern Europe, accounted for 39% of turnover, North America for 19%, Asia for 24% and South America for 11%. 75% of the employees were now outside Sweden.

**2014** Around 55% of the employees worked in Europe, 19% in Asia, 16% in North America and 7% in South America.



# 30%

of the approximately 100,000 people who work for the Volvo Group have English as their first language.

**FIKA**

A Swedish word that has spread throughout the Volvo world. Fika means taking a break from work to have a cup of coffee and perhaps eat something, like a slice of cake or a bun.



# 13

The number of languages in which the Volvo Group Magazine is published. They are Swedish, English, German, French, Polish, Russian, Japanese, Dutch, Korean, Thai, Chinese, Brazilian Portuguese and Spanish.

# 4

Excellent language skills are required from the employees at the Uptime Solutions Center in Ghent, Belgium. All the staff speak at least four languages fluently. Some of them speak no fewer than eight.

# 130

The approximate number of nationalities working within the Volvo Group. The largest groups are the Swedes, French, Japanese, Americans and Brazilians. The employees also include people from Burkina-Faso, Surinam, Jamaica, Madagascar, Moldavia and Iceland.



Increasingly sophisticated IT is changing the conditions in one area after another. The task of protecting development projects is no exception. A secret truck visible on Google Maps is an illustration of the problem.

TEXT PER SUNDSTRÖM PHOTOS JUN TAKAGI

# Keeping secrets

in a highly transparent age



Every day, thousands of people are involved in secret development projects within the Volvo Group. They range from small projects to giant launches that involve thousands of people, as was the case with the latest Renault Trucks' launch a few years ago.

On that occasion, Cloe Tejteltbaum Tardy was responsible for confidentiality, as part of her role as Project Assurance Manager. Most things had gone according to plan. Then, close to the end of the project, a colleague raised the alarm. The new truck could be seen on the internet, parked on the GTT site in Lyon, France.

At first, Cloe Tejteltbaum Tardy could not believe it was true. The truck was concealed in a building. But she watched in amazement how it was possible to zoom in on the truck from above, through Google Maps. The building had no roof and no one had ever considered possible satellite photos.

"Who could possibly have imagined that Big Brother was watching? But we were lucky. The incident didn't cause any damage," says Cloe Tejteltbaum Tardy, who thinks it was an excellent illustration of the new challenges posed by IT developments.

"The work of protecting projects is becoming increasingly complex, with virtual information

Despite being well hidden on the ground, a new Renault truck at GTT's Lyon site is clearly visible on Google Maps.

## ROLES IN PROTECTION

- ▷ The Volvo Group's largest product development site is in Gothenburg. The others are in Lyon, Greensboro, Hagerstown, Ageo, Curitiba and Bangalore.
- ▷ The Chief Project Manager (CPM) has the overall responsibility for confidentiality, but this is often delegated to the Project Assurance Manager. The PAM is then responsible for confidentiality, risk management and ensuring deliverables meet project timing requirements.
- ▷ In large projects, a confidentiality committee is responsible for ongoing issues.



Cloe Teitelbaum Tardy (left) and Masami Suzuki.

that is transferred digitally, more software and social media that increase the risk of information spreading.”

Today, planning for project protection takes place locally at the Volvo Group’s development sites worldwide. For large projects, a committee responsible for confidentiality is appointed to manage ongoing issues.

In the past, there were no overarching instructions, but, during the development of the Euro VI engines, Cloe Teitelbaum Tardy produced a manual with the assistance of the network at GTT.

“I’m pleased we have this manual,” says her colleague Masami Suzuki, who is performing

## “I’m pleased we have this manual.”

MASAMI SUZUKI, PROJECT ASSURANCE MANAGER

the corresponding role in a development project in Ageo in Japan. Masami Suzuki often sees important regional differences that require attention. UD Trucks was previously Nissan Diesel and some old routines are still in place.

“The differences aren’t that big, but they are still important,” says Masami Suzuki, adding that this places additional demands when it comes to informing the participants in the project about how the Volvo Group approaches confidentiality.



Stephanie Borne-Prieur

One concrete regional difference is that the Japanese authorities demand to see photographs of prototypes that are being tested on public roads. This requirement goes against an internal Group ban on the dissemination of photographs.

“The manual needs to be adjusted and updated if local legislation, for example, makes this necessary,” says Masami Suzuki.

Some special measures are also necessary in the US. An obvious example is truck size. US trucks are so large that special masking systems are needed since they cannot be hidden in a trailer during transport.

In Greensboro, Stephanie Borne-Prieur has the role of Project Assurance Manager.

“PEOPLE OFTEN THINK that measures like masking confidential areas will attract more attention, but it’s important for the project to maintain strict confidentiality standards to minimise the risks,” she says.

One of the basic measures to reduce risks is to give as few employees as possible access to information, even if this may cause some disappointment. For those who do get access to





There have been no serious leaks or incidents in recent projects, according to GTT's crisis committee.

vehicles or components, photography is strictly prohibited; a precaution that social media has made even more urgent.

In Greensboro, the confidentiality committee has decided that visitors to sensitive areas must have stickers fixed to their cell phone cameras. Ageo has similar regulations.

To protect secrets, planning is key.

"It's a huge challenge," says Cloe Tejtelbaum Tardy. "At the beginning of a project, requirements are not clearly defined. It is difficult to define a confidentiality management plan and identify risks without detailed information."

In order to manage increased complexity, Cloe Tejtelbaum

Tardy is hoping for more in-depth discussions between the PAMs and the Corporate Security Team, when it comes to the way monitoring needs and mitigating risks will be developed in the longer term.

"If we had a vision for the way we need to work in the future, it would simplify the task of developing sustainable methods. Instead of focusing on the negative aspects and the complexity, we would then be able to work more pro-actively and recognise the opportunities IT developments offer us," she says. ☺



# Electromobility on the move

Many cities are looking at long-term methods of combating air pollution problems. Scotland's capital city Edinburgh has adopted Volvo hybrid bus technology as part of its strategy.

TEXT ALASTAIR MACDUFF PHOTOS SARAH ROBERTS





**E**DINBURGH, WITH ITS iconic landmarks, historic castle and world-famous festival, is a favourite destination for tourists. Scotland's second largest city also has a well-documented history of recent transport issues. A project to introduce trams in the city centre ran several years over schedule and was costly and controversial, finally opening in 2014.

Like many major cities, Edinburgh also faces a significant challenge in tackling environmental problems caused by vehicle emissions. Feedback in local media shows a strong public engagement in the transport and pollution issue, with many calling for a

sustainable approach to be adopted.

Lothian Buses, Edinburgh's largest transport operator, have had a forward-thinking, environmentally friendly purchasing policy for a number of years. They are an integrated transport company, commercially operating many bus routes around Edinburgh and its environs.

In 2013, they bought the first ten 7900 Hybrids from Volvo Buses. "We had a strategy to improve the air quality in the city and had looked at the hybrid buses in Volvo's offering," says Bill Devlin, Engineering Director at Lothian Buses.

They were very satisfied with the fleet which has now grown to 70 Volvo hybrid buses in operation around the city.







"The fact that the 7900s were Euro 6-compliant vehicles made the difference for us," says Bill Devlin, Engineering Director.

**FOR LOTHIAN BUSES**, the attractions of the hybrids were the fuel savings and the minimal environmental impact. "The economic perspective of reduced fuel costs is obviously important. We have had challenges to meet along the way, as our transport strategy incorporates working with two separate local authorities. Having been involved

in buying buses for many years, I also knew that Volvo was known for mechanical reliability. The fact that the 7900s were Euro 6-compliant vehicles made the difference for us," says Bill Devlin.

As for future plans, Lothian are looking at the next step towards zero emissions. This involves Volvo's latest offering, Electric Hybrid Volvo 7900 buses. These vehicles have extended electric running and, with support from telematics and zone management, can run using full electric power in air quality hot spots. During 2016, Lothian Buses will purchase twenty-five of these vehicles, with assistance from the Scottish Green Bus Fund, an environmental programme set up by the Scottish government.

**ACCORDING TO BILL** Devlin, the reaction from the general public has been positive. "It's not something we get credit for every day, but when we tell people what we are trying to achieve – to create a cleaner environment in the city – then the response has been very good."

Lothian are looking at the long-term possibility of incorporating full electric buses into their fleet. "This would be a very important and greatly beneficial step for the transport network in Edinburgh in future years," says Bill Devlin. ☉



### Volvo first bus manufacturer to introduce hybrids in India

PHOTO: COLOURBOX

**THE STREETS OF** Navi Mumbai in India will be populated with Volvo hybrid buses during the first half of this year.

Volvo is the first bus manufacturer to introduce hybrid buses in India, as the government launches a campaign. Incentives are being offered on electric and hybrid vehicles as part of a drive to promote clean technology in India's vastly populated major cities.

The Volvo hybrids will be manufactured at the facility in Bangalore. Volvo Buses is well-established in India, having sold over 5,300 buses since 2001. More than 1,500 Volvo city buses are currently operating in 34 Indian cities.

# 700

Lothian buses are operating around Edinburgh and the Lothian region.

## £18,500,000

has been invested by Lothian Buses in hybrid vehicles.

# 85 HYBRID VEHICLES

are currently in service, 70 of which are Volvo 7900s. The others are Alexander Dennis Enviro 400 hybrid buses.

## TWO CHARGING STATIONS

at either end of the route for the electric hybrid buses – at Musselburgh to the east of the city centre and Clovenstone to the south-west.

# 25

of Edinburgh's fleet of Volvo 7900 Electric Hybrids will run along a 26 km route, which passes through three Air Quality Management Area sections where vehicle emissions are strictly monitored.

## City Mobility a long-term Volvo strategy in UK cities

As part of the City Mobility strategy, Volvo Buses has been working with electromobility in the UK for a number of years. The collaboration with Lothian Buses is one of a number of successful ongoing partnerships.

**ADRIAN FELTON IS CITY** Mobility Manager and is based at Volvo Group UK headquarters in Warwick. "The key part of my role is to promote sustainable transport solutions and the products that are included in the electromobility strategy. We have a road map dedicated to this, which includes promoting our products, strategy and vision to potential customers. By focusing on specific locations, our operations have thus far been a success."

Adrian Felton's role involves liaising with local transport authorities, operators and other stakeholders, either to explore the opportunities for co-operation or to offer ongoing support to existing customers. As well as Edinburgh, Volvo Buses' City Mobility programme is currently working with authorities and bus operators in Chester, Harrogate, Greater Manchester, Lancashire, York and London. According to Adrian Felton, there are major challenges involved in breaking into the market in the capital. "There are many historical and

geographical challenges in London. The city has gone from traditional diesel buses to hybrid, which will possibly lead to electric hybrid buses over time. Even if we can't win all the business there, it is important that we take a share and don't get left behind."

**THE MOMENTUM OF** Volvo Buses' electromobility programme is slowly growing in the United Kingdom. The organisation is in discussion with various city councils.

"There is stiff competition in the UK market, both from local manufacturers and from products from the far east. We must find our way forward even in cities where major funding is not available – the financial and social benefits must be clearly communicated.



Adrian Felton

City Mobility is a sustainable transport solution that can benefit many UK cities in the long run," says Adrian Felton. ☉

### CITY MOBILITY IN THE UK

- ▷ City Mobility is the integration of sustainable transport solutions in cities. Electro Mobility is the vehicle platform that supports the city mobility vision; Hybrid, Electric Hybrid and Full Electric Vehicles.
- ▷ First hybrid Volvo double-decked vehicles enter service in 2010.
- ▷ Volvo hybrid complete single-decked vehicles are introduced in 2013.
- ▷ Edinburgh Lothian Buses was identified as the Pilot City Mobility project in 2014.
- ▷ Over 850 hybrid vehicles are currently in service in the UK.



# Fuelling the power to change

Engine idling is a major cause of fuel wastage and also impacts negatively on the environment. A team at Group Trucks Technology, GTT, was recently involved in developing a technology that can reduce fuel consumption when idling by up to 70 per cent.

TEXT ALASTAIR MACDUFF PHOTOS SÖREN HÅKANLIND

**W**HEN TRUCK DRIVERS take a break, the electric energy consumed by using various home comforts like air conditioning, radio, TV and microwave oven is provided by the idling of the main engine or by conventional engine-based auxiliary power units. Both these solutions are less than efficient, causing a significant amount of fuel wastage, emissions and noise. Idling in heavy-duty trucks is a major concern within the global truck industry. In the United States, for example, rest-period truck idling consumes up to one billion gallons of fuel annually. However, a solution to this slumbering problem could now be at hand.

In June last year, the DESTA research project was completed, resulting in the installation of the very first European Solid Oxide Fuel Cell (SOFC) Auxiliary Power Unit (APU) on board a heavy-duty truck. This new APU technology changes the way that power is supplied to the truck cab, thereby reducing fuel consumption and costs, as well as lowering noise and pollutant emissions.

GTT was responsible for designing a vehicle system to integrate the APU into the truck. The EU co-funded project involved a number of working partners and focused on truck use in the US market. Potential future benefits for fleet owners, drivers and the environment make the project's success both significant and exciting. >







Sophie Tintignac, Jonas Hagerskans and Azra Selimovic were part of a team at GTT that designed a vehicle system to integrate the Auxiliary Power Unit into a truck.



Jonas Hagerskans, DESTA Project Manager: "Once we got underway in 2012, integration work on the vehicle went very quickly."



Sophie Tintignac, Research Engineer: "Balancing the energy flow was very important. We had to factor in the difference in battery voltage in the US when developing an electrical system."



Azra Selimovic, Technology Manager Electro Mobility Sub-systems: "Volvo Group has been working with fuel cell technology since the 1990s. The system we planned to develop was seen as a game changer."

**"Fuel savings, reduced emissions and the low noise factor can make our solution very attractive to fleet owners and drivers."**

JONAS HAGERSKANS, DESTA'S PROJECT MANAGER AT GTT

A **FIVE-PERSON TEAM** in Gothenburg developed the requirement specifications, DC/DC converter, interface and control system, then fitted the APU into the truck and tested it to make sure it functioned properly in real conditions.

"We saw potential in Solid Oxide Fuel Cell technology to create a compact system with high efficiency, low weight and volume. After an application for EU funding was successful, Volvo Group invested around SEK 6 million in the project. This investment was important as it showed Volvo Group's continued commitment to innovative, long-term technology," says Azra Selimovic.

The project's strict timeline meant that work between the partners

involved had to be extremely coordinated and focused. Jonas Hagerskans was DESTA's project manager and was heavily involved in research and development during the whole process. "Once we got underway in 2012, integration work on the vehicle went very quickly. We built the vehicle system in parallel with the

APU. Our working partners, AVL and Eberspächer, had developed their own respective lab versions, which was great from our point of view."

The project began by benchmarking the two systems, together with the partners. In the benchmark test, points were awarded to both systems respectively, depending on the results in each benchmark test. The winner of the test – the system from Eberspächer – was then chosen to be integrated in the vehicle.

**ONE IMPORTANT ASPECT** of the APU installation was the support of batteries when starting up the system. Sophie Tintignac is the research engineer who was mainly responsible for the work with the battery in the course of the

### HOW DOES FUEL CELL TECHNOLOGY WORK?

The diesel from the vehicle tank is transformed via an electrochemical reaction to electrical power in the APU, only resulting in carbon dioxide and water as residual products. In the APU, the diesel is first transformed to a hydrogen-rich gas in the reformer and then passed to the fuel cell where chemical energy is transformed to electrical energy.



project. "Balancing the energy flow was very important. After looking at the alternatives open to us, we made a trade-off and tried to stay as close as possible to the original electrical system, while ensuring that the engine cranking function of the batteries would not be altered."

Fuel cell technology of this kind is attractive to the DESTA team because of the flexibility it can offer the market. A generic power source has been developed, which can be used to power other truck applications, like an electrical high-power crane or refrigerated transport, for example.

Having been conceived as an ambitious and detailed EU project proposal, the result is long-term technology that could greatly benefit the market. "What will be important is the total cost of ownership and how the Solid Oxide Fuel Cell Auxiliary Power Unit compares with alternatives – a combustion engine, for example. The technology involved is more complex, but fuel savings, reduced

emissions and the low noise factor can make our solution very attractive to fleet owners and drivers," says Jonas Hagerskans.

The project received a great deal of external praise, with EU Scientific Coordinator Carlos Navas remarking that he had never seen such a good end result. "The team spirit among everyone involved was incredible," says Azra Selimovic. "Now we have completed our work and are aware of the benefits, the maturity level and how we are able to utilise the technology."

**LOOKING TO THE** future, it is expected that the majority of all vehicles should have some kind of anti-idling system installed by the year 2027.

Several US states already have anti-idling laws in place. "Of course we know that the US market is tough, but we are looking forward at these long-term targets for APUs on vehicles and are optimistic. For us, nothing is impossible after DESTA," Azra Selimovic concludes. ☺



Sophie Tintignac measures the battery voltage of the specific batteries the team chose to install in the vehicle.



PHOTO: JONAS HAGERSKANS

For testing purposes, an American truck was specially imported to Sweden. By 2027, most vehicles are expected to have anti-idling systems installed and several US states already have anti-idling laws in place.

## THE LOWDOWN ON DESTA

- ▷ The project ran from the start of 2012 to June 2015 and involved several important working partners including AVL List in Austria and Eberspächer Climate Control Systems in Germany.
- ▷ For testing purposes, a US truck was imported to Sweden. Conventional US diesel was used, which the APU handles directly from the tank.
- ▷ The APU had to be as small and light as possible to accommodate the truck's diesel tanks and keep fuel consumption to a minimum. It is just 40 cm wide.
- ▷ Test results showed diesel consumption of just 0.95 litres per hour at max power, compared with ~3 litres per hour in an idling engine. A similar comparison recorded a 73% reduction in CO<sub>2</sub> emissions, as well as zero emissions of NO<sub>x</sub> particles.



## COMPETITORS



### VOLKSWAGEN

Chairman Ferdinand Piëch resigned in April 2015 after he failed to oust CEO Martin Winterkorn. However, later in the year, Winterkorn had to resign any way following the emissions scandal.

The integration of Scania and MAN under the Volkswagen umbrella continues and a new commercial vehicles division was created under former Daimler Trucks head Andreas Renschler. Scania continues to invest and build its position, especially in India and South America, while MAN is struggling with low profitability and is working with an efficiency programme. It includes reduced overhead costs and a streamlined organisation.



PACCAR engine

### PACCAR

The PACCAR Group, which includes Kenworth, Peterbilt and DAF brands, is the most profitable of all truck companies. It is conservative in market expansion and prioritises profitability over volume and brand image over market share. It has announced an extension of the DAF product range in Brazil, as well as engine production in Brazil.

IC School bus from Navistar



### NAVISTAR

The painful effects of Navistar's failed engine business in 2012 continued in 2015, with Navistar cutting off unprofitable business lines and restructuring its plant network. While it has been successful in reducing costs, its market share in NAFTA is still historically low.

### TATA AND ASHOK LEYLAND

Tata and Ashok Leyland continue to dominate and also heavily depend on the Indian market. Tata Motors' market share has been declining since 2010, while Ashok Leyland has maintained or even raised its share. Both companies have similar strategies: focus on cost cutting and efficiency, product development and globalisation.

*Volvo Group Magazine* asked Business Intelligence to list some key events from the industry in 2015. Not surprisingly, Volkswagen's emissions tests scandal was one of the biggest topics from last year.

TEXT ANN-BRITT SEDIG

# Competitors at a glance

## BEIQI FOTON AND SINOTRUK

With overcapacity in the Chinese truck industry, Chinese competitors such as Beiqi Foton and Sinotruk continued to expand overseas investments. However, plans for Brazil and India have been delayed.

## HYUNDAI

An upcoming competitor with global ambitions is Korean Hyundai who started making its heavy-duty truck, Trago Xcient, in China in 2014. It also started building light commercial vehicles in Turkey in 2015.



Hyundai's Trago Xcient

## IVECO

Iveco continued its European plant network restructuring programme. Its plants in Spain will concentrate on heavy-duty trucks, while production of extra-heavy special vehicles and light-duty vehicles will be transferred to Italy.

## DAIMLER

Daimler is eager to bring in even more advanced technology, like connected trucks and advanced telematics. In 2015, Daimler Trucks North America unveiled the Freightliner Inspiration Truck and autonomous trucks are being tested on public roads in the USA and in Germany.

Daimler announced a full-scale review of its leadership and management structure in 2016, in order to prepare the business for coming challenges, such as new powertrains and competition from companies like Google or Apple.

India continues to be a focus market. Daimler is also strengthening its regional organisations. There will be six new regional centres in Dubai, India, Singapore, Johannesburg, Nairobi and Latin America.

In 2015, the Freightliner Inspiration Truck was unveiled.

PHOTO: DAIMLER



## KAMAZ

Kamaz, the market leader in Russia, had problems with a declining market for trucks. Nevertheless, Kamaz is investing in new products and is even developing an autonomous truck.

## HINO AND ISUZU

While Japan is the commercial foothold for advanced markets and the location for production of major components, Hino and Isuzu continue to shift production from their native Japan to Southeast Asia. Hino's strategy is to have major production hubs in Indonesia and Thailand and additional assembly plants in other countries. Isuzu plans to use Indonesia as the core manufacturing foothold for the CV business in ASEAN. A new plant in Karawang, West Java, became operational in 2015.



Rennie Shamambo and Sarah Chishimba are former Nortec students. Today they work at an engineering company in a mining district.

"It has been fun to be part of the Zamita project and talk with the girls at the school we visited. The students had many questions about how we could get where we are today. They do not believe women can do what we do."



A total of 4,000 students go to Nortec, of which 800 specialise in heavy machinery.



Nortec is a school with one of the best reputations in Zambia.



### *Alport Banda*

is head teacher at Nortec's section for heavy machinery.


"When we did our pilot study for Zamita, we asked companies in the field which skills they lacked from the students coming from Nortec. We realised that there was a big gap between students' knowledge and industry needs, mainly in the field of electronics."



# TEACHING *Zambia's future* TECHNICIANS

The Zamita project, one of the Volvo Group's investments in vocational schools in Africa, is creating new opportunities for aspiring technicians in Zambia and helping more young women begin careers in engineering.

TEXT GÖRREL ESPELUND PHOTOS ANDREAS KARLSSON



**T**he Nortec vocational school lies in the heart of Zambia's mining region, the Copperbelt. It has been training technicians and electricians since 1959 and is one of the most highly rated vocational schools in the country. Since 2014, it has been part of the Zamita (Zambian Industrial Training Academy) project, one of the educational programmes in which the Volvo Group participates.

Alport Banda is the head teacher at the heavy-duty machinery department.

"Before we were unable to teach the very latest technology because we didn't have the equipment, so the students graduating from the school had to participate in internal training at their workplaces before they could do their jobs properly. This new partnership is going to raise the standard and the students will be able to find jobs in the mining, transport and construction industries," he explains.

Together with Selma Klipic, a production

engineer in Skövde who volunteered through GTO's On-site Volunteering project, he shows the *Volvo Group Magazine* team around the school. The maintenance work has fallen behind and the blue and white walls in the corridors are in serious need of a fresh coat of paint.

The workshop is empty. In December last year, the premises were cleared and the old machinery was removed. The Volvo Group is in the process of shipping new equipment to the school as part of the training and education project.

"One of my tasks has been to plan the new workshop. It's large and well suited to its task, with straight lines and plenty of potential. I have several ideas for what can be done and I have discussed different solutions with the workplace engineers in Skövde," says Selma Klipic.

The old workshop bears the traces of decades of work but will be given a full-blown facelift.

The Zamita programme is a one-year extension course for students who have already completed basic technology training and education at Nortec. The first class of Zamita students is expected to >





From a little kiosk on Nortec's grounds, students and teachers can buy phone cards to load internet and phone hours onto their mobiles. Ndola is Zambia's third biggest city and Nortec is located in the surrounding suburbs, just a short drive from the city centre.

begin the course in May. By then, a curriculum is needed, the machinery must be installed and the teachers have to be trained in the new technology. A great deal of emphasis will be placed on electronics and electric hydraulics, as well as engines and gearboxes of different kinds, in order to cover the needs of industries in the region.

**IREM SOYDAN, DIRECTOR** External CSR Management, explains the Volvo Group's involvement. "Africa is one of the Volvo Group's strategic growth markets and, with our sustainability programme, we can help create economic growth in the region. By concentrating on vocational training in different countries, the organisation helps to reduce unemployment, while remedying the lack of trained mechanics and technicians, which has been an obstacle to business development – both for our customers and for the Volvo Group," she says.

In addition to the Volvo Group and Nortec, Zamita comprises the Swedish International Development Co-operation Agency (SIDA) and the UN organisation for industrial development, UNIDO. Erik Ladefoged, technical adviser at UNIDO, describes the project as the beginning of a "fantastic concept".

"When a company involves itself and commits to a development project for several years, as the Volvo Group is doing here, it's completely different from the investments companies

normally make within the framework of their social sustainability programmes. Access to new technology, specialist training for teachers and the potential for further collaboration make every partner a winner. The challenge is that this is something new for everyone and we have a great deal to learn. This could prove advantageous when the Volvo Group extends its investments in Africa," he says.

During her two months as a volunteer, Selma Klipic has acted as the link between the Volvo Group and Nortec.

"The situation in Zambia is so different and there are many small details that are difficult to explain. One thing I have learned is that, if we are to realise the project objectives, we have to improve our ability to communicate," she says.

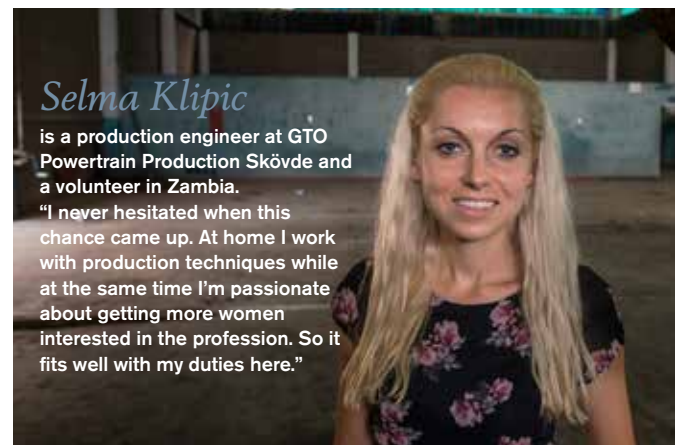
An important goal with the initiative is to give young people an education that matches companies' needs, since many of the companies in the Copperbelt are existing Volvo Group customers. In addition, there is an aim to increase the percentage of female students at the school. At present, 11 of the 800 students on Nortec's current heavy-duty machinery programme are women.

This has also been part of Selma Klipic's assignment and, together with two of Nortec's former students, Rennie Shamambo and Sarah Chishimba, and the only female teacher in the subject at Nortec, Eunice Kakoma, she has visited a number of schools in the area.

Since Rennie Shamambo and Sarah Chishimba graduated in 2010, they



Irem Soydan



The first class of Zamita students is expected to begin in May.



## Ten vocational schools in Africa

- ▷ Over a period of five years, the Volvo Group is planning to set up ten vocational training programmes in Africa. The Volvo Group is partnering with development organisations and schools in different countries.
- ▷ The vocational programmes will help to match the need for trained workers.
- ▷ The project has already begun in Ethiopia, Morocco and Zambia.
- ▷ In Zambia, a total of 420 students will receive training over a period of four years.
- ▷ On-site Volunteering is a pilot project and, to date, three GTO employees have participated.
- ▷ The marketing of these courses to young female students is an important factor.

have been permanent employees at one of the companies in the mining town of Kitwe.

"It was interesting to visit the schools and talk to the girls and show them that they can in fact choose a different occupation without being particularly masculine," says Rennie Shamambo, one of Nortec's brightest alumni.

Both she and Sarah Chishimba had fathers who encouraged them to take an interest in technical subjects. They are hoping that these encounters with girls at school will inspire students who do not perhaps have the same support at home.

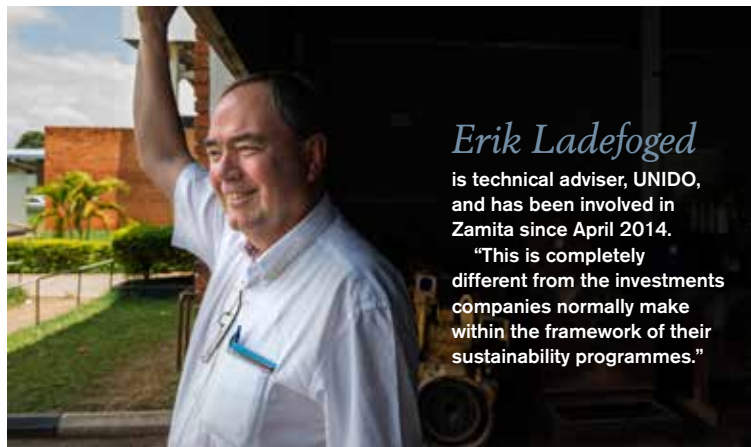
"In many African cultures, women are expected to stay at home and, as a result, many young girls are afraid to do something else. They don't believe they can do what we have done," says Sarah Chishimba.

They have visited a total of seven schools.

"It's been great having Rennie and Sarah with me, as they have talked about their personal development and the reception they have been given in the workshop. The students have been able to ask the kind of questions they could never have asked me, such as how their parents reacted to their choice of profession

and the job opportunities that are available," says Selma Klipic. Alport Banda also underlines the importance of attracting more girls to the programme.

"Girls in our culture do not traditionally choose technical subjects, so this is something we need to change and I hope there will be more equality in the next generation," he says. ☺



### *Erik Ladefoged*

is technical adviser, UNIDO, and has been involved in Zamita since April 2014.

"This is completely different from the investments companies normally make within the framework of their sustainability programmes."



The Electric Site project involves several partners. "Mutual trust is incredibly important," says Erik Uhlin. Left to right: Uwe Müller, Jenny Elfsberg, Joakim Unneback, Magnus Henke (seated) and Erik Uhlin.

# ELECTRIC TEAMWORK

A unique electrification project is paving the way for the construction machines of the future. Volvo CE has joined forces with other partners to develop technology set to reduce carbon dioxide emissions by up to 95 per cent.

TEXT MARIA SKÖLD PHOTOS RICKARD KILSTRÖM

WHEN THE NEWS was announced in June 2015, it sparked interest. Volvo CE and the Swedish construction and aggregates company, Skanska, revealed that they were developing an electrical solution for working in quarries. In the long run, this could change the entire aggregates and construction industry.

The Electric Site project was presented at Volvo CE's large Construction Climate Challenge conference, a suitable location as the new technology appears promising from a climate perspective. If the machines were powered by electricity instead of diesel, it is estimated that



## WHAT IS ELECTRIC SITE?

The project involves the electrification of a complete work step in a quarry – from blast pile to secondary crusher.

### TIME SCHEDULE

#### 2015

Volvo CE and Skanska present the Electric Site project. The estimated cost is SEK 203 million, of which 65 million will come from the Swedish Energy Agency.

#### 2016

Development of technical solutions. Close cooperation with post-graduate students.

carbon emissions could be reduced by as much as 95 per cent for work in quarries. The customers' production costs could also be cut by 25 per cent, mainly due to the increased efficiency of electric machines and higher overall operational process efficiency.

**"THIS INDUSTRY IS** often somewhat conservative, but we are facing what can only be described as a paradigm shift with more sustainable technology and a new way of thinking," says Jenny Elfsberg, Director Emerging Technologies at Volvo CE.

Since the presentation of the project, the team in Eskilstuna, Sweden, has welcomed a large number of interested visitors, including the Swedish Energy Minister and the Director General of the Swedish Energy Agency. The Energy

Agency is involved on a large scale and is also contributing a substantial part of the financing.

"We are going to see some extremely rapid changes over the next five to six years, not least when it comes to automation. We are therefore partnering with Volvo CE on a number of projects. This is important for the whole of society," says Magnus Henke, transport supervisor at the Swedish Energy Agency.

**ANOTHER PARTNER** is the construction and aggregates company, Skanska, which has been part of the project group since the very start. This, too, differs from the way work of this kind is normally organised, according to technical project leader, Erik Uhlin, and chief engineer, Joakim Unneback.

"We have found an open, effective way of





### TARGETS

Electric Site  
could give a:

# 95%

reduction in  
carbon  
emissions

# 25%

reduction in  
production costs  
(cost per tonne)  
to the customer

(Provided that  
the electricity is  
produced in a  
carbon-neutral  
manner.)

Jenny Elfsberg, Director Emerging Technologies at Volvo CE, emphasises the importance of working with universities.

working. It's incredibly important that we share a feeling of mutual trust," says Erik Uhlin.

Joakim Unneback underlines the benefits of constantly exchanging thoughts and ideas with the customer during development. This does not simply save time, it also provides important insights into how products are actually used.

Uwe Müller, the Chief Project Manager for Electric Site, believes that working with the customer from the development stage is the way things will be organised in the future, as a natural result of shifting focus from selling yellow machinery to offering a solution to the customer's problems. "Close cooperation and shared values will be increasingly important and Electric Site is a good example. We are working together to develop technology that is safe, environmentally friendly, efficient and commercially viable, for us and for the customer," says Uwe Müller.

**ANDREAS SUNESSON**, HEAD of the Division of Fleet and Technology at Skanska Aggregates, is also

very satisfied with the partnership. To him, one of the most important prerequisites is the fact that Skanska and Volvo CE share the same values, not least when it comes to the environment and safety.

Just like Uwe Müller, Andreas Sunesson has noticed that more and more customers are asking for complete solutions and this demands a new approach. "As far as we're concerned, this project has been something of a think tank. To be honest, in this business, we've been doing more or less the same thing for a very long time. We may not use spades and wheelbarrows any more, but the principle is the same," he says.

Electrification on the other hand, represents a major change that can really improve efficiency. Now it is possible to think in a new way from the very start and find more productive solutions.

"The principal challenge is to change our way of thinking. I believe that companies like Skanska and Volvo CE can learn a great deal from one another and really develop together," says Andreas Sunesson. ☺

**2017** First prototype tested, both in simulated and real environments.

**2018** Test set-up in operating quarry.



PHOTO: VOLVO TRUCKS; RENAULT TRUCKS

## THE SANCTIONS

On 16 January 2016, the EU lifted nuclear-related economic and financial sanctions for Iran. The action followed verification by the International Atomic Energy Agency (IAEA) that Iran has implemented the measures proposed.

# Potential for growth in Iran

**IN JANUARY MANY** of the trade sanctions against Iran were suspended. What does this mean for the Volvo Group?

The lifting of sanctions against Iran can potentially bring many positive developments for the region. With a population of 80 million and a GDP of \$370 billion, Iran is an emerging market with growth potential. There is a vast demand for trucks, not only in the key oil and gas sectors but also in construction and infrastructure. Iran's Ministry of Industry, Mine and Trade estimates that around 200,000 commercial vehicles will have to be replaced in the coming years.

In 1980 Volvo Trucks signed an industrial and supply co-operation agreement with the state-owned company Saipa Diesel. Over the years, a full CKD (Completely-Knocked-Down) operation was developed. It initially started for the Volvo N and F models and then expanded to include the successful Volvo FH model. Renault Trucks entered the Iranian market in the year

2000 with the assembly of Midliners and Midlum in collaboration with Saipa Diesel. Historically, Renault Trucks has also successfully imported and sold the Premium and Kerax ranges in Iran.

**THE VOLVO GROUP** did not deliver trucks or parts to Iran between 2012 and 2014 due to trade sanctions against the country. With sanctions lifted and the banking system once again in operation, Lars-Erik Forsbergh, Vice President Volvo Trucks Middle East sees the potential to resume sales, ramp up volumes and put Iran back among the top global markets.

"We have a running fleet of some 50,000 Volvo trucks in Iran, a large Renault truck population and an exceptionally strong Volvo image to build on. I don't believe in the 'gold rush' that you read about in media, but rather a steady business growth following a gradual recovery of Iran's economy," says Lars-Erik Forsbergh.

TOBIAS WILHELM



Lars-Erik Forsbergh



## 130 years of dedication and commitment

**The Arvika Plant** has a truly fascinating history. It began life as a small forge back in 1885 and has grown to become the Volvo Group's principal plant for the production of wheel loaders.

**THE ARVIKA PLANT IS SITUATED** deep in a Swedish forest, far away from large cities with their abundance of transport facilities and workers. So how has it been so successful?

The answer is simple: people with drive who have dared to think outside the box.

The company's founder, Per Andersson, was an innovator with a great head for business. After starting by selling uncomplicated ploughs, he moved on to produce castings and mowing machines.

In 1898, a contract to sell 2,500 mowing machines a year was signed with a dealer. The reputation of these Swedish machines quickly spread abroad and with customers in South Africa, Australia and South America, the Arvika Plant's turnover skyrocketed.

**JUST BEFORE THE START** of the Second World War, the company had more than 700 employees, annual sales of 15,000 agricultural machines and a site with an area of 280,000 square metres.

In 1960, the company was acquired by AB

Bolinder-Munktell in Eskilstuna. In the same year, the whole headquarters burned to the ground. In spite of this, over the next few decades, it succeeded in increasing the production of backhoe loaders, paving machines and crawler excavators. In 1966, the plant produced its first wheel loader.

**IN 1995, FOLLOWING** a merger between the Volvo Group and the American company Michigan/Euclid, Volvo Group became the sole owner of the company, which since has been known as Volvo Construction Equipment.

Today, the Arvika Plant is a high-tech facility with around 1,000 employees. The people driving the company forward can still be described as dedicated. In the latest VGAS, almost 90 per cent of employees said that they were looking for ways to improve productivity. No wonder colleagues from the Volvo Group and visitors from other companies come here for inspiration. Per Andersson would be proud.

MARIA RHÖSE O'CONNOR

1918



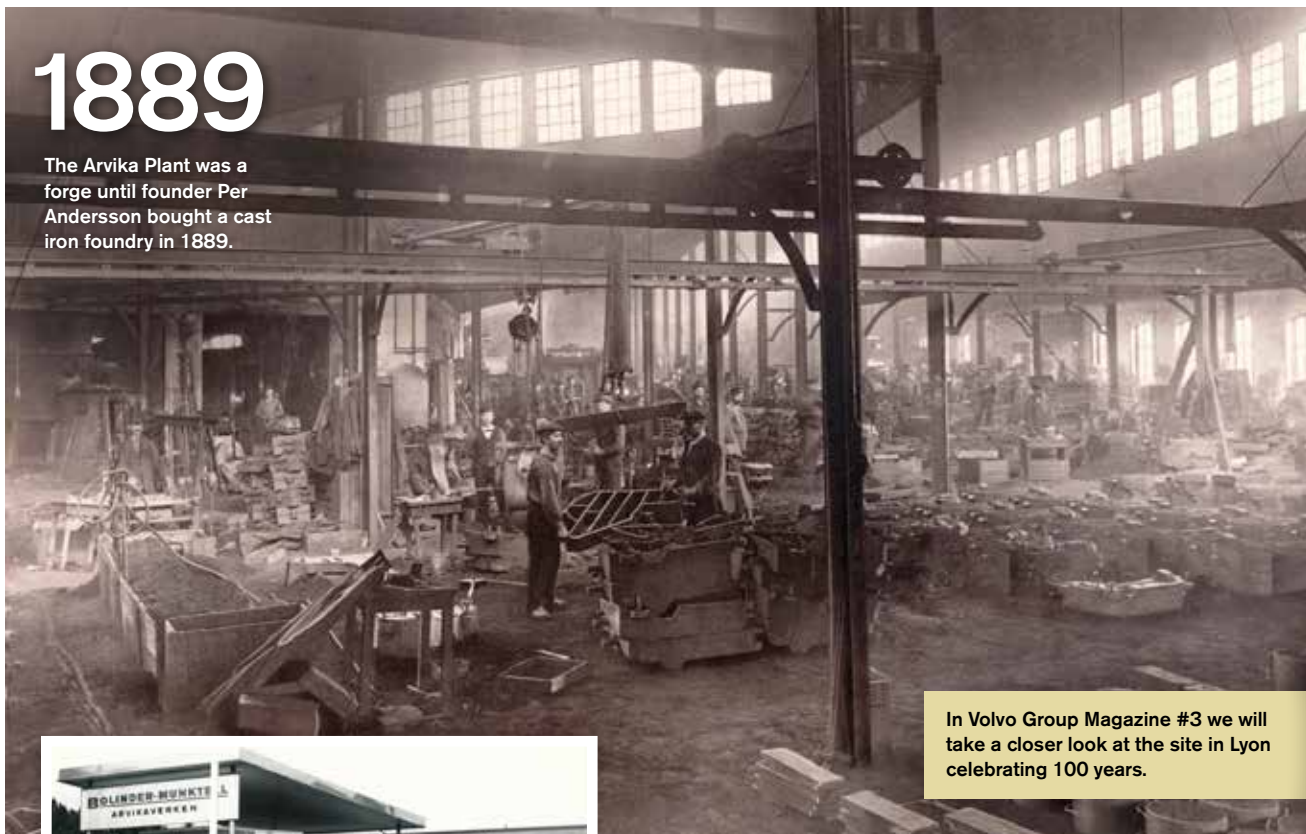
The Arvika Plant's product designers



The newly launched G612 excavator on parade in Arvika in 1965.

# 1889

The Arvika Plant was a forge until founder Per Andersson bought a cast iron foundry in 1889.



In Volvo Group Magazine #3 we will take a closer look at the site in Lyon celebrating 100 years.



A tracked vehicle drives through the new gates on a test run in 1965.

# 1970



The first LM 845 rolls out of the Arvika Plant in 1970.

# 1978

A proud team show off the 5,000th LM 846.



The workshop in the 1920s



## Being wiser with water

In a grey industrial area, officially classified as a “blue water scarcity zone”, the 120-acre Volvo Group Trucks & Bus plant on the outskirts of Bangalore in South India has managed a near miracle. In the past three years, it has generated water for its industrial use, while also maintaining lush green surroundings with over 5,000 trees, and has recharged the ground water table for its neighbours too.

It started in 2013 with some ambitious water conservation measures – injection of rainwater into bore wells, percolation ponds and

a lake to recharge and rejuvenate the water table, creating a sustainable, long-term solution.

“These efforts have made the company a responsible corporate citizen in a drought area with severe water stress, benefiting not only us but our neighbours too” says Shivakumar P, Site Manager, Volvo Group Real Estate.

After domestic water consumption was reduced by 60 per cent through tap regulators, the first step in water rejuvenation was to create 30 infiltration wells. Located strategically at lower points on site and connected to storm water channels to harness rainwater, these collectively harvest 135 kilo litres every year.

Apart from reducing the need to buy water, the rainwater lake is also home to fish and birds, and adds a nice ambience to the plant. “It also recharges the ground water. In the adjoining farmland, the two bore wells are now brimming with water,” says Shivakumar P.



Next, open borewell recharge units filled with multiple layers of filters were created.

The third step was the creation of an artificial lake at the deepest part of the plant, to enable the natural gravitation of rainwater, and create a storage capacity of around 35 million litres of water.

In addition, every year low-water consuming trees such as mahogany, silver oak, rose wood and teak are planted on site.

The end result: the rejuvenation of around 259 million litres of water every year, an admirable feat in a dry and distressed industrial belt.

R F MAMOOWALA

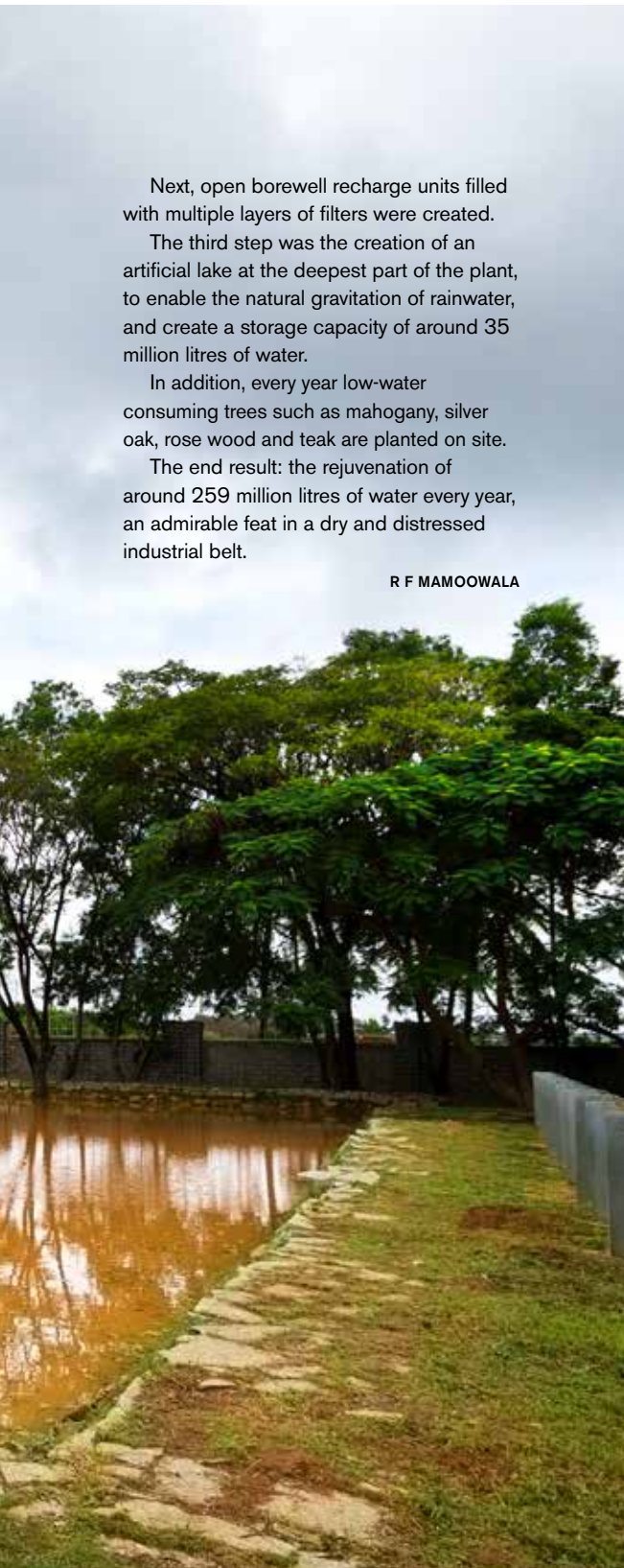


PHOTO: KIRAN NAMA

ULRIKA JACOBSSON

## “The power of dialogue”

**T**HE INFORMATION WE get every year from all employees responding to VGAS is a strong indication of how our strategy and culture are lived in the Volvo Group. The Employee Engagement Index has declined for two years in a row. According to Kenexa/IBM, who supplies us with the survey and external benchmarks, there are some key factors for us to focus on in times of change and challenges. The first is constantly to have a dialogue in our teams about our company purpose, break it down to each team and make sure everyone sees their contribution to it.

The second relates to transparent communication. Extensive research shows that engagement can remain stable or even increase in organisations going through tough changes – if the leaders take the opportunity to speak frequently with their employees. Leaders and teams that have a constant open and honest dialogue, not only about what is going on, how we feel about it, what we fear, but also about the benefits it will bring, appear to manage the change better.

**IT IS A QUESTION OF CONNECTING** the head and the heart to create a common understanding of where we are going, who we need to be as a company and where we, as individuals, fit in. Doing this makes us feel more involved and perceive change as something happening *with* us, not to us.

When communicating, never take it for granted that other people have the same knowledge and experience as you. Repeat the full story and use the dialogue as an opportunity to listen and learn from other perspectives. This is a useful tip from Cecilia Hellner, Inbound Director at GTO Sweden, when sharing her experience as a manager.



Another leadership insight from Patrick Collignon, SVP GTO Americas, is that trust is a foundation for powerful communication; with trust comes the ‘Fun Factor’, meaning that it is important that people feel happy in their environment as this boosts performance.

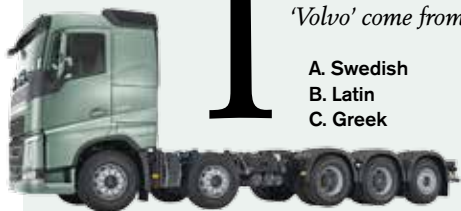
The same goes for engagement.

ULRIKA JACOBSSON  
ENGAGEMENT SPECIALIST, VOLVO GROUP



# Ciao, 哎, hola, hello, hey, hé, hei, ஸ்ஹீ!

This time the quiz is all about languages.  
Need some help? All the answers can be found  
in the magazine. Good luck!



# 1

*Which language  
does the word  
'Volvo' come from?*

- A. Swedish
- B. Latin
- C. Greek

# 2

*Which CEO  
coined the term  
'Bad English'?*

- A. Leif Johansson
- B. Olof Persson
- C. Sören Gyll

# 3

*Approximately  
how many different  
nationalities work  
within the Volvo  
Group?*

- A. 150
- B. 130
- C. 100

# 4

*Working for Uptime  
Solutions in Ghent  
requires the ability  
to speak multiple  
languages. What is  
the minimum number  
of languages each  
employee speaks?*

- A. 4
- B. 3
- C. 5

# 5

*How many Volvo  
Group employees  
have English as their  
first language?*

- A. 50 per cent
- B. 45 per cent
- C. 30 per cent

# 6

*What is Martin  
Lundstedt's favourite  
expression?*

- A. Nu fikar vi!
- B. Nu kör vi!
- C. Nu rullar vi!

# 7

*What are the most common languages  
in South Africa?*

- A. Zulu, Xhosa, Afrikaans and English
- B. Afrikaans, English, Xhosa and Northern Sotho
- C. Zulu, Afrikaans, English and Swazi



PHOTO: VOLVO TRUCKS, COLOURBOX, SÖREN HÅKANLIND



## WIN A DUFFEL BAG!

Email your answers to [groupmagazine@volvo.com](mailto:groupmagazine@volvo.com) no later than 31 May 2016.  
Write "Quiz" on the subject line. Remember to include your name and address.  
Three lucky winners will receive a red duffel bag from Renault Trucks. The bag has  
black handles, one adjustable strap and a zipper pocket at one end. The duffel bag  
is 56.5 cm long.

**VOLVO**