

# DESIGNING MOBILITY

A magazine of the GOVECS GROUP and the Future of Mobility

**OEM**  
Original  
Equipment  
Manufacturing



New Urban  
Mobility



**Sway**  
Form follows Fun



**THE VISIONARY**  
Thomas Grübel



**TRIPL**  
The new Standard



**COOLTRA**  
The E-Scooter Rental  
delighted Spain



# EDITORIAL

## FROM THE STREET DEVIL TO DESIGNING MOBILITY

THOMAS GRÜBEL | GOVECS CEO

————— The Street Devil was born from a crazy idea I had in the late 1990s to turn a toy into an electric scooter. Initially, the idea of taking a pedal scooter, adding a motor and getting it on the road was a huge challenge.

This fascination led to us developing of a number of vehicles that are still available on the Asian markets today.

There already was a thriving market for such vehicles in Asia, unlike in Europe where it was still in its infancy. Another difference was that in China electric scooters occupy the entry level segment, but in Europe they can be more high end.

My vision for Europe clearly was to develop and offer a scooter in Europe adapted to European needs. This could not be done from Asia. In Asia there is little appreciation of European considerations, of European needs, or of European service standards. So it became increasingly clear that if I were to develop another scooter, then it would have to be produced in Europe.

In the up-and-coming city of Wrocław we felt very much at ease. It was no problem to find quality engineering and a good workforce who really identified with the product and, at the end of the day, also played a key role in bringing such a high-quality product to market. The biggest challenge is to accommodate the entire setup as one package in the vehicle. This includes intelligent and efficient electronics, a battery and a motor that have to be continually developed and refined, and of course the onboard communications system.

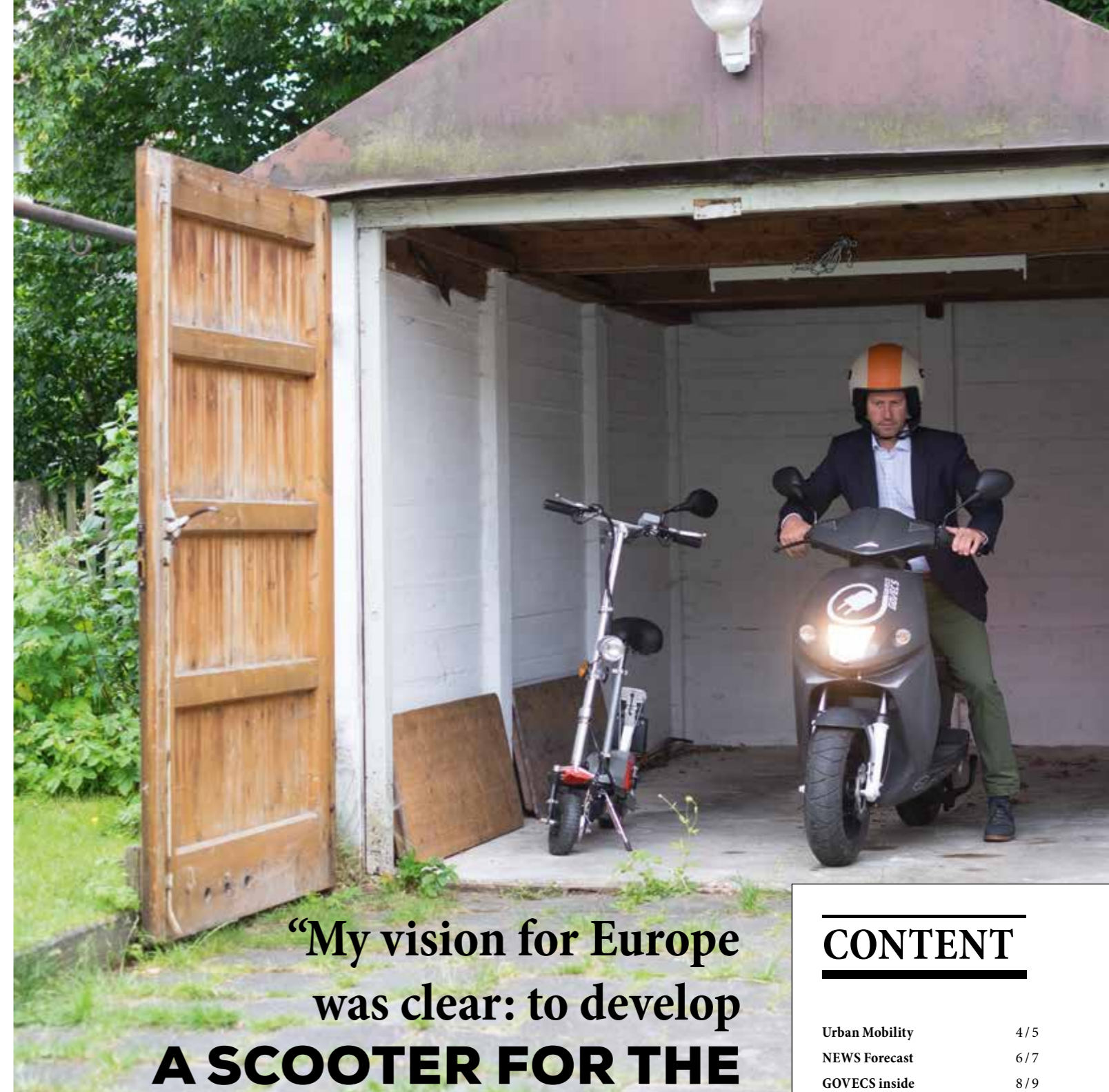
An electric scooter is flexible enough to satisfy all manner of customer demands, which could be anything from delivery services to technically complicated sharing services. Only an electric scooter allows such individual customization in such a short time.

I believe anyone who has even been on or in an electric vehicle soon realizes that they provide more than just an exhilarating driving experience.

Our creativity can't cover every direction. There are creative minds in every sector, there are skateboards, there are tricycles, four wheelers, five wheelers – creative ideas can spring from anywhere. Mobility will no longer be the prerogative of just car and scooter manufacturers.

These creative ideas will come from all over the place. Ultimately, we can only make sure that we take up on these ideas and help those companies use our technical platform to express their vision.

—————



**“My vision for Europe was clear: to develop A SCOOTER FOR THE EUROPEAN MARKET that meets specific European requirements.”**

Thomas Grübel

## CONTENT

Urban Mobility	4/5
NEWS Forecast	6/7
GOVECS inside	8/9
A new Way of Mobility	10/11
The new Standard   TRIPL	12/13
COOLTRA	14/15
The Govecs E-Scooter	16/17
GOVECS Plant	18-21
GOVECS goes FRISCO	22/23
Deliver Quality	24/25
OEM	26/27
Form follows Fun   SWAY	28/29
Bits & Bytes	30/31
Imprint	31

WHY WE NEED A NEW WAY OF THINKING

URBAN

# MOBILITY



————— Mobility is undergoing change. In the year 2030, 60% of the world's population will be living in urban areas. The ever growing residential density, the increasing traffic volume and the increase in CO<sub>2</sub> emissions associated therewith make clean and efficient transport solutions necessary. It is required to establish a new way of thinking and innovative mobility concepts in order to ensure clean inner cities and a healthier urban life.

The car that used to be the status symbol of personal freedom will be gradually expelled from the cities and replaced by new mobility concepts. E-mobility will contribute considerably to the so-called "Green Cities". Even though the idea of electric vehicles is not really new as such, the time is right and there is high demand to revive this technology, which has been developed already at the beginning of the 20th century, for instance in electric scooters.

These new concepts as well as the e-mobility will bring completely new challenges for all those who are involved. In fact, it is not only the way of thinking in public authorities, of urban planners, enterprises as well as local residents and commuters will change significantly, but also the habits with respect to one's individual

mobility as well as the overall infrastructure. The biggest reservation with respect to electric scooters today still relates to the range. But did you know that with a scooter on average you only cover a distance of approximately 12 kilometres per day?

GOVECS' electric scooters are best suited to close this gap with their wide-reaching batteries and underline the comfort and easiness of personal mobility in urban areas. With our many years of experience GOVECS focusses on the urgently needed,

future-oriented mobility solutions. Sharing and Rental Agencies are already using the reliable and high-performance GOVECS electric scooters in their fleets. More and more delivery services also prefer the "load carriers" of our GO! T series designed especially for high mileages over the customary combustion engines.

Gliding through the city, passing cars caught up in congested traffic. Parking issues are an unknown factor to you. You do not know about parking problems. You are relaxed, have a coffee or go shopping while your scooter is recharged at the charging station. Our cities would be much quieter and the air would be fresh and pure again.

And for exactly that dream scenario GOVECS is developing future solutions already today. This is what we understand by DESIGNING MOBILITY. —————

**You are silently moving through the city, passing the cars stuck in congestions. You do not know about parking problems.**



# NEWS FORECAST



## GOVECS TAKES OVER VECTRIX PLANT

The assembly line of the US maxiscooter manufacturer Vectrix in Wroclaw, Poland, was set to produce the “smart e-scooter” by Daimler AG. This endeavour came to an abrupt end when Vectrix had to file for bankruptcy and subsequently the smart e-scooter never left the prototype phase. Now GOVECS is resurrecting the cutting-edge production plant. As part of an asset deal the company is taking over the complete machinery as well as the inventory of Vectrix and will be integrating them into their own 4,000 m<sup>2</sup> high-tech facilities in Wroclaw. The deal is both a strategic success as well as a necessary next step for GOVECS which is experiencing flourishing consumer business and B2B expansion in both Europe and the USA. The acquisition quadruples GOVECS production volume to more than 20,000 vehicles per year.

## DEALER SUBSIDIES

The KfW bank offers, as part of the “KfW Environment Programme”, subsidies respectively advantageous financing options for all companies and professionals for the purchase of electric scooters. Take advantage of this program.



## MAKE GETTING AROUND BY BIKE AN OBVIOUS CHOICE

From new municipal terms of office to new cycling plans, France is showing a fair amount of ambition when it comes to cycling policies. But our country needs model cities; cities that serve as benchmarks; cities that innovate and demonstrate that it is possible to change the ways we get around.



## PREMIERE AT POST-EXPO PARIS: GOVECS AND TREFOR PRESENT THE ELECTRIC VEHICLE “TRIPL”

Munich-based GOVECS GmbH does not only develop and produce their own electric scooters, it is also established as globally active Original Equipment Manufacturer. Danish energy company TREFOR also resorts to GOVECS’ know-how for optimizing and producing their vehicles. The first result of this cooperation is the electric vehicle TRIPL: As completely new concept and with almost endless possibilities of customization and individualization the vehicle turns all former solutions in delivery and transport upside down.

## MAJOR ORDER FROM THE STATES: GOVECS ANNOUNCES PARTNERSHIP WITH WORLD’S LARGEST FREE FLOATING PROVIDER SCOOT NETWORKS



San Francisco’s Scoot Networks, the largest free floating e-scooter sharing provider in the world, trusts GOVECS. Electric scooters from the Munich-based company will form an integral part of the Scoot fleet with a total of 150 to be shipped to the West Coast over the coming weeks. The first scooters have already been in use since the middle of June. The reason for ordering in Munich was GOVECS’ singular ability to customize its scooters according to technical requirements of the sharing provider. The common practice for providers to modify the scooters themselves is now obsolete, making GOVECS a global leader in this sector.



## MORE POWER AND GREATER RANGE FOR THE GOVECS SCOOTERS

GOVECS relies on the most advanced battery technology. Therefore we constantly develop the whole Battery System for more power and a wider range. For the model year 2016 we offer two new battery types with 2.1 kWh and 4.2 kWh. That represents a 45% improvement in range and perhaps more importantly, it cracks the 100 km range mark with the GO! S/T2.6, which is something of a milestone (to overcome fear and doubts of some buyers).

“Even we don’t call it ludicrous speed, the new GO! S and T-Models 3.6 with the 4.2 kWh battery hits 83 km/h in a blink” Nicholas Holdcraft told us during the presentation. “Imagine, faster delivery and more pizza per charge”.

The complete battery is a highly advanced piece of technology developed by GOVECS on their own. Like in a Tesla Car, the GOVECS battery-pack is made up of hundreds of Li-ion cells, controlled by a smart

electronic, insuring the driving performance and high-speed charging capabilities. The battery is covered in a solid aluminium case, preventing the cells from every kind of

damage or weather like rain or minus-degrees and snow. Even under bad conditions or in the case of an accident the GOVECS battery always stays fireproof, risk-free and save.



TWO NEW BATTERY TYPES  
2.1 kWh and 4.2 kWh

Definitely more than  
100 km range with the  
GO! S/T2.6

THREE NEW MODELS

GO! S/T1.5 (2.1 kWh),  
GO! S/T2.6 (4.2 kWh) and  
GO! S/T3.6 (4.2 kWh  
with a speed of  
83 kph)

RANGE  
INCREASE  
OF  
45%

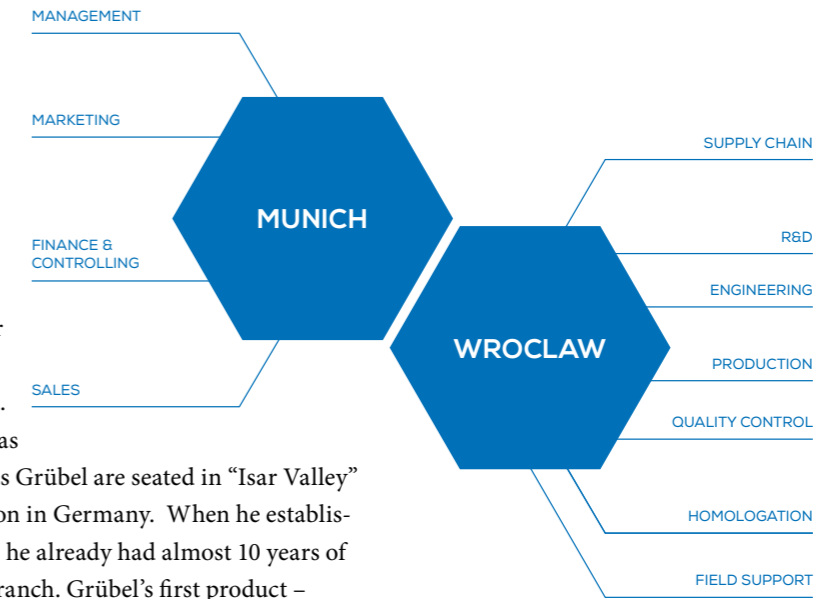
# GOVECS INSIDE

**GOVECS does not only stand for great products and innovative projects. It is our team spirit that distinguishes GOVECS further. Day by day our team develops, optimizes, produces and innovates electric mobility on two wheels.**

————— In our Polish plant in Wroclaw, Co-Founder Nicholas Holdcraft as VP Operations is responsible for engineering, product development and production. Following his studies at the renowned Northwestern University in Chicago, US-born Holdcraft had worked in several executive positions in Australia, Italy and Poland. He can look back on more than 10 years of experience in the field of production management and project planning in the still young electric mobility industry. —————

## MUNICH

While in Wroclaw the Morning Meeting is taking place, the Munich-based colleagues are responsible for moving our scooters to the customers and bringing them onto the streets. Marketing, Sales and Finance as well as GOVECS' CEO Thomas Grübel are seated in "Isar Valley" – the strongest business location in Germany. When he established the company back in 2009 he already had almost 10 years of experience in the e-mobility branch. Grübel's first product – the "Street Devil" – used to be the first electric vehicle homologated in Germany, and he is deemed one of the most important visionaries of the industry ever since. "We are producing and marketing vehicles that are fun to ride and convey an ecological lifestyle, at the same time embodying modern mobility."



## WROCLAW

Every morning our management team in Wroclaw gathers for the Morning Meeting in order to plan the day and discuss the upcoming projects. "We at GOVECS live on the agility, the passion and creativity of our staff. This is why we are living a very open culture with flat hierarchies and without paradigms. We assign responsibility and are thus all working together for the bigger picture. In fact, this is the only way to quickly adapt to the most various requirements that we are encountering in implementing our projects."



*Somehow  
we all  
got  
electrified  
here!*

# A NEW WAY OF MOBILITY

The GOVECS Group is much more than an electric scooters manufacturer. It is a visionary and developer, a pioneer and manufacturer. And as OEM partner it is also the patron for outstanding mobility concepts worldwide.

Established in Munich in 2009 by Thomas Grübel and Nicholas Holdcraft (Co-Founder), GOVECS is today one of the market leaders of the branch. The customer can meanwhile chose from seven vehicle models in two series and different performance and weight classes. The core business consists of using the e-scooters for delivery services, sharing/renting, companies and commission projects for other producers, so-called Original Equipment Manufacturer (OEM).

Just to give you some examples: The traffic wardens in the Dutch city of Leinden are moving around the city on electric scooters of GOVECS. If a hungry guest in Greece orders some pizza from the fast food chain Dominos, this pizza will be delivered with the silent e-scooters of GOVECS. In order to ensure that Geirangerfjord in Norway overcomes the tourist invasion every year, since 2013 GOVECS electric scooters are available to explore the UNESCO natural heritage. The electric scooters with Munich origin can also be found in San Francisco, Barcelona or Ibiza for an environmentally friendly and economical mobility.

Along with the development of their own vehicles, GOVECS is a sought-after partner also for Original Equipment Manufacturers because of the high quality of its products, its engineer know how and its reliability. Producers of electric vehicles worldwide rely on the expertise of GOVECS. The service and consultancy portfolio covers the whole value creation chain and ranges from purchase to development and engineering work to the production of prototypes and serial production.

GOVECS quite consciously choose to locate its cutting-edge development centre in the Polish city of Wroclaw: Wroclaw is the geographical centre of Europe and the technical talent factory par excellence. Founder and CEO Thomas Grübel found an outstanding and motivated team here that was well acquainted with the technology and production of electric vehicles.

The most important sales markets include the Benelux countries, Germany, France, Spain and the US.

SCOOT NETWORKS (SHARING)  
SAN FRANCISCO

THUISBEZORGD  
(FOOD DELIVERY)

HEADQUARTERS GIGI  
AMSTERDAM

HEADQUARTERS TRIPL  
DENMARK

PRODUCTION  
GOVECS  
WROCLAW

CITYSCOOT  
PARIS

DOMINO'S PIZZA  
PARIS

HEADQUARTERS SWAY  
SAN FRANCISCO

HEADQUARTERS COOLTRA  
BARCELONA

HEADQUARTERS  
GOVECS  
MUNICH

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



# THE NEW STANDARD

**PREMIERE AT POST-EXPO PARIS:  
GOVECS AND TREFOR  
PRESENT THE ELECTRIC VEHICLE**

**TRIPL**  
URBAN CARGO DRIVE

———— Munich-based GOVECS GmbH does not only develop and produce their own electric scooters, it is also established as globally active Original Equipment Manufacturer. Danish energy company TREFOR also resorts to GOVECS' know-how for optimizing and producing their vehicle. The first result of this cooperation is the electric vehicle TRIPL: As completely new concept and with almost endless possibilities of customization and individualization the vehicle turns all former solutions in delivery and transport upside down.

The premier of the TRIPL was a huge success at the Post-Expo in Paris from 29 September until 1 October 2015.

The beginning of the partnership between TREFOR and GOVECS was coined by an in-depth engineer consulting when producing the prototype. In the further evolution the E-vehicle specialists



from Munich will be in charge of the overall vehicle optimization as OEM partners in order to subsequently produce the preproduction series and the TRIPL in serial production.

“TRIPL is an electric vehicle drafted in Denmark and the best proof

that innovative design and environmentally friendly energy technology go hand in hand. In this way TRIPL is a real gain for traffic within urban green zones”, says Knud Steen Larsen, CEO of TREFOR A/S. “We are looking forward to a close cooperation with the well-established producer of electric vehicles GOVECS.”

### *Transportation vehicle for deliveries of all kind*

“With TRIPL, GOVECS and TREFOR developed the perfect transportation solution for delivery services of all kinds. Be it for mailings and parcels, urgent medication deliveries or Food Delivery. I even dare to say that in the transportation industry TRIPL is an adequate alternative for a car”, says Thomas Grübel, CEO and founder of GOVECS

GmbH. “Its various fields of application, completed by the successful interplay of efficiency, ergonomics, low overall operating costs and zero emissions will without any doubt set new standards in the transportation industry.”

**“We are looking forward to even closer cooperation with GOVECS, the renowned producer of electric vehicles”**

*Knud Steen Larsen, CEO of TREFOR A/S*

TRIPL comprises a flexible charging module that can be individually adjusted to the respective transported goods in terms of size in a few simple steps. With a remarkable holding capacity of 750 litres and 200 kilograms even the delivery of bulk goods becomes a walk in the park. The lockable transport box safeguards a whole new protection against theft, wind and weather, keeps the freight dry and protects from prying eyes. Another highlight of TRIPL is the possibility to individually adjust the driver's seat to the body size of the respective

driver. The sum of these properties make TRIPL a highly ergonomic and user friendly vehicles.

In the main application areas of TRIPL TREFOR guarantees a service network. —————

# COOLTRA

## E-SCOOTER RENTAL CAPTURED SPAIN'S IMAGINATION

————— Bright sunshine, white sandy beaches and palm-edged serpentines really make a wonderful scenery. But rattling engines and ill-smelling exhaust fumes do not fit into this idyll – and are even strictly forbidden in some places.

This is what Timo Bütetisch thought. The founder and CEO of Cooltra, Spain's largest scooter renting agency, decided to integrate electric scooters in his vehicle fleet in 2012. The vehicles of most various manufacturers were tested, but GOVECS made it. 500 of the 3,000 scooters provided by Cooltra originate from GOVECS – with upward tendency. The reliability and sophisticated technology are still convincing to Bütetisch – and are inspiring for his customers.

Although some may think that only residents and tourists make use of Cooltra's services, Cooltra's customers also include local administration and companies. The latter appreciate the high degree of economic efficiency of the

electric scooters. For tourists first and foremost the driving pleasure scores while ensuring maximum safety – a central aspect for providers of renting services for liability reasons. Another highlight: Thanks to zero emission electric scooters may even be used in nature protection areas. These are thus the best preconditions for being able to explore the holiday destination at any time – comfortably, quickly and independently.

The Cooltra team is enthusiastic not only about the technical refinements of the GOVECS scooters. "When the idea of establishing a fleet of electric vehicles began to mature, I did not only look for a supplier, but rather for a long-term trustful partner", says Timo Bütetisch. "We are working in this business for ten years now and we know perfectly well what we want to have. I could indeed imagine to switch over the entire Cooltra fleet to electric drive in the long run. And GOVECS is the ideal companion for that." —————

"NOT ONLY A MANUFACTURER,  
BUT RATHER A RELIABLE  
PARTNER AT THAT"

GOVECS cooperates with COOLTRA,  
Spain's largest scooter renting agency.





# THE GOVECS E-SCOOTER



## DRIVETRAIN

The characteristic centrepiece of a GOVECS scooter is the belt drive. We have based the entire drive system on it from the very beginning and spent tremendous amounts of time and testing for it. Now that we drove more than a million of test kilometres we are proud of this all-encompassing drive system, which makes a highly efficient energy utilization and an optimal interaction of the components possible and at the same time ensures unique driving experience.

Every year we succeed in making our motor even more efficient, so that they work with the same performance mapping at low speed as well. This, in turn, helps to continuously increase the life of the belt. The bigger pinion provides for a smoother acceleration up to the maximum speed at lower energy consumption.

In combination with our own battery management system this provides for a perfect interaction of the technical components and leads to maximum efficiency.



**GO! T1.5**  
Maximum speed: 45 kph  
Range: 50 – 70 km  
New 2.1 kWh battery

**GO! T2.6**  
Maximum speed: 45 kph  
Range: 90 – 120 km  
New 4.2 kWh battery

**GO! T3.6**  
Maximum speed: 83 kph  
Range: 70 – 90 km  
New 4.2 kWh battery

**GO! S1.5**  
Maximum speed: 45 kph  
Range: 50 – 70 km  
New 2.1 kWh battery

**GO! S2.6**  
Maximum speed: 45 kph  
Range: 90 – 120 km  
New 4.2 kWh battery

**GO! S3.6**  
Maximum speed: 83 kph  
Range: 70 – 90 km  
New 4.2 kWh battery

**“One of the developments we are the most proud of is our battery development program.”**

Nicholas Holdcraft | VP Operation

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One of the crucial characteristics for accuracy, efficiency and time control of the drivetrain is the special angle of the magnetic Encoder-IC and a switch that is directly integrated in the die-cast motor housing. With that the torque is improved and the measurements can be carried out with a relative accuracy of +/- 1 LSB. This ensures a smooth control of the drive system during acceleration. When the driver actuates the throttle, this produces a flat power curve that is much more comfortable than the binary jerky movement of our competitors.

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In combination with our own battery management system this provides for a perfect interaction of the technical components and leads to maximum efficiency. —————

THE BIGGEST PRODUCTION FACILITY  
FOR ELECTRIC 2-WHEELERS IN EUROPE

# GOVECS PLANT

GOVECS's state of the art production plant with an assembly hall covering a surface of 4,000 square metres is located at the geographical centre of Europe – in the Polish city of Wroclaw. The automated production line is 36 metres long and provides enough room for the parallel assembly of up to nine scooters. Work to full capacity thus means that every 15 minutes an electric scooter rolls off the production line.

4,000  
square metres  
production  
area

Production  
line  
36  
metres  
long

Own  
R&D  
department



The GOVECS team makes sure that even the weirdest ideas for mobility drawn up on a napkin can be transformed to electric vehicles ready for serial production.



The work ergonomics of the production line take into account the many manual work steps and provide optimal accessibility while at the same time ensuring an utterly safe work environment. GOVECS is VCA certified throughout the applied production processes. An ERP computer system controls the production with a just-in-time delivery of the components. The FIFO warehousing method safeguards smooth operation of inventories.

Wroclaw is also the place where the individual threads of the various suppliers come together. The components produced by our European cooperation partners in accordance with our specific quality standards once again undergo an intensive quality control here.

Along with our own production lines, classical OEM products are produced in Wroclaw as well. Our cooperation partners may thereby use the entire value creation chain of vehicle construction as well as vehicle development, ranging from R&D and prototyping to the final serial production or homologation. The GOVECS team makes sure, that even the weirdest ideas in terms of mobility originally drawn on a napkin are transformed to electric vehicles that are ready for serial production.



NICHOLAS HOLDCRAFT TALKS ABOUT THE DRIVE TRAIN:  
[www.govecsgroup.com/en/corporate/development/drivetrain/](http://www.govecsgroup.com/en/corporate/development/drivetrain/)



## PRODUCTION PROCESS





12 FLIGHT HOURS - 9,435 KM  
MUNICH - SAN FRANCISCO



**The company from Munich was the only manufacturer able to individually construct the electric scooter in such a manner that they met all requirements regarding telematics and software of the sharing providers.**

# GOVECS GOES FRISCO

**Almost twelve flight hours and 9,435 km as the crow flies separate San Francisco and Munich – halfway around the world. And yet: Munich-based GOVECS GmbH has managed to sell 150 electric scooters to the sunshine city on the West Coast of the USA.**

Our customer is the company Scoot Networks. It is the largest free-float provider for electric scooter sharing world-wide. Well, most tend to think that this should not be a problem, as there are enough manufacturers. However, the crux of the matter was that Scoot Networks wanted to integrate a software in the scooters that is absolutely indispensable for the sharing business, but there was no manufacturer able to directly and easily implement this integration. It would have involved time consuming and cost intensive reconstructions.

GOVECS found the right solution. The company from Munich was the only manufacturer able to individually construct the electric scooter in such a manner that they met all requirements regarding telematics and software of the sharing providers. This is an absolute novelty world-wide, which makes GOVECS a technology pioneer in the field of sharing. At GOVECS we are convinced that connectivity is a precondition for sharing projects. It means that information regarding the vehicle can be retrieved, for instance, by means of an App. The e-scooter thus communicates with the driver, and the operators are always up-to-date with respect to the condition and the location of the vehicle.

**150 SCOOTERS GO WEST**

150 electric scooters of the GO! T1.4 model are cruising through the streets of San Francisco for Scoot Networks since June 2015, they are humming over the Golden Gate Bridge, take hundreds of people living in San Francisco to work, and are the environmentally friendly vehicle for excursions or shopping trips.



MADE  
in  
EUROPE

COST  
SAVING



WHY QUALITY  
MATTERS IN  
THE TRANSPORT  
INDUSTRY

**DELIVER  
QUALITY**

CO<sub>2</sub>  
neutral

FAST



Yes, you are quite right here! A cold pizza Quattro Stagioni causes watery eyes instead of making your mouth water. When ordering some Pizza we rather imagine how the pizzaiolo removes it from the pizza oven, fuming and smelling, puts it into the thermos box and sends it out to us hungry aficionados of Mediterranean fast food. But for how long will the pizza in a thermos box stay warm enough to be sold? Per hour the pizza cools down by approximately one degree. Can the supplier wait for the ADAC because the battery of the electric scooter does not supply any electricity? Delivery services

are quite demanding in every aspect. The motto here is that quality may not suffer on account of speed. In Europe approximately 100,000 restaurants offer bring-home services. For caterers in Germany this has developed to become a key additional business. System gastronomy is also expanding their mobile services further. Everybody knows that customers, who have to wait for their order for a long time tend to change to the competitors. Return unlikely. To prevent this from happening to you, you should go for a transport means that you can rely on. If a scooter breaks down for some hours, you would instantly lose dozens of

customers. Do not take this risk, but rather invest in quality and decide for GOVECS electric scooters. Even a higher acquisition price pays off at the end. To everybody preferring the motto "no risk no fun", we would recommend to consider their drivers' safety. Risk does not have anything to do with fun here. If in the late evening hours the time pressure impairs the driver's attentiveness, it is good if you have used your best efforts to ensure that your couriers arrive at the customers' premises at all, and not only quickly. So do not go for super service only, but also focus on super safety.

**Delivery services are demanding in every respect. The motto here is to not let quality suffer for the sake of speed.**

# OEM

Depending on the requirements of the customer, we step in at various development and production stages of the projects. We are thereby in a position to cover the entire value creation chain of vehicle manufacturing, or – if required – provide support only in separate partial steps on a project basis.

In the past two years alone, GOVECS was the OEM partner for six outstanding and highly innovative electric vehicles. Sway is a swinging electric scooter of US-based Sway Motorsports. The vehicle is intuitively steered by weight shifting of the driver and is going to enthuse the West Coast within short. The electric folding scooter GiGi is certainly still catching the amazement of passers-by. Only two years ago this vehicle was the sketch of a design study. The vehicle can simply be folded after the ride and taken along on the train, on the plain, to the office or to one's apartment. The future of the transport industry will be essentially influenced by the electric vehicle TRIPL. The load area of this vehicle is individually adjustable to the size of the respective transported goods, and the seat can be individually



adapted to the build of the respective driver. With its enormous load capacity of 750 liters and 200 kilograms, TRIPL is the ideal transportation means for couriers, delivery services and parcel delivery companies.

GOVECS offers the best service and support for your creative idea, not least because of its technical platform for DESIGNING MOBILITY.

**For us as production facility Original Equipment Manufacturing (OEM) necessitates a full individual process management for every single order that is adjusted to the respective projects.**

### MAIN KNOW HOW

- Experienced in the complete product development process – from design over homologation to serial product
- More than 15 years experience in the international network
- World-wide partners and international network
- Own product development engineering e.g. lithium-ion battery pack, motor, battery management system
- Flexible system integrator by implementing existing solutions with own application engineering to create the most efficient system
- Provide the best technical solution for the particular markets and target groups



# FORM FOLLOWS FUN

In November 2014, Joe Wilcox, founder and CEO of the American company SWAY Motorsports, approached our booth at the EICMA trade fair in Milan. He brought with him an Alpha prototype of his latest developments and the recommendation that GOVECS had “the guys that are able to implement that”.

———— The idea clearly sparked a lot of interest and it was decided that GOVECS was the manufacturer of choice to get “SWAY” to serial production. The prototype was then sent to the Polish city of Wroclaw and was put to the acids there by our team of engineers. This specific technical challenge regarding this innovative OEM product is the so-called “Tilting” concept. It means that the driver controls and steers the SWAY by distribution of pressure/weight transfer on the two front wheels.

Joe Wilcox travelled to Europe from the USA only to fine-tune the details with our engineering team in Wroclaw within a period of four weeks. “I am highly satisfied”, Wilcox said, and we are glad to see SWAY as serial product capturing the West Coast of the USA.



“THE INITIAL IDEA BEHIND SWAY WAS TO HAVE A VEHICLE THAT HAS THE PERFORMANCE AND MANOEUVRABILITY OF A MOTORCYCLE.”

Joe Wilcox, SWAY Motorsports

# BITS & BYTES

**GOVECS is currently developing a novel telematics system for the remote administration of vehicles.**

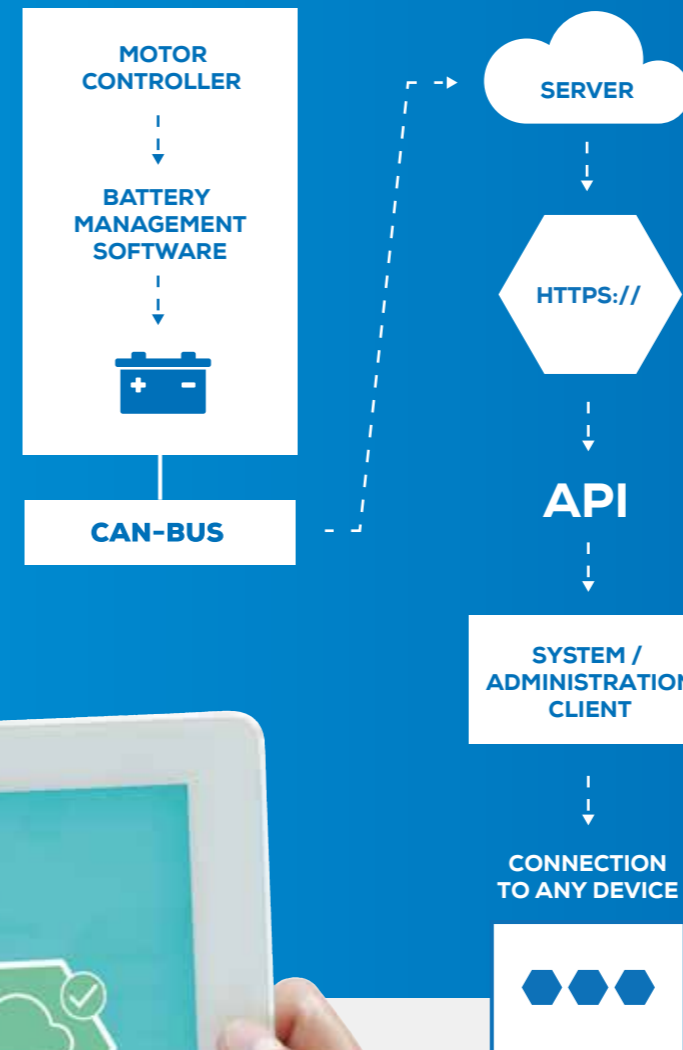
For managers of vehicle pools and fleets this means in-time access and the accurate control of every single scooter, the possibility of determining the exact location of the scooter and of obtaining information regarding the already covered distance, the current state of charge of the battery as well as the next servicing intervals. For sharing providers and rental agencies the new system provides a payment system as well, which can be easily implemented in any smartphone App. By means of retrievable statistics regarding user behaviour a user-oriented customer communication can be achieved which also helps increasing user interaction.

For our customers the interface constitutes the communication centre with the provider and the scooter as such. It is moreover possible to generate one's own statistics or directly contacting the GOVECS Field Support through a personal user profile in order to obtain simple and straightforward remote diagnoses.

**More than 100 data of the scooter hardware are gathered in the BMS and can then be transferred to a cloud server through the CAN-bus.**

## ACHIEVEMENT "BITS & BYTES"

- Development of a cloud based telematics and tracking system for the administration of GOVECS vehicles
- More than 100 data of the scooter hardware are gathered in the BMS and can then be transferred to a cloud server through the CAN-bus e.g. mileage, battery status or current location
- The system provides direct access for the GOVECS field support team in order to obtain simple and straightforward remote diagnosis
- This offers opportunities for new business fields e.g. fleet management, sharing projects, logistic companies



## IMPRINT

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**STATUS:**  
November 2015

**IN COLLABORATION WITH**  
Cooltra – www.cooltra.com  
Tripl – www.tripl.com  
Thuisbezorgd – www.thuisbezorgd.nl  
Sway – www.swaymotorsports.com  
GiGi – www.gigiscooter.nl

Technical modifications and errors excepted.

WWW.GOVECS.COM

**GOVECS GROUP**





# Drives on and on and on ...

The GOVECS scooter has a range of more than 100 km per battery charge.

