

# SAFETY #3

# FIRST+

REPORTS AND STORIES OF EMERGENCY SERVICES.

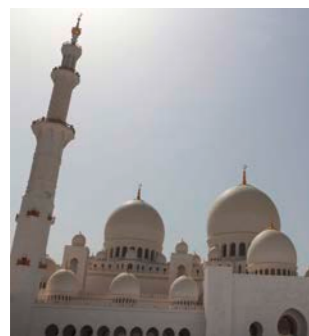
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# SAFETY FIRST+



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## IMPRESSUM



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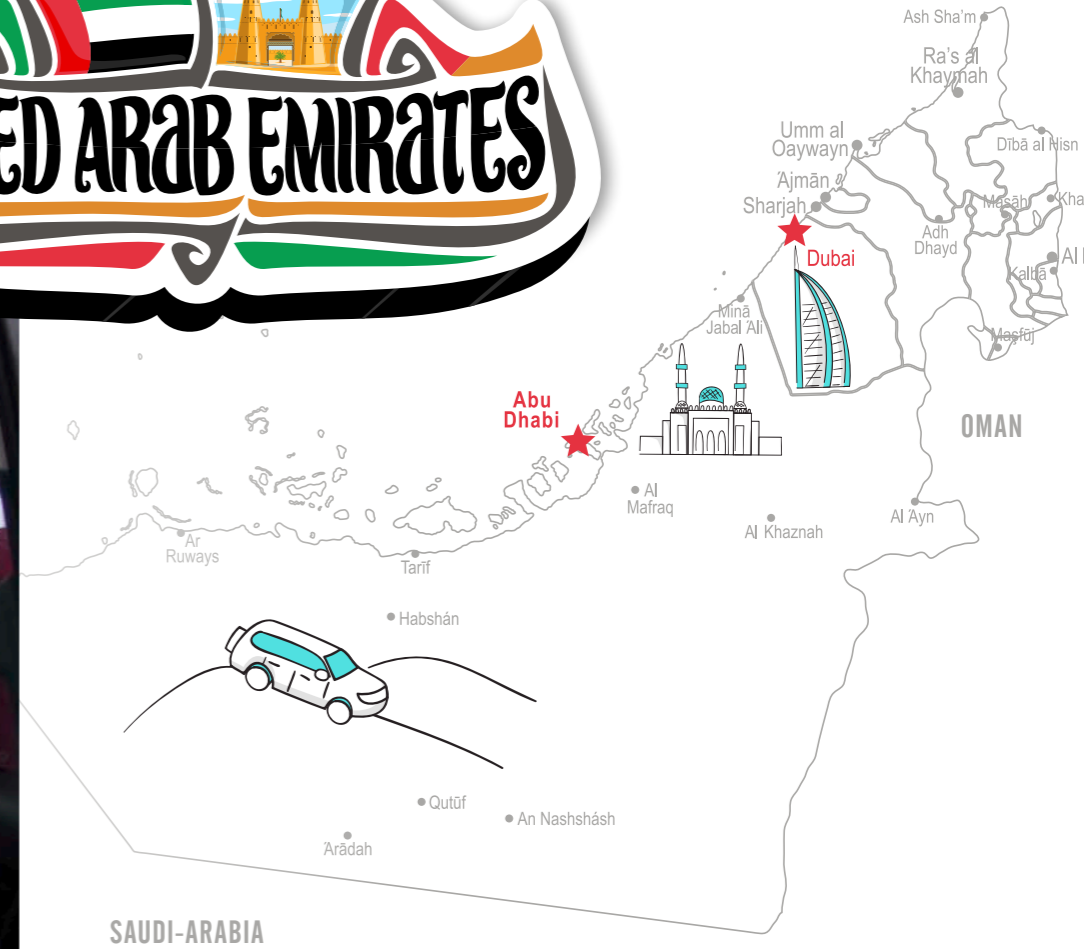
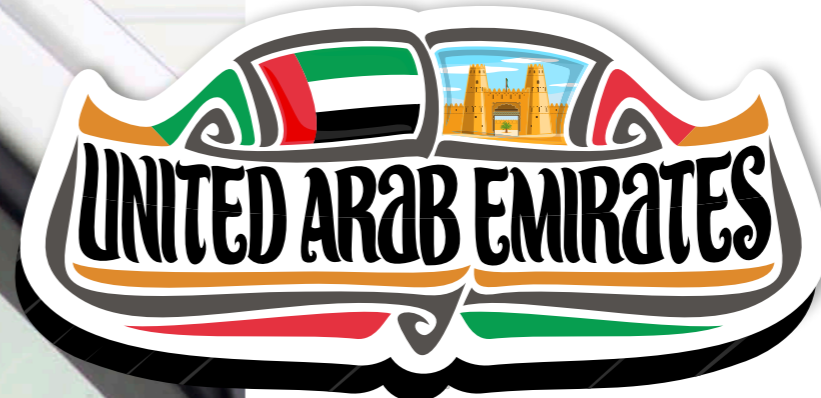


## EDITORIAL

“Die Bergretter”, broadcast in ZDF on a Thursday evening in December 2018, was the most watched programme that day with 5.26 million viewers, or 17.6 per cent of the total. The real mountain rescuers at the Bavaria Mountain Rescue Service carry out around 12,000 missions yearly, with far less media exposure. Yet their success rate is even higher. We frequently encounter women and men in rescue teams who are regarded as heroes, but for whom this term means little. They think it’s normal to do their best, and this attitude helps us not only to try our best but to spotlight those people who inspire and support us. The reports in this issue deal with these people.

*T. Sigeneger*  
Tilo Sigeneger

*A. Ploeger*  
Andreas Ploeger



# PRAVEEN PULICKANTHOTTIYIL PRATHAPAN — OUR MAN IN ABU DHABI.

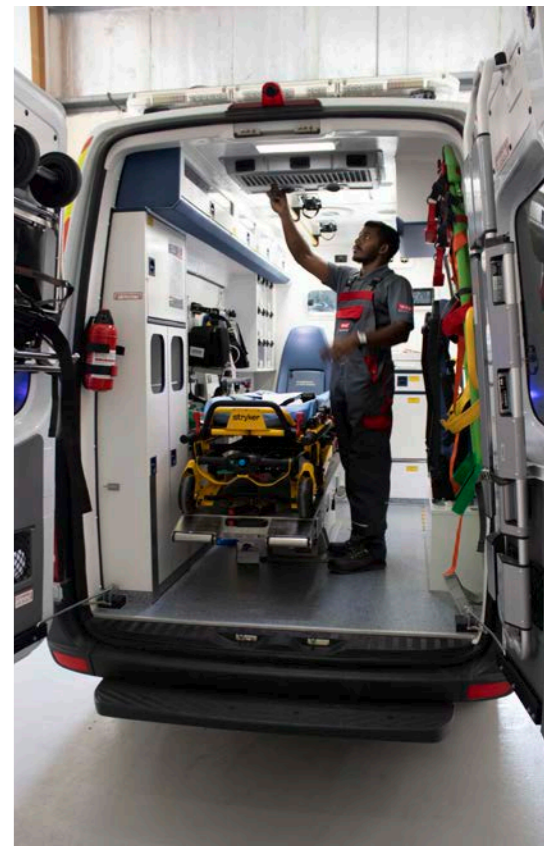
SO THAT WE DON'T STUMBLE OVER HIS NAME, WHICH IS VERY DIFFICULT FOR US, WE ARE ALLOWED TO CALL SERVICE TECHNICIAN PRAVEEN PULICKANTHOTTIYIL PRATHAPAN SIMPLY PRAVEEN. PRAVEEN IS ON THE ROAD FOR WAS FIVE DAYS A WEEK AND SOMETIMES LATE IN THE EVENING TO BRING WAS SERVICE FROM ABU DHABI TO THE ENTIRE UNITED ARAB EMIRATES. HE MAKES AROUND 160 CUSTOMER VISITS A YEAR WITH HIS SPRINTER FOR WAS VEHICLES AND RESCUE VEHICLES OF OTHER BRANDS, WHICH HAS BEEN CONVERTED INTO A SERVICE VEHICLE. HE COVERS IMMENSE DISTANCES.

Approximately 600 kilometres lie between the border with Saudi Arabia in the west and the Gulf of Oman in the east of the UAE. One could say that Praveen is responsible for WAS customer service in all Emirates of the sparsely populated country on a total area of approx.

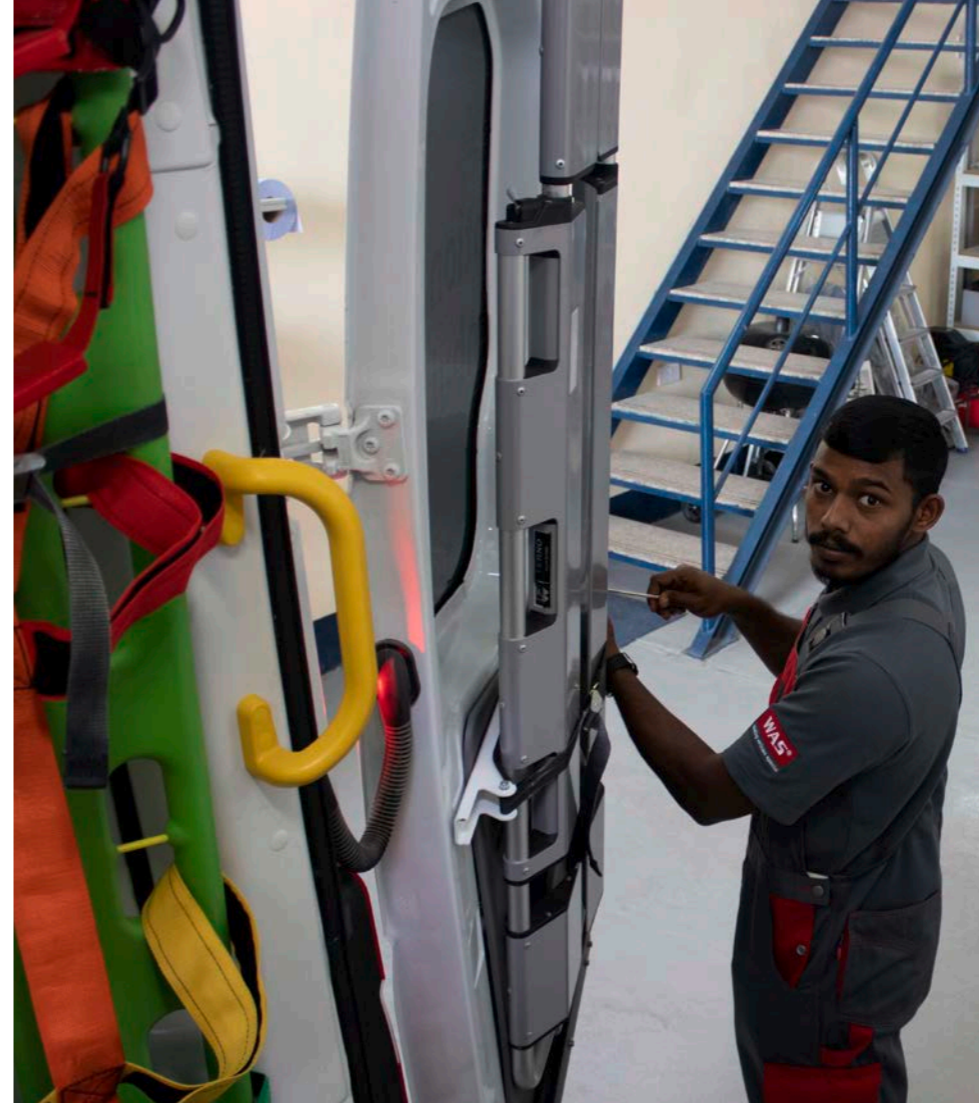
83,600km<sup>2</sup>. With a total of approx. 250 missions per year – stationary and mobile – a WAS technician must also be a real all-rounder in the UAE. As an ambulance conversion combines technology from many trades, such as electrical, heating and air-conditioning technology, electronics, hydraulics, mechanics, vehicle technology and also from carpentry. Praveen knows all these areas.

#### A GOOD RELATIONSHIP WITH GERMANY.

Born in India, he has been a member of the WAS team for almost two years and has been in Abu Dhabi for a total of four years. With a bachelor's degree in electrical engineering, he first worked in the field of automotive electrics and air conditioning in the technical service department of a large taxi company before being recommended to WAS by a business partner. Many



Praveen in action.



Praveen handles 250 missions a year, both stationary in his workshop and mobile at the customer's site.

Indians – including cousins and an uncle of Praveen – live and work in the UAE to accumulate savings for the existence of their families in India. With 3.5 million people, they even form the largest population group. With 90% of foreigners, almost all of them migrant workers, it is common for workers in the UAE to spend their holidays in their country of origin. Praveen also flies to his family in India to go on holiday. A colleague from Germany then takes over the on-site service for him. While he's on vacation the orders are collected in Wietmarschen and a German colleague processes them within a few days in the UAE. Depending on the urgency, the colleagues from Wietmarschen also fly to Abu Dhabi for individual cases. Most of the time, however, Praveen is the WAS service technician on site in the UAE and takes care of all orders independently. And if he has questions he gets telephone support from Wiet-

marschen. However, this does not happen very often, because Praveen knows his vehicles and has every conceivable spare part directly in his "mobile workshop". 900 kg weight for parts and tools come together like this: approx. 500 different tools, starting with the simple screwdriver and the mobile air conditioning filling station to the WAS in-house development, the certified oxygen test case.

#### WHAT YOU DON'T HAVE IN THE CAR, YOU HAVE IN THE WAREHOUSE.

What he doesn't have with him he has in stock at the service station in Abu Dhabi. Among other things, these are 472 different spare parts; each part for the various ambulances located in the country at least once. For components where experience has shown that they need to be replaced more frequently, more items are stored. Quite frequently he places an order with WAS for new spare parts.

The WAS Servicemobil was built according to the German model and is equipped in such a way that all services and almost all repair work can be carried out on site at the customer. That's a good thing, because Praveen covers 35,000 km a year with this vehicle. The most distant rescue stations are Ras Al Kaimah, 300 km away, and Sila, 325 km away, on the Saudi Arabian border. Due to the strictly controlled speed limit (max. 120 km/h on the highways), overcoming these distances takes considerably longer in the UAE than in Germany. From the service station via Dubai to Ras Al Kaimah it takes about four hours, and about three hours to the Saudi border. And about two to three times a year it even rains on the way. Otherwise, Praveen has more problems with sand drifts. According to unconfirmed estimates, his "rolling workshop" involuntarily transports about 11 million grains of sand from one end of the desert region to

the other. Praveen is always anxious to achieve the minimum possible response time. Our customers recognise this performance and reward our speed. All the more so, since active after-sales service is otherwise not necessarily one of the uncomplicated services available from most local commercial enterprises.

#### JUMPED INTO THE COLD WATER AND BROKE THE ICE.

But you don't have to make things unnecessarily complicated. That was probably what WAS colleague Gunnar Gering thought when he had his first interview with Praveen. The polite young man answered questions with "yes" or "no", but when he was asked to connect a relay and lamp in a practical task, he was soon in his element and the matter for WAS was clear. The decision to hire Praveen has not been regretted in Wietmarschen since then. The first familiarisation was nevertheless a leap into the cold water,

because from as early as the second working day he and the team from Germany had to upgrade four Ford Explorer into first responders in the WAS workshop in Abu Dhabi. After a two-week visit to Germany, during which he not only received technical training but also spent a lot of time with his German colleagues, the ice was finally broken. Praveen has also become accustomed to the comparatively flat hierarchies of German employers and has since become increasingly self-confident. When the colleagues from Wietmarschen come

to Arab Health in Dubai, they will be pleased that Praveen supports them and is still there after work. The service technician will soon be visiting the province of Lower Saxony again. On his last visit, he was cooking, eating pizza, skating with his German colleagues and, of course, visiting the neighbouring Netherlands. It will be interesting to see which excursions they come up with for their colleague this time. +

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# BEYOND A STANDARD RESCUE.

BAVARIA MOUNTAIN  
RESCUE SERVICE  
OVERCOMES  
HIGHS AND LOWS.





From the winch of the helicopter cell it is up to 14 m to the ground for the rescuers.



**“WE ARE RESCUERS. NOT JUDGES.” THOMAS KÄSBOHRER QUOTES HIS INTERVIEW PARTNERS FROM BAVARIA MOUNTAIN RESCUE SERVICE (IN GERMAN: BERGWACHT BAYERN) IN HIS BOOK “AM BERG. BERGRETTET ÜBER IHRE DRAMATISCHSTEN STUNDEN”\* (ON THE MOUNTAIN. MOUNTAIN RESCUERS ON THEIR MOST DRAMATIC HOURS). THE BOOK TELLS 33 STORIES ABOUT THEIR MISSIONS AND THE PRECEDING QUOTE SUMS UP THE ATTITUDE OF BERGWACHT. IT’S NOT ABOUT WHAT SOMEONE DID WRONG TO GET INTO A DANGEROUS SITUATION ON THE MOUNTAIN, BUT ABOUT HELPING THAT INDIVIDUAL OUT OF THE SITUATION. IN BAVARIA, MORE THAN 3500 VOLUNTEERS ARE READY TO DEVOTE THEIR TIME AND SKILLS TO THIS TASK.**

#### SPECIAL TRAINING FOR SPECIAL MISSIONS.

The missions in the alpine regions usually have little to do with a standard rescue. Every mission is different. In addition to caring for and rescuing people on hiking trails, ski slopes and high alpine terrain, Bergwacht Bayern also deals with nature and environmental missions, such as fighting mountain forest fires or rescuing animals. Mountain rescue today often means cooperation with rescue helicopters or with the police's or German armed forces' mission helicopters. Accordingly, the training also requires special methods. To do justice to this, the men and women of Bergwacht train in a simulation centre for air rescue in Bad Tölz, the Bergwacht centre for safety and training (Bergwacht-Zentrum für Sicherheit und Ausbildung, BW-ZSA), operated by the Bergwacht foundation. Here you can not only practice procedures and handholds, but you also get the feeling of a real mission. This helps to act calmly in an emergency and also to be emotionally prepared as far as possible.

The 60m long and 25 m wide hall with a transparent façade accommodates two helicopter cells that can be moved using overhead cranes. If a rescuer hangs on the winch of the helicopter cell, it is up to 14 m to the ground. Vertical climbing walls, a cableway, a house with various slopes and roof coverings are used by Bergwacht, the police and the fire brigade for training. The basin in the middle can be converted. When it is filled with water once a year for four weeks and a current is created by turbines, the German life saving society



#### RECOMMENDED READING

\*The book “Am Berg. Bergretter über ihre dramatischsten Stunden.” written by Thomas Käsböhrer reports sensitively and excitingly on particularly intensive missions of Bergwacht Bayern. The book is published by millemari and available as paperback for €24.95. 25 % of the proceeds from the sale go to the mountain rescuers.

ISBN 978-3-946014-80-5

So far only available in German language.



A vehicle "removed from practice for use in practice": In cooperation with WAS and Volkswagen, the company switched from Toyota base vehicles to the more powerful VW Amarok with a box body. The vehicles are on the road in the Bavarian Alps and low mountain ranges. Apart from off-road capability, the box body is the most obvious feature of the fleet.

(Deutsche Lebens-Rettungs-Gesellschaft, DLRG) water rescuers and water watchmen come to train. The training centre is so unique that guests from Germany and abroad come to Bad Tölz for their training time and time again. Not only the training, but also the resources of Bergwacht Bayern are adapted to the special needs. In order to be able to reach the scene of the accident at any time, even in impassable terrain, specially equipped off-road vehicles are available at every mountain rescue station. Special requirements also

require special measures. Since 2013, WAS representative Andreas Kotte at WAS has been dealing with the special requirements of Bergwacht for their rescue vehicles. Thanks to the intensive cooperation with the rescuers, he has now gained deep insights into the challenges of mountain rescue and is very familiar with the requirements placed on the vehicles. For example, the volume of the warning system must be adjusted to the location in the mountains. Mountain hikers and mountain bikers should not panic when the mountain rescue vehicle becomes noticeable. It must also be possible to mount the mountain stretcher on the roof on a special carrier with a unicycle for summer use or an akja sledge for winter use. In addition to off-road capability, the vehicles must be able to transport patients, take an emergency team on board or provide enough storage space for rescue equipment.



#### SMALL CASE, BIG IMPACT.

Bergwacht has been procuring its vehicles centrally from WAS for six years. To date, around 70 VW Amarok vehicles with WAS assemblies are already on the road in the Bavarian Alps and low mountain ranges. In cooperation with WAS and Volkswagen, the company switched from Toyota base vehicles to the more powerful VW Amarok with a box body. Apart from off-road capability, the box body is the most obvious feature of the fleet. The case is equipped with a demountable and quickly removable carrying table, among other things. The stretcher for patient positioning is the same as the one found in rescue helicopters. Next to the patient's head there is a fold-away seat for the attendant. Of course, the interior of the box body can also be disinfected. As soon as it is possible, the patient is transferred from the mountain rescue

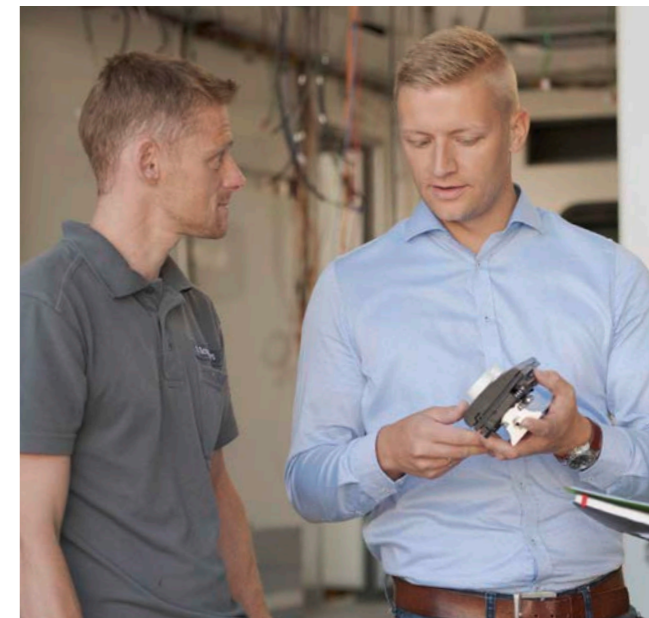
vehicle to a standard ambulance or helicopter – depending on whether, in an emergency, you reach a drivable road or a suitable landing site first. Bergwacht Bayern's mountain rescue vehicle is a vehicle "taken from practice for use in practice". As befits Bergwacht, it goes without saying that the special vehicle was also first tested in practice and then further developed in detail time and time again. During driving training the rescuers were able to familiarise themselves with the vehicle under real conditions. Preparation is undergone for emergency cases in Bavaria.

If you would like more information about the important work of Bergwacht Bayern and the training centre, you can find it at [www.bergwacht-bayern.de](http://www.bergwacht-bayern.de) and [facebook.com/bwzsa](https://facebook.com/bwzsa) +

# PROJECT MANAGEMENT FROM THE START.

**LUKAS BRENNEKE,  
CONTRACT MANAGER AT WAS,  
IN THE EMPLOYEE PORTRAIT.**

ANYONE WHO IS A LITTLE FAMILIAR WITH WAS, KNOWS THAT THE TAILOR-MADE PRODUCTION OF VERY SPECIAL VEHICLES IS ONE OF OUR GREATEST PASSIONS. THAT IS WHY WE ARE ALWAYS LOOKING FOR NEW COLLEAGUES WHO SHARE THIS PASSION. THE COOPERATION THEN LEADS TO PROJECTS THAT MAKE CUSTOMERS HAPPY AND FUN FOR US. CONTRACT MANAGER LUKAS BRENNEKE IS SUCH A COLLEAGUE. WE ARRANGED TO MEET HIM FOR COFFEE AT THE MARKETING OFFICE IN ORDER TO HEAR A LITTLE MORE ABOUT HIS WORK AT WAS.

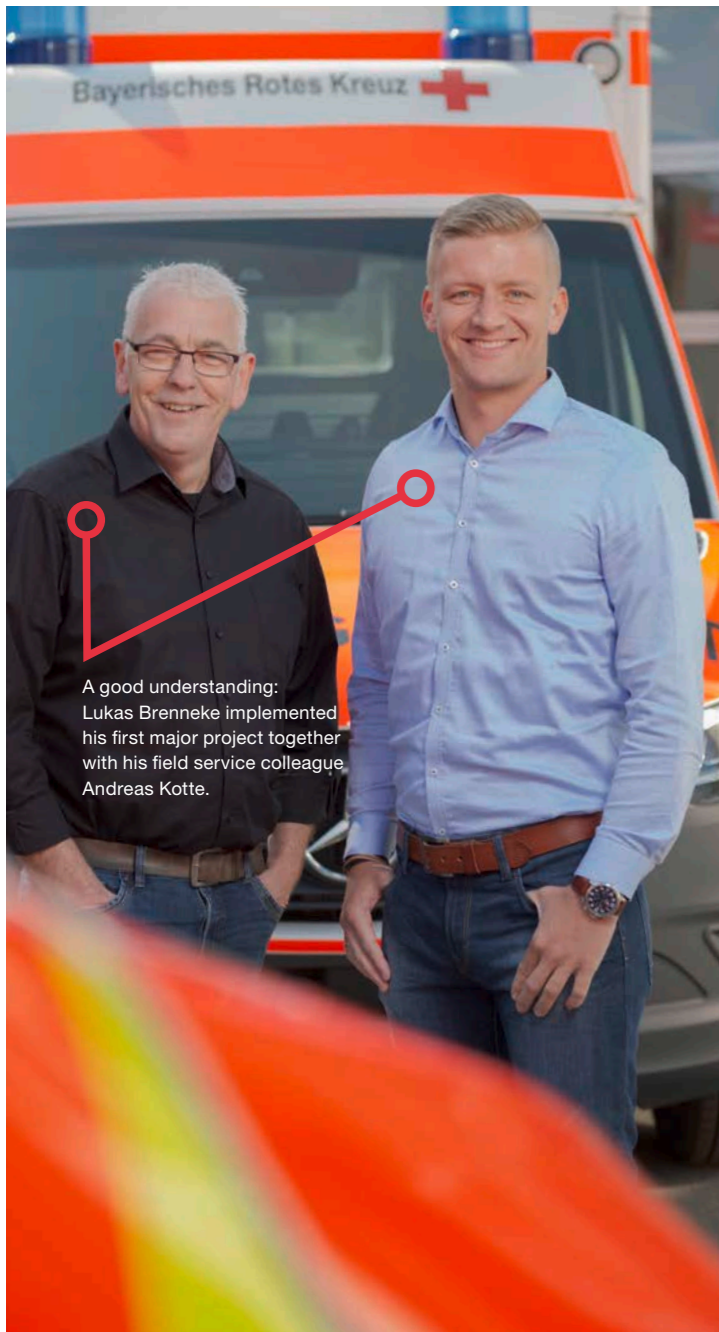


When Lukas Brenneke enters the meeting room, he brings energy with him. An open smile, a sincere handshake – he is one of those people who takes up space without constricting others. The word “people person” describes the first impression most aptly. And this word also includes a large part of his job description at WAS. Lukas Brenneke spends a lot of time dealing with people. He is not only in direct contact with customers, but also with colleagues in production, design, sales and purchasing. He is therefore rarely to be found in the office.

## **YOU CAN TALK ABOUT IT.**

When he’s not meeting customers, he’s out and about in the company to drive his projects forward. Sure, he could pick up the phone every time, but personal conversations simply suit him more. He must be able to rely on teamwork, because he is responsible for the entire process from the first meeting to the handover of new vehicles and is the contact person for everyone.

The job requires an enormous willingness to communicate and, last but not least, a high degree of stress tolerance. And even if you keep all the balls in the air, make the most precise arrangements and plan ahead – where so many people work together, things can go wrong. When a prototype is suddenly 20 kg too heavy after completion, Lukas Brenneke and his colleagues have to find a solution. In concrete terms, this means replacing components such as the ambulance table, seats and a step with lighter components with the same benefits and at least the same quality. “The most important thing” he emphasizes “is to change the concept in consultation with the customer in such a way that it does not



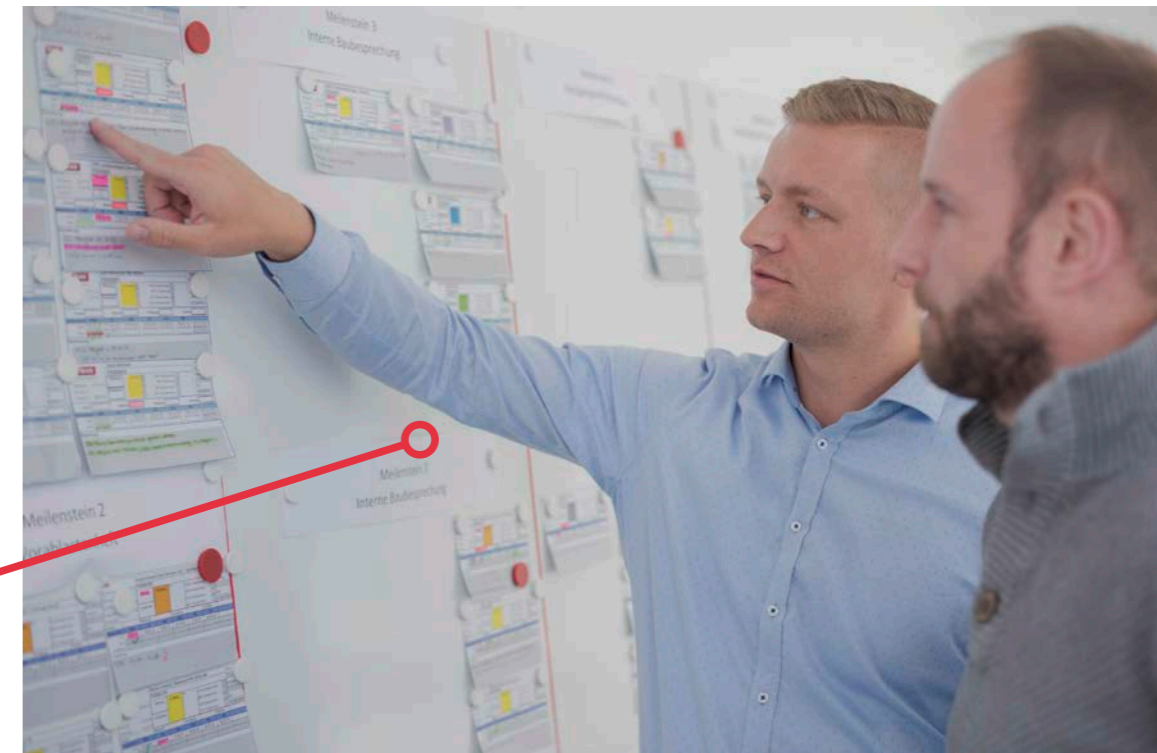
A good understanding: Lukas Brenneke implemented his first major project together with his field service colleague, Andreas Kotte.

“ THE JOB REQUIRES AN ENORMOUS WILLINGNESS TO COMMUNICATE. ”

WE ARE LOOKING FOR EVEN MORE PEOPLE WHO LOVE SOMETHING SPECIAL.  
All information about apprenticeship and career at WAS can be found at [www.was-vehicles.com/en/company/careers](http://www.was-vehicles.com/en/company/careers)



Lukas Brenneke is usually found talking to colleagues – when he is not on the phone with customers.



have any disadvantages. Even if that means that the costing for WAS is a little bit higher. You just have to bite the bullet.” After all, customer confidence is worth much more in the long run than the procurement of lighter tables, seats and steps costs.

In general, the 28-year-old seems keen to build and maintain stable relationships in his working environment. Maybe this is why he decided to continue at WAS after completing his dual studies three years ago. Together with his WAS representative colleague Andreas Kotte, he implemented his first major project for the Bavarian Red Cross in 2016. “This was a prototype of the good cooperation between the office and field staff,” says Lukas happily. Both his colleague and the Bavarian Red Cross have since been favourite elements of his work at WAS. His colleague because the cooperation not only

works well, but is also fun, and the Bavarian Red Cross for the same reasons – and perhaps also because of the proximity to Bayern Munich, Brenneke’s favourite football team.

**YOU GROW WITH YOUR TASKS.**

Since his first project for the Bavarian Red Cross, in a short time many more have been added for the 28-year old. As one of seven project managers, he is now Contract Manager in Technical Sales. On average, each project manager at WAS processes 200 vehicles per year. Project planning can sometimes take several months. In the case of special vehicles individually agreed with the customer, it is not surprising that the longest time is spent on the preparation phase. Once the concept is finished, production only takes about 4–6 weeks. His tasks include construction meetings

with customers – for whom Lukas sometimes travels to Doha – the preparation of specifications, detailed configuration, discussion of vehicle and furniture concepts and much more. Tenders also fall within the remit of the Contract Manager. Since 2018, his day-to-day work has become increasingly international. Customers in France, Qatar and Egypt enjoy working with him.

The contact with different cultures has strengthened Lukas Brenneke’s personal development and self-confidence. While at the beginning of his career he was a little nervous when he had to negotiate with customers in English, his second language is now a matter of course in his day-to-day business. The same goes for the fact that at WAS no two projects are the same and that you always have to develop new ideas and put your thoughts into them. His interest in vehicles has

increased with the job. The basis for this was certainly laid by his studies in industrial engineering, the contents of which are now reflected in his daily work and which made it easy for him to keep track of things from the very beginning. He has to do the same with the many new major projects that are equally important and run in parallel.

And what does the young Contract Manager actually do to recover from all the hustle and bustle? He’ll have to think about that for a moment: “I like to go to the gym. I don’t play football any more because of a cruciate ligament rupture, but I go running. But I don’t really have to distract myself from the job.” Then all that remains for us and for him is to wish that this remains so for a long time to come. +



# THE PROPORTIONALITY OF MEANS.

PILOT PROJECT FOR THE RELIEF OF THE EMERGENCY SERVICES IN LIVE OPERATION.

The specially trained emergency paramedics relieve the strain on emergency services because they are used when emergency calls are made that do not concern an acute emergency situation.



Do you have a slight feeling of dizziness when you get up? A violent coughing attack after overcoming an apparent case of bronchitis? Googled vague symptoms and panicked? If in doubt, many people prefer to call the emergency services immediately. Frequently, those affected are unable to judge for themselves whether they can confidently wait until their GP's Monday office hours. In other cases, overburdened relatives or concerned third parties prefer to play it safe by dialling the emergency services – in the truest sense of the word. There are many reasons for this, and even if the frequency of such calls suggests a certain increase in the population's sense of entitlement and need for security, it can be assumed that no one will let a rescue team arrive for fun or boredom. Rising deployment figures are much more likely to be due to demographic change and the reduction of hospitals and accident and emergency departments, particularly in rural areas. If the nearest hospital appears to be too far away for a taxi ride, ambulances are called more quickly.

## THIS IS NOT A NEW PHENOMENON.

Experts now even assume that an annual increase of 5% in the number of rescue operations can be expected. The majority of these missions are general assistance requests, which do not necessarily require a fully equipped ambulance. In combination with the already problematic shortage of skilled workers, this tension can, in the worst case, lead to real emergencies not being treated in time, because the

vehicle and crew were ordered just for a "taxi ride".

The phenomenon of unnecessary rescue operations is, by the way, neither new nor national. Studies in Finland, England and the United States have also observed an increase in the number of non-life-threatening missions, as Frank Flake has demonstrated in detail in the "Community Emergency Medical Technician Concept". However, Frank Flake, Head of the Oldenburg District Emergency Preparedness Department of Malteser Hilfsdienst gGmbH, has not only collected information and summarised the problems, but also, together with all project participants from the city of Oldenburg and the districts of Vechta, Cloppenburg and Ammerland, provides a possible answer to the increasing number of deployments: and that is an emergency community paramedic.

## FROM THEORY TO PRACTICE.

This specially trained rescue staff could care for patients who have dialled the emergency number in a non-emergency situation where an ambulance isn't required. Without an ambulance does not, of course, mean without a mobile vehicle and equipment. Emergency community paramedics travel in cars or vans, comparable to an ambulance emergency response vehicle with almost identical equipment. Since the beginning of 2019, the concept has been tested in real operation in a pilot project in parts of the districts of Ammerland, Cloppenburg, Vechta and the entire city of Oldenburg. We met Frank Flake to talk about the background and initial results of the project. +



## THE PROJECT AT A GLANCE.

### Initial situation:

Nationwide, the costs for ambulance deployment have doubled to EUR 2.1 billion in the past ten years

### Objectives:

Relieve emergency services, avoid unnecessary rescue trips, prevent overcrowded emergency rooms in hospitals and reduce costs

### Period:

Two years

### Region:

26 emergency community paramedics have been deployed at four locations in the districts of Vechta, Cloppenburg and Ammerland as well as in the city of Oldenburg since the beginning of the year

### Financing:

Health insurance funds

### Personnel:

Trained emergency paramedics with three months of additional training

# 44



## “REVALUATION OF THE PROFESSION IS DESIRABLE.”

**FRANK FLAKE, HEAD OF THE OLDENBURG DISTRICT EMERGENCY PREPAREDNESS DEPARTMENT OF MALTESER HILFSDIENST GMBH, IN AN INTERVIEW ABOUT THE PILOT PROJECT FOR EMERGENCY COMMUNITY PARAMEDICS.**

**Emergency community paramedics have been on duty since the beginning of 2019. Is it possible to identify trends after the first few months and to report initial experiences?**

Yes, this is possible and the first experiences are very much positive. In the city of Oldenburg, the number of calls is rising continuously and currently stands at 5–6 calls in 24 hours. This already provides a noticeable relief for the rescue service.

**How long did it take from the first idea to implementation at the beginning of the year and what levers had to be set in motion?**

It took about 2.5 years of development and persuasion work. We started with the initial ideas at the end of 2015. Both the interior ministry and the funding agencies were quickly convinced. We then had to overcome the financing hurdle together. Then a curriculum had to be written. Of course, we also looked at what other countries are already doing. We met on a monthly basis in the working group and compared the state of affairs.

**Did you have any fellow campaigners right from the start or did you have to convince them?**

We had fellow campaigners right from the start. The idea immediately fell on fertile ground with the rescue service supporters.

**To what extent have your personal experiences in the rescue sector influenced you?**

They have influenced me a lot. It has been my endeavour for years to optimise the rescue service and, of course, to improve the position of rescue personnel in terms of professional policy. In my experience, problems have to be tackled. Doing is better than philosophizing about how bad everything is. This does not get us any closer to a solution and does not correspond to the truth either. There will be no stopping development. We can't change people either, but we can find solutions. From my point of view, anything is allowed. You have to try things out to find the best solution in the end.

**Were you confronted with the fear that, in the long run, the emergency community paramedics would encourage citizens to dial the emergency call even more quickly because of petty little matters, because the inhibition threshold would be reduced even more if they knew that no actual rescue team was going to be deployed?**

We were a little worried about this. But we can't be immediately alarmed. As a component of emergency rescue (112), you have to do this through the control centre and the emergency community paramedic is not simply alerted. If it is a case of a deployment for the medical on-call service, this is also passed on there. Only if all other aids fail or are not attainable and it concerns a low-threshold rescue service deployment, the emergency community paramedic comes. In this respect, the danger is small. We can also observe this and will then implement countermeasures.

**Could the emergency community paramedic develop into a separate occupational group or a kind of parallel “emergency service” for non-life-threatening cases?**

Yes, that's our hope. Revaluation of the profession and an additional rescue device. From our point of view, this would help everyone in the end.

**The project will be scientifically supported and evaluated during the trial phase by the Universities of Oldenburg and Maastricht as well as Klinikum Oldenburg (a hospital in Oldenburg). How is this implemented in practice?**

There are scientific and medical protocols that are evaluated. Interviews are also conducted. We all meet once a month and talk about the results and the next necessary steps.



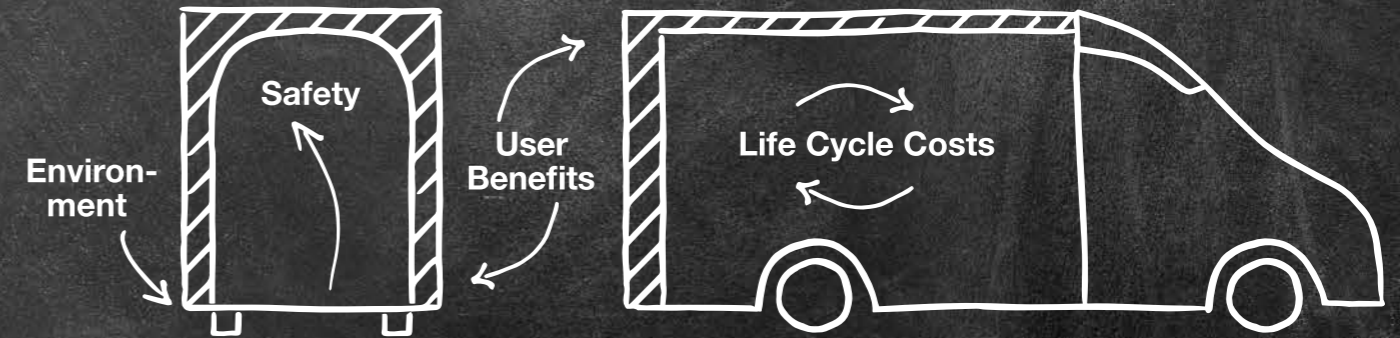
26 emergency community paramedics have been deployed at four locations since the beginning of the year.

**Was it clear to you from the beginning that emergency community paramedics would be travelling with WAS vehicles and how they should be equipped?**

As a long-standing customer, that was clear in my case. Here I have the advantage that WAS already knows what I value. So there was no alternative for me. In addition, it pays off to implement the same expansion concept for all vehicles. This makes it easier for the emergency services to find their way around in the vehicle and the vehicles of the emergency community paramedic can also be used normally in the regular rescue service.

HIGHLY DIVERSE ASPECTS HAVE TO BE CONSIDERED WHEN PLANNING A NEW TYPE OF EMERGENCY VEHICLE. LIFE CYCLE COSTS, WORKING METHODS AND AREAS OF DEPLOYMENT, SPACE NEEDED, ERGONOMICS, CONSUMPTION, AND JUST AS IMPORTANTLY, TOTAL VEHICLE WEIGHT HAVE TO BE TAKEN INTO ACCOUNT DURING PLANNING. TO IMPROVE OUR CONSULTANCY SERVICE, WE'VE EVALUATED PAST EXPERIENCE FROM COMPLETED PROJECTS AND USERS' FEEDBACK. WE PASS ON THE RESULTS TO OUR CUSTOMERS TO HELP THEM WITH DECISION MAKING. RECENTLY THERE HAS BEEN INCREASING DEMAND WORLDWIDE FOR BOX BODIES. HERE WE HAVE SUMMARISED THE FACTORS CONSIDERED BY EMERGENCY SERVICES WHEN DECIDING TO BUY A BOX VEHICLE.

## Think outside the box!



# TRAVELLING

# TRAVELLING LIGHT.

**AN INCREASING NUMBER OF EMERGENCY SERVICES ARE USING THE WAS LIGHTWEIGHT BOX SYSTEM.**

### 1. LIFE CYCLE COSTS

Initial acquisition costs can be more efficient for some vehicle systems than for a box body – however, the box pays off in the long term. When the base vehicle reaches the end of its life cycle (through ageing or accident), the box can continue to be used on a new base vehicle, going through a second life cycle. The issue becomes more complex when considering that, in case of damage, individual parts or entire side panels of a box body can be easily and cheaply repaired or replaced. Comparable alternative vehicle systems do not offer this option.

WAS boxes are manufactured using the VacuTherm process, guaranteeing a stable, robust construction which is still thinner and lighter than conventional systems. The lightweight improves energy efficiency, lowers fuel consumption, and ultimately, has lower life cycle costs.

### 2. USER BENEFITS

A box body does not automatically have larger exterior dimensions than a converted van. Even if the exterior box width or height are identical to those of a van, the construction will have more space, and especially greater headroom inside. Compact models with a total weight of 3.5t can now be built with the WAS lightweight box system. A box weighing less means that a far greater payload can be transported (e.g. weight reserve) for equipment and medical technical supplies. Vehicles of this type are suitable for urban traffic conditions, still providing all the advantages offered by the box system in the patient compartment, for example, huge scope for planning the interior fittings – customised for application and working methods. A lightweight construction does not automatically mean it's "diminished". Vehicles weighing up to 10t can be constructed using this method. The crucial factor is that the WAS box system can be enlarged, whilst retaining a comparatively low weight. Regardless of whether the concept is large or small, more space in the patient compartment not

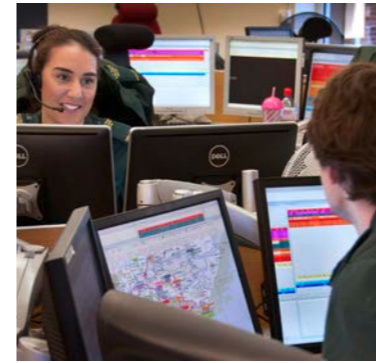
only provides a better working environment for emergency personnel, but also larger external storage compartments and greater configuration flexibility. A patient transport ambulance with a box body can also be used as an emergency ambulance. The separation of patient compartment and equipment storage makes it easier to access storage areas for oxygen bottles, rescue materials and secondary level instruments without restricting activities in the compartment or soiling it.

### 3. SAFETY

Our customers frequently report that box body ambulances are more visible in traffic, since they are usually higher and their appearance differs from other vehicles such as delivery vans. Greater headroom means even more safety. Results from the R66 roll-over tests and compliance with DIN 13500 prove that a lightweight construction can be remarkably stable.

### 4. ENVIRONMENT

Many emergency services wish to take a responsible attitude towards the environment and CO<sub>2</sub> emissions. Since some services deploy quite large vehicle fleets and cover long distances yearly, they consider it important to reduce emissions. As with life cycle costs: less weight means less fuel consumption, meaning reduced emissions. It is therefore essential to factor in the permissible total weight when planning. Lighter bodies have a direct effect on energy consumption and environmental impact. Many sectors are observing a trend towards more lightweight designs up to 3.5t. Longer and more flexible box use reduces the overall environmental impact. The higher insulation values of lightweight boxes also help to save energy, since less heating or air conditioning are needed.



# EAST OF ENGLAND — A STRETCHER LOADING: A CLEAR DECISION FOR AUTO-LOADING SYSTEM INSTEAD OF RAMP.

More than 1 million emergency calls were received by the East of England Ambulance Service NHS Trust (EEAST) in 2017/18. The authority responsible for the provision of ambulances to the National Health Service (NHS) operates within the counties of Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk in the East of England. There are a total of approx. 5.8 million people residing in this area, which spans more than 19,400 square kilometres. The 4000+ employees and approx. 1500 volunteers can hardly complain about underemployment. On the contrary, an intensive search for skilled workers is underway to help meet the large number of calls. While in the event of skills shortages in England you are more or less at the mercy of economic factors, demographics and politics. Luckily you have more influence when it comes to the selection of operating resources.

The EEAST fleet currently consists of 387 front line ambulances, 178 rapid response vehicles, 175 non-emergency

ambulances (PTS and HCRT vehicles) and 46 HART/major incident/resilience vehicles. With vehicles that are tailored to the needs of local rescue services and patients, the EEAST is establishing a basis for the best possible medical care in the event of an emergency. Since 2008 this has also increasingly included vehicles featuring the WAS box body. Ultimately, there were many reasons behind the decision to forego vans altogether in favour of premium box bodies when purchasing vehicles. Without doubt, the available space and greater flexibility played a role when equipping their fleet. At EEAST people are so convinced of the advantages of the box body solution that they elect to save money on the chassis and even forego a little drive comfort – in favour of a premium box body. For this reason, the box body is now installed on a Fiat Ducato chassis, and no longer a Mercedes-Benz Sprinter. A choice that the English continue to stand by: in November 2018 WAS won the contract for 500 vehicles to be supplied by 2022 within the scope of a framework agreement. +



## STRYKER POWER-LOAD.

Stryker and WAS have developed a strong historic relationship lasting over 10 years where we have worked in partnership to provide the best outcomes for the NHS. This relationship has enabled us to work closely and collaboratively to provide EEAST a total solution which includes our Stryker Power-PRO XT stretcher and Power-LOAD fastening system.

EEAST will be the first UK NHS Ambulance Trust to completely convert their whole frontline fleet of ambulances with the innovative Stryker Auto-Loading system. The Power-LOAD and Power-PRO XT are currently being used in larger volumes across Germany, Netherlands, US, Canada and Australia. The Power-LOAD System eliminates the use of any manual handling for EEAST staff when loading and unloading a patient (up to 318kg) into and from the back of their ambulance. In addition to this, the Stryker Power-LOAD will ensure that EEAST is also benefitting from increased patient comfort, fuel savings (Power-LOAD weighs significantly less than the traditional tail lift), reduction in MSK injuries (zero manual handling) and savings in vehicle down time and maintenance costs (LOLER Exempt). The collaborative efforts have enabled Stryker, WAS&EEAST to develop and improve the day to day work of ambulance crews, revolutionising patient transport for UK NHS Ambulance Services.

[www.stryker.com](http://www.stryker.com)



# “WE HAVE AN ABSOLUTE RESPONSIBILITY TO MAKE OUR BUSINESS MORE SUSTAINABLE.”

## PAUL HENRY, DEPUTY DIRECTOR OF OPERATIONS SUPPORT AT EAST OF ENGLAND AMBULANCE SERVICE NHS TRUST.

### Paul, why did you decide to purchase boxes over vans for your latest procurement of 500 ambulance vehicles?

“We constantly review the best environment in which to provide care. For many years we’ve got used to using a coach, so this was an ideal opportunity for us to test what it was that our staff felt was the most appropriate way of caring for the patient. So in the lead up to making our decision we built a number of evaluation vehicles, some on a van and some on a FIAT platform with a box. And the constant feedback from our users was that they preferred the greater operating space that the box enabled them to have. It enabled us to design the vehicle with less restriction that the van was providing so we had more space to think the vehicle through ergonomically and to start to test where seats are best located in terms of being proximate to the patient and where other key items of equipment goes. So over all, the operation inside a box was deemed to be the best environment for crews and therefore the best environment for our patients.”

### What was the trust’s decision making in favour of the box body like from a financial perspective?

“The decision was never only about the box or the operating environment. We had to consider whole life costs for our vehicles because having 500 of them they become a very expensive asset. So our decisions were framed by a requirement to find ways to make our ambulance fleet lower cost and more sustainable in terms of carbon footprint. And some 18 months ago we started on our journey to work out what would be the best ambulance for the future. In terms of finance, sustainability and vehicle design we had to provide a vehicle that took us forward in terms of the care we could give. So we brought three very difficult things together. We wanted to sit among the most frugal of ambulance providers in our country who provide the best vehicle for that money.”

### What is the trust’s approach to emissions and environmental impact of your vehicles?

“As a public body and as an organization that travels around 12 million miles a year we have a very clear impact on the environment. As a public sector organization, and a good citizen, we have an absolute responsibility to continue to find ways to reduce our carbon footprint to make our business more sustainable.”

### What do you consider the key factors in living up to that responsibility?

“On top of the issues of finance and having proper space, we had to find a way to get all those things within a new design that changes our 5t ambulance into something near of 4t. Because lighter weight means lower fuel and less emissions. So we examined every single element of that vehicle to be able to test whether it was relevant, required or could be done better and lighter. We’ve made a huge step in coming from 5t to 4.250. The next step has got to be to aim towards the 3.5t but for now we made great progress and are willing to continue to learn.”

### The EEAST made the switch from the typical ramp base loading system to a Stryker Power-LOAD system with lift assistance. How did you come to this decision?

“When you are in the market of change it’s healthy to look at everything. So we decided not just to look just at the vehicle but at everything that is in the vehicle and to test our customary practices. One of which was that we had the same stretcher type for more than a decade. The stretcher is probably one of the single most important parts of our ambulance – from the patient’s perspective, too. So we took the opportunity to really look at the market and identify better opportunities. We were looking for a system that enabled us to look after the patient, reduced injuries to staff and at the same time contributes towards our overall

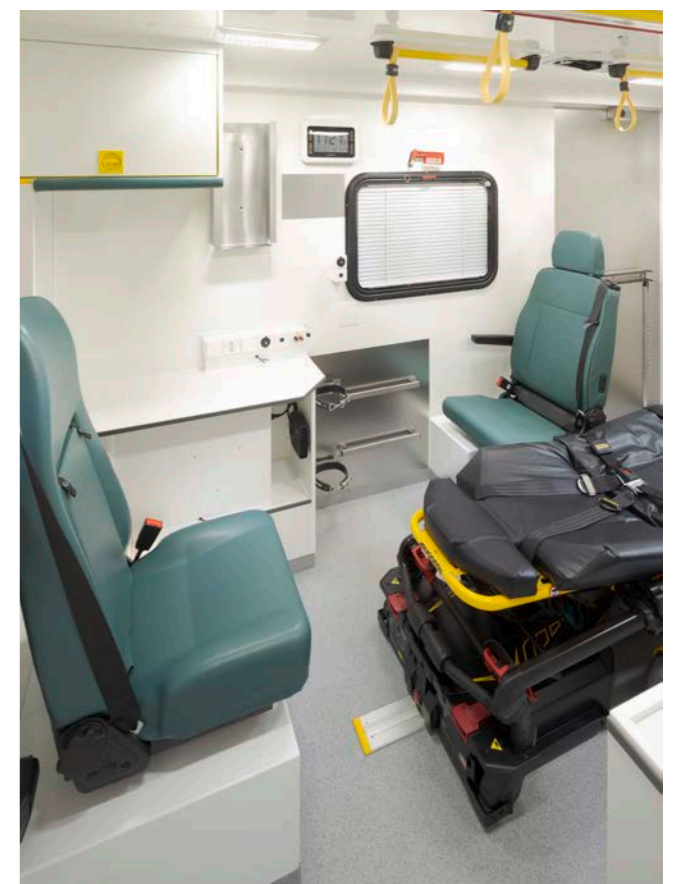
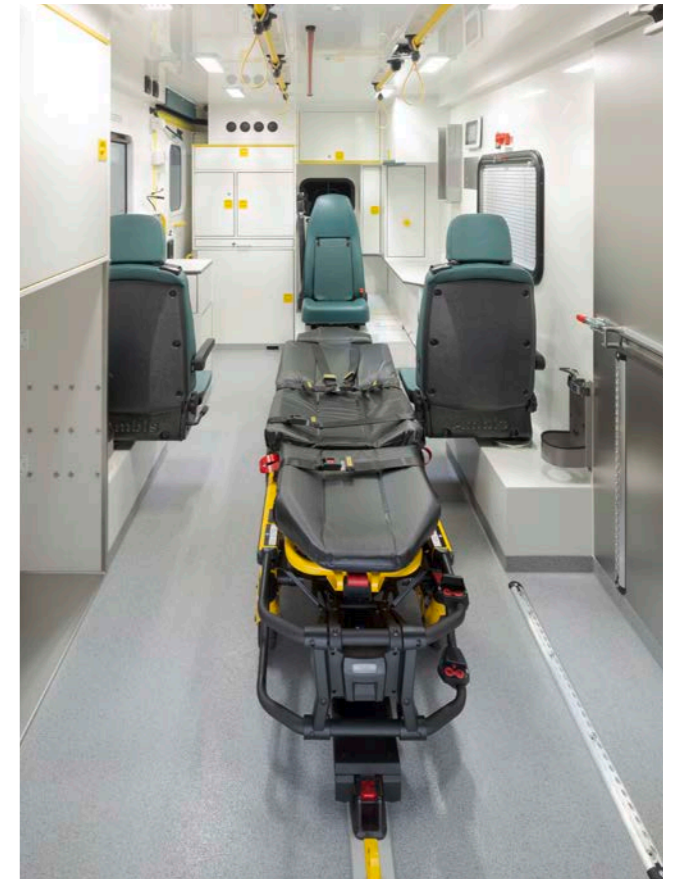
goal to take weight out of the vehicle. The Stryker Power-LOAD system gave us the perfect opportunity to hit all those objectives and get rid of a heavy tail lift that was unfortunately a regular point of failure. The staff are positive that it also reduces injuries. So apart from being able to demonstrate large cost reduction in our vehicle build we believe we are able to add further cost reduction in terms of injuries to staff, staff off duty, not available for work.”

### How does the crew benefit from the change besides that?

“Another important feature the new ambulance has, is that we had the space to bring the paramedic and the patient closer together in alignment. This enables the paramedic to be still harnessed but also able to reach and treat the patient. Currently most ambulance services will identify that their crews travel for a large part of the time unharnessed, unbuckled and therefore expose a great risk to themselves and the patient if the vehicle has a road traffic collision. Our design makes it possible to do the majority of the care they have to do while safely harnessed in a paramedic chair either side of the patient.”

### So you’ve got 360° access to the patient and the technicians or paramedics will always be faced forward in the seats, never facing sideways?

“Absolutely and in terms of safety sideways facing is an absolute no no, it’s dangerous. We designed our vehicles to eliminate the possibility of people taking that option. So it’s an active design that insures forward facing care and insures that they are buckled and harnessed for the majority of the time they are working.”



A box body, barely larger than the base vehicle, makes manoeuvring much easier.

# AN E-AMBULANCE FOR DUBAI.

INNOVATIVE SPIRIT  
IN THE UAE.



The WAS E-Ambulance was presented as a concept for the first time at RETTmobil 2018, Germany.



Through our commercial relationships and also our personal experiences during numerous visits to Dubai, Abu Dhabi etc. the consistent impression we have gained of the United Arab Emirates is of a country of extremes and contradictions. Deeply conservative in many regards, we have nonetheless found it to be highly receptive to new technology. For instance, the UAE are pro zero emissions and fundamentally supportive of innovation. Even though most innovations originate from abroad, the UAE are often among the early adopters. This is a place where taxi drones and Uber helicopters are discussed without any

sense of irony – for a country where a litre of petrol still costs less than 0.50 Euros, there are a remarkable number of charging points for Tesla and other electronic vehicles. The Emirates are investing in all kinds of cutting-edge technology under the slogan “UAE innovates”. The economy in Dubai, unlike in Abu Dhabi, is only indirectly dependent on oil and, according to German Trade & Invest, it has been particularly active over recent years when it comes to investment. As the start date for Expo 2020 draws closer, Dubai is steadily increasing these investments. The focus includes transport infrastructure, metro expansion

and projects aimed at making this emirate more attractive to visitors. Against this background, our new E-Ambulance attracted lots of attention at Arab Health in January 2019. Arab Health is the largest conference and exhibition for experts, retailers, manufacturers and institutions in the health sector in the so-called MENA (“Middle East & North Africa”) region and the second largest medical technology trade fair in the world. An E-Ambulance on a 5 t chassis is unique, even in Dubai. To create the E-Ambulance prototype, we stripped a new vehicle of the motor and gear box and had it converted by a company that specialises

in the electrification of vehicles. This approach was fine for the prototype but, for obvious reasons, cannot be a sustainable business model. Another special feature of an E-Ambulance for the Emirates is that we need to install a high-performance air-conditioning system and no heating; something which will demand double the output from the battery. The thermal separation offered by the box body (a separate insulation layer offers additional partitioning between the internal area and the external environment) is a crucial feature for any kind of deployment in hot countries. The Dubai Corporation For Ambulance Services (DCAS),

known for its pioneering role in the region, was particularly interested in the innovative E-Ambulance even before the trade fair. Under the leadership of Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates, Dubai is striving to attract world-class businesses from all areas of the healthcare sector. The use of artificial intelligence and other innovative technologies are being tested for use by the emergency services. One of the initiatives being driven by DCAS is the use of E-Ambulances in collaboration with WAS. The organisation is in the process of a six month

trial using an environmentally friendly vehicle, with the ultimate goal of exhibiting it at EXPO 2020. So beforehand we arranged for Khalifa Hassan Al Darrei, Executive Director of DCAS, to have a test drive and a conversation at our exhibition stand. The test drive impressed this e-mobility expert. He is already planning to use the E-Ambulance in the VVIP area at EXPO 2020 in Dubai. In the meantime, we will continue working on the ambulance to ensure it is equipped to handle Dubai’s hot climate. +

# DUBAI TO THE RESCUE. 44

FOUR RESPONSES FROM KHALIFA HASSAN AL DARRAI,  
EXECUTIVE DIRECTOR DCAS.



As part of Arab Health in Dubai, we met the Executive Director of the Dubai Corporation For Ambulance Services. The aim was not only to introduce him to our E-Ambulance, but also to take advantage of the opportunity to ask him about Dubai's emergency services.

**1. What makes DCAS so unique is the use of specialised vehicles to cope with the UAE's complex societal structure. Tell us a bit more about your fleet.**

44 The DCAS fleet definitely includes vehicles for very different ambulance services, some of which do not even exist in Germany. For instance, in an emergency involving a female patient, the emergency crew and doctors dispatched will always be exclusively female. A woman will also be in charge of driving the pink-clad ambulance to help keep stress levels for all involved as low as possible. Specially equipped ambulances are also used for pregnant women and for children. In addition, there are special "heart attack ambulances", infection emergency vehicles, heavy duty ambulances for transporting obese patients and specially

equipped vehicles for people with other mobility restrictions. Recreational off-road driving is common in the desert (as we reported in Issue #2) and this frequently results in accidents, so specialised, all-terrain vehicles are another standard requirement. These are also equipped with a cargo drone that can fly out a defibrillator or dressings to a patient. In order to be able to respond to any kind of crisis or emergency situation, DCAS also has three disaster-management buses in its fleet. As part of the Marine Unit C Disaster Team, Dubai Creek is additionally covered by a boat and emergency Jet Skis.

**2. Is the service in Dubai organised in a similar way to Germany?**

44 Yes, DCAS also responds using the Rendezvous system. When an emergency call is received by the control centre, a first-responder is initially dispatched, including a paramedic. They can then request an ambulance and an emergency doctor on the ground. If it is already clear from the emergency call that an ambulance is required, the

responder, ambulance and, if necessary, an emergency doctor set off immediately. One special feature is that the responders are positioned on call in the 123 ambulance stations, which are strategically located across the entire emirate, whereas some of the ambulances are also located in urban areas. The control centre can see this at all times on a map thanks to the Acetech telemetry system, which enables them to notify the nearest free vehicle. Currently efforts are under way to reduce emergency response times from eight to six minutes.

**3. How are the staff at DCAS organised?**

44 DCAS employs about 1000 staff and works on a two-shift system. Around 250 people are deployed on each shift; with at least two emergency doctors among them. One particular feature that distinguishes our staff is their diversity. Since the population of the UAE is made up of so many different nationalities, we need people at the control centre who speak a wide range of languages: including Arabic, English, French, Spanish, Hindi, Pashtu, Urdu, Filipino, Chinese and Russian.

**4. In Germany we are increasingly having to deal with staff shortages. What is staff recruitment and training like in Dubai?**

44 As is typical in the UAE, most of our specialist staff come from abroad. This means they completed their training in their native country and with us they simply undergo an additional 22-day trainee programme to adapt their working methods to our standards. This system works well, but unfortunately these foreign paramedics often leave us after a couple of years to return to their country of origin. That is why we have been training increasing numbers of Emiratis over recent years as part of an Emiratisation\* process. We currently have a total of 65 Emiratis working in the DCAS emergency service. Training at our academy takes three years, just like paramedic training in Germany.

**Thank you for talking to us!**

\*So-called Emiratisation is an initiative by the government of the United Arab Emirates to employ more Emirati citizens and to deploy them in a meaningful and efficient manner in the public and private sectors.



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