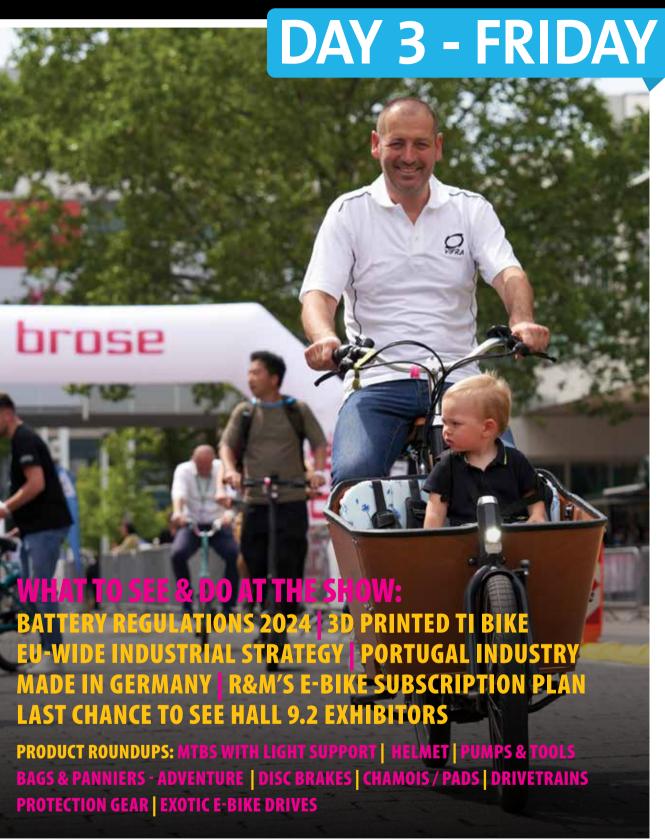


# SHOW DAILY





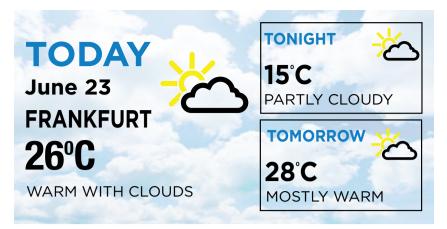
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Fr 15.07.- So 17.07. 9:00 - 16:00

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**Geldautomaten** Torhaus, Ebene 3 / Eingang City, Ebene 0/ Eingang Torhaus( S-Bahn Terminal) / Eingang

Galleria 9.T/Eingang Portalhaus

**Postservices** Torhaus Service-Center, Ebene 3, geöffnet von 9.00 bis 17.00 Uhr

**Apotheke** Apotheke im Hauptbahnhof B-Ebene Nord Brocks'sche Apotheke im Skyline Plaza Einkaufsmöglichkeiten Torhaus, Ebene 3 / Eingang City/ Hallen 4.0, 4.1, 5.0 und 9.0 Süd, 10.0, 11.0

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LEVA-EU Info-Meeting on new EU battery directive 5
Green guidelines at the Big Sustainability Summit 5
All business: last chance to see B2B exhibitors in Hall 9.2 6
Vox Pop: show impressions 8
Rallying support for an EU-wide industrial strategy 9
The number one cause for recalls: carbon steerer tubes12
SQlab's fitting way to boost sales13
Abimota bets on innovation and sustainability14
LiteMobie: from electronics to bike sharing solutions14
Unibike's rapid recovery from disaster16
Growing Portuguese assembler In Cycles17
Sram's chain plant in Portugal18
Sangal overcomes challenges19
Connectivity and integration at Astro20
Find Taiwan suppliers quickly with Bicycle Cluster20
"Made in Germany" rediscovered22
Drivetrain concepts push mobility forward26
Overview: Pro tools to keep you rolling29
Unimate: vides to vides comme
Helmets: rider-to-rider comms 32
Exotic e-bike drives34
Exotic e-bike drives34
Exotic e-bike drives

**CONTENT HIGHLIGHTS** 



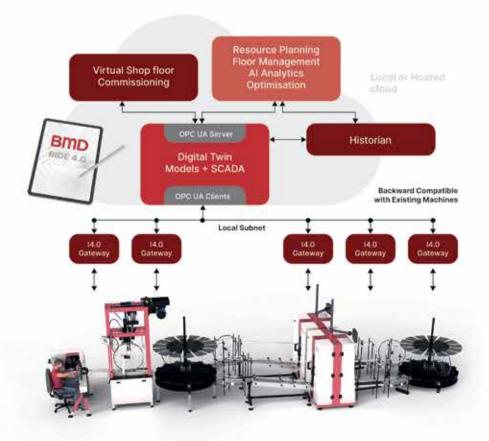
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#### LEVA-EU INFO-MEETING AT EUROBIKE

# NEW EU BATTERY DIRECTIVE HAS MAJOR CONSEQUENCES FOR BIKE INDUSTRY

On June 14, the EU announced a strict new battery directive that will have far-reaching consequences for the bicycle industry. At its info meeting yesterday at Eurobike, Leva-EU provided insights into the implications of these new rules.

Up to now, the key e-bike market of the EU has treated e-bike batteries as industrial batteries. So there were no requirements in terms of collection, recycling and sustainability. That is about to change with the new battery regulation that will be implemented step by step starting in September 2024 as part of the EU's Green New Deal. The goal of the new regulation is to make batteries of all kinds, from small wearable devices to e-bike batteries. more sustainable, circular and safe to use throughout their lifecycle - from the sourcing to their collection, recycling and repurposing.

Since this new battery regulation applies to sealed batteries weighing 25 kg or less used on wheeled vehicles or Light Means of Transport (LMT), it clearly impacts the bicycle industry. For this reason, **Leva-EU [hall 8.0 / NO2]** held an information meeting on Thursday to explain the new regulation and its implications for battery suppliers, e-bike manufacturers and distributors. One of the key points was that waste batteries need to be collected by the party that has put the battery in question on the



Hannes Neupert, president of Extra Energy EV.

market in the first place, and then be treated by an authorized facility. The goal is to recover valuable materials as a step towards a circular economy.

Naturally transitional periods are part of the EU's new battery regulation, and the requirements get stricter over time. In order to keep track of the return rate, companies are required to report the yearly amount of LMT batteries put on the market per member state. By the end of 2026 the EU will also require a detailed battery



E-bike batteries are assembled from a sizable number of cells.

passport accessible through a QR code, and a minimum lifecycle of 5 years. Another requirement aims to allow for the repair and exchange of batteries.

The president of Extra Energy EV, Hannes Neupert voiced worries about the implications of this new requirement. "Up to now, the bicycle industry has not been striving for compliance of LMT batteries with circular economy requirements. Since the current technology does not allow for repairs, the logical step would be to



Leva-EU manager Annick Roetynck.

resort to a rental model or battery as a service as the only market mechanism that would encourage technologies focusing on longer lifecycles."

Leva-EU's manager Annick Roetynck is not as alarmed, however: "The regulation does not specify the extent of repairs. Leva-EU's main issue is that battery production capacities within the EU are insufficient, and that the additional administrative requirements introduced with the new battery regulation are likely to overburden SMEs." LVR

## DNK GUIDELINES GOING GREEN

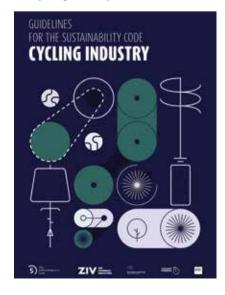
As a means of transport bicycles are very ecofriendly. However, things look differently when it comes to their production and disposal when their useful life is over.

With its guidelines for sustainability presented at today's Big Sustainability Summit, some key actors of Germany's bicycle industry aim to change that.

While some forward-thinking companies such as Riese & Müller and Miranda are already publishing comprehensive sustainability reports, many firms within the bicycle industry find it hard to assess their production, the raw materials used, their supply chains and the complete product life cycle for sustainability according to international standards. E-bikes in particular do not make this task any easier. For this reason, the Zweirad-Industrie-Verband (ZIV), the Verbund Service & Fahrrad (VSF), Zukunft Fahrrad, the think tank Bikebrainpool as well as the German Council for Sustainable Development (RNE), want to guide companies in the cycling industry on their way to sustainable management practices and provide them with a reference book for sustainability reporting.

Due to its easy accessibility, the German Sustainability Code (DNK) is an established reporting standard that offers a welcome opportunity to begin and continuously develop sustainability reporting within a company. Throughout a series of workshops, numerous practical insights and explanations have

been gathered to facilitate the implementation of a sustainability strategy, take measures and set ambitious and measurable goals. The participating associations of the German cycling industry and RNE are making good use of CIE's **Big Sustainability Summit** [hall 8.0 / Future Mobility Forum] taking place today from 10am to 1pm to present their guidelines for the sustainability code to interested members of the cycling industry.



## SEMAPA BUYS PORTUGUESE FRAMEMAKER

## TRIANGLE'S UNDER NEW OWNERSHIP



Jointly founded by Rodi, Miranda and Ciclo Fapril, Triangle's has quickly become a poster child for Portugal's fast-growing bicycle industry. Now this frame builder has been acquired by the Semapa conglomerate for an amount of € 178.7 million.

With its automated production of alloy frames that started back in 2017, making generous use of welding robots, Portuguese company Triangle's [hall 9.2 / C20] has caught a lot of attention from the media and the European bicycle industry alike. Premium brands such as Riese & Müller have the frames of their e-bikes built at this factory in Agueda that recorded a turnover of €36.7 million in 2022. This turnover has seen continuous growth thanks to the company's proximity to key e-bike markets.

The ongoing success of this

frame supplier has now attracted the attention of Semapa. This Portuguese conglomerate controls the pulp and paper producer Navigator, owns cement maker Secil, and also has businesses in the environmental and hydrogen sectors. As per June 20th, Semapa confirmed the acquisition of Triangle's for an amount of €178.7 million, with an additional amount to be paid by 2027 depending on Triangle's performance and other conditions.

In its official statement Semapa said that it is seeking to speed up Triangle's growth and will invest to further increase its capacity and technological development. According to Semapa CEO Ricardo Pires, this acquisition shows "a commitment to sectors of the future, combining decarbonisation and sustainability goals with growth prospects."

### **TODAY IS YOUR FINAL CHANCE TO VISIT THE SUPPLIER AREA!**

## ALL BUSINESS: HALL 9.2 FOR 3-DAY B2B EXHIBITORS

When the clock strikes 18:00 today, exhibitors in the Supplier Area of Hall 9.2 will pack up their booths and either head home or head to a different section of Eurobike to support colleagues during the Festival Days.



Sinbon

Companies exhibiting in the Supplier Area were given the option for the new shorter stay format lasting just three days instead of five. This is the first time that Eurobike has offered the choice to book a booth for only the first three days.

The new format came about after last year's Eurobike, when the international supplier industry voiced its request to have a specific, customized format suiting their requirements. The companies in Hall 9.2 are specifically focused on B2B transactions with international industry and product management contacts. Following an intensive analysis of the exhibitors' feedback, this year's edition was modified accordingly. Reviews of the new setup are mostly positive, yet drawbacks include lower traffic for some categories, a problematic time lapse between booking and confirming booth space, and fears related to product regulations (or lack thereof).

"This morning is already busy and it's going well," said Roxanne Petersen, key account manager for **Sinbon**[9.2 / E27]. "Customers really want to know what makes us different and it's because we don't offer just one or two components but it's the whole integrated drive system." The 30-year-old Taiwanese company produces the ECU, hub motor, battery, controller, and companion app for ebikes.

"For us I think it's fine because the B2C days are a bit useless because our customers are our business partners and not the end customers," said Florian Dinkel of **BikePackaging by HORNA [9.2 / B03]**, which supplies packaging for shipping wheels and complete bikes.

"We just want to gather all the potential customers during these three days," said Andrea Yan of **Hebei Hanglun Technologies [9.2 / A10]**. "The first day we met a lot of new and old customers, so it has been a success." The Chinese brand produces 18,000 titanium bike frames per year under the name Hi-Light and serves



BikePackaging by HORNA

the most well-known titanium bike brands worldwide.

"I think it's a nice first time to see all the brands, to learn about the category, and to share our innovation," said Amit Baron of **Smartrike** [9.2 / A16]. This is the first time at Eurobike for the family-owned, global brand that's showing its patented Xtend 3 in 1 bike that "grows" with children from 3-7 years old.

"I think the new format is good but there aren't so many people because of fears about the status of batteries and we haven't signed too many customers," lamented Bridge Zang of **Zhangzhou Aucopo Energy Technology [9.2 / A24]**. Another challenge for Aucopo was the timing between booking the booth space and confirming it. The lag in between didn't allow a lot of time for securing visas, which was cited as a possible issue for customers as well.

"The European team decided to come because of the B2B format," said Kristof Van Wetering of **A&C Solutions** [9.2 / E61], whose exhibiting partner, Higo, makes cable harnessing and waterproof connectors. "We've been able to have a lot of meetings that were planned ahead for this short timeframe."

"The location is really bad for us because the suppliers around us have nothing to do with our business," said Valentín Fuster of **SPW Fabrics [9.2 / A39]**. "For us it's really important to be surrounded by other textile producers because if there's an area for textiles, customers can organize a lot of meetings all at once."

"We're focusing on bike share and food delivery companies because the biggest problem for them is flat tires, which require a lot of maintenance and cost," explained Dinja Witbraad of **Supreme Dutch [9.2 / E23a]**. "Here we have a lot of bike share companies and bike brands that supply bikes to food delivery companies. Yesterday was our first day and we had people in our stand all day."



SmarTrike



A&C Solutions with exhibiting partner, Higo



SPW Fabrics

Eurobike first-timers had the nicest things to say about the new Supplier Area, while brands that expected more out of the format are still waiting for customers to come by and place orders. If those customers do materialize, they only have another



Supreme Dutch



Hebei Hanglun Technologies (Hi-Light)



Zhangzhou Aucopo Energy Technology (Aucopo)

eight hours or less before Hall 9.2 is decoupled from the rest of the show and these B2B exhibitors pack their things "behind the scenes" to allow B2C brands to shine during Festival Days. • WB





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## **VOX POP**

What are your impressions of the show so far?



#### Heiko Esser

Shop owner, Der Zweirad Experte, Wuppertal, Germany

I just bought a bike shop four months ago, so I'm still getting to

know the bike business.

I've been incredibly impressed by the show, so many suppliers, great bikes, it's crazy to see all that is being created in terms of technology, the shape of bicycles, battery capacities, performance of motors, drive trains and more.

The second day has been extremely exciting, with an overload of information. I'm just here to take it all in.



Falk Siegel

Kleta, co-founder and CEO, Spain

Amazing so far.

I was actually
a speaker at the
start-up innovation
forum, and it was
amazing. I spoke

about our start-up, and how we attract non-cyclists to switch to bikes, and especially e-bikes. It was interesting and the feedback was amazing afterwards.

Now it's amazing to see different

manufacturers, different bike brands and bike products.

It's overwhelming sometimes, so much new stuff out there, but the impression overall is very nice so far.



#### Petr Minarik

SW-Motech, bicycle manufacturing, Czech Republic

I'm here for the first time. We are a production company — we're

looking for business opportunities and we see some potential.

We have some signals that some current bike producers are moving production capacity from Asia to Europe. So based on this information we see some opportunities for us. What we needed, we saw and we found.



#### Yves Lohse,

Key account manager Germany, Endura, Germany

I was here last year, my impression is that there are many, many

more people here than last year.

I was going home last year [asking myself] does it makes sense to have this trade show here in Frankfurt, or is it better to go back to Friedrichshafen, where it was before. But this year when I see how many people are here, it's a very, very big step forward.

It's a special situation with these different floors here, it's unusual for a trade show. But it's a learning process: there's the possibility of having three floors in one hall instead of just one. For me it's fine.



Francisca Campos Bike24 Spain,

country manager, Spain

I have been to Friedrichshafen in the past, but it's the first time

that I've come to Frankfurt. This one is much bigger, it has more things, and I'm most impressed with the cargo bikes, the different models for different kind of requirements. Big novelties, actually – and the possibility to test, that's great for me. It's very nice, you have brands from all over the world. There's so much passion around cycling here and I have made a lot of contacts.



Cezar Gremi

Urbico, general manager, Italy

I was here last year. It's always well organized and interesting, but I get the impression that there

are fewer cargo bikes than last year. Maybe it's just an impression.

It would be a nice idea to have some water fountains, but apparently they don't do that in Germany.



**John Adisi** Humanbike and Driiven . U.K.

It's easier to get here from the U.K. and probably from most places, but I think this is quite vast, this whole

place, and it's a bit swamped – I would prefer if it was a bit more intimate, contained in one place where you can get to places quite easily.

I've just come from Hall 8, I'm going to Hall 12 and I've got to go back to 8 at three o'clock – it's such a long walk and you don't quite know where anything is as well.



#### **CIE INDUSTRY LEADERS' BREAKFAST**

## **RALLYING SUPPORT FOR AN EU-WIDE INDUSTRIAL STRATEGY**

Speaking at the Industry Leaders' Breakfast yesterday morning, key stakeholders supported joint efforts to build up a more robust and sustainable industrial cycling ecosystem in Europe.

Cycling Industries Europe (CIE), which organized the high-powered breakfast, indicated that these efforts could be pushed by European funding - provided it's able to obtain solid backing for an industrial development plan. It estimates that such investments could help create one million jobs in Europe.

"We need to turn up with an investment plan for our industry for the next five years and actually declare that this is what we are going to do," said Kevin Mayne, CIE's chief executive.

The industry's drive to obtain more recognition and support from the European Union was stimulated by a proposal from Frans Timmermans, first vice-president of the European Commission, to put forward a European Declaration on Cycling.

"That declaration will be our strategic compass for European rules, funding and policies going forward," Timmermans told the CIE summit 2023.

Mayne said the first stage of this process should be around October, and it could open up access to huge funding. It has been suggested that the bike business could be eligible for some funding from a European budget of €1 trillion across industries.

CIE has already shared a draft proposal of about 40 pages with the European Commission, which should be examined and adjusted in the next months.

For instance, it has been estimated that the European sector would require investment of about €2 billion by 2030 in research and development, beyond the budgets committed by industry players, to be "truly competitive" in manufacturing and assembly.

Then again, business leaders made it clear at the breakfast that it would take forceful input for cycling to be heard against powerful voices such as the car or aviation industry.

'They show up in numbers," said Friederike Pischnick, senior expert of sustainable mobility at Bosch e-bike systems. "We show up with two people."

Decathlon, the largest European sports retailer, has set up an office in Brussels precisely for this purpose. Bertrand Tison, head of EU Public Affairs at Decathlon, suggested that it would be hard for cycling to compete against these more influential industries in terms of employment



From left to right: Moderator Christof Backhaus, professor of marketing at Edinburgh Napier University; Friederike Pischnick, senior expert of sustainable mobility at Bosch e-bike systems; Bertrand Tison, head of EU Public Affairs at Decathlon; Raymond Gense, director at Pon Mobility.

and investment. "But we have the carbon that we're taking off the street," Tison said.

This resonated with Raymond Gense, director at Pon Mobility. He called for more research to evaluate the environmental impact of the industry, as well as its economic value.

Pon, Decathlon and Bosch are all involved in the process to put together the industry's strategy for the European Commission.

The packed audience heard encouraging consumer research updates from Marc Anderman, head of cycling at Sporting Insights, showing abundant and more frequent participation. The latest numbers indicate that 7% of cyclists started riding less than one year ago, or one or two years ago. About 13% cycled at least once a day last year, up from 10% two years earlier, and 32% cycled a few times per week, up from 29% in 2020. ■ BS



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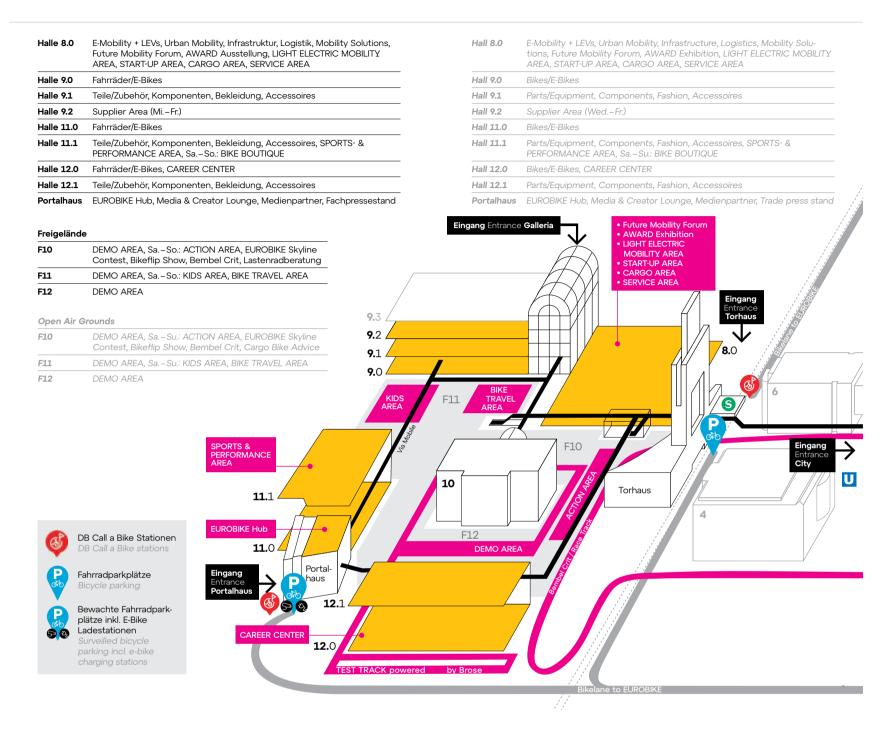








## **EUROBIKE HALL GUIDE**



#### Anreisemöglichkeiten zur EUROBIKE

Travel options to EUROBIKE

Die EUROBIKE findet auf dem Gelände der Messe Frankfurt, statt. Die Messe Frankfurt, zentral in der Mitte Europas gelegen, erreichen Sie schnell über optimale Verkehrs-verbindungen – ganz gleich von wo du startest in der innenstadt, am Hauptbahn-hof, am Flughafen Frankfurt oder auf der Autobahn oder ob Sie zu mit dem Fahrrad, zu füß, mit dem ÖPNV oder anderen Ver-





#### Kostenlose Anreise mit dem ÖPNV für **Fachbesucher**

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Alle Fachbesuchertickets, die online er-hältlich sind, berechtigen zur kostenlosen Hin- und Rückfahrt zur Messe in Bussen und Bahnen im Gebiet des Rhein-Main Ver-kehrsverbundes. Bitte beachte, dass diese Tickets nur ausgedruckt und in Verbindung mit einem gültigen Ausweisdokument



#### Anreise mit dem Fahrrad

Arrival by bike



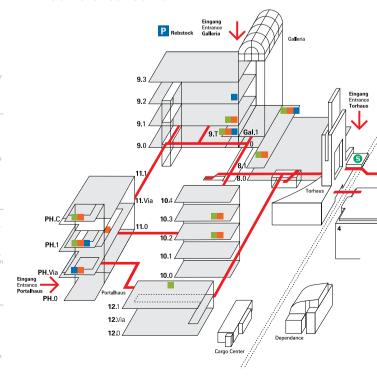
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Bike in Frankfurt vom 21. –
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#### **Conference rooms**



#### چ۶

## WHATS ON TODAY:

FRIDAY 23 JUNE



## SCAN HERE FOR A COMPREHSIVE GUIDE TO EVENTS

## 09:00 a.m. - 06:00 p.m. Freigelände F11

#### **GRAVEL LOUNGE**

The Gravel Club and Gravel Collective open their Gravel Club Lounge for small talk about gravel biking and bikepacking and interesting workshops. Furthermore, the Gravel Club Lounge is a meeting point for gravel rides and you can enjoy refreshing drinks and delicious coffee.

## 09:00 a.m. - 10:00 a.m. EUROBIKE HUB, Portalhaus

## MEDIA & CREATOR LOUNGE BREAKFAST

This year, the Media & Creator Lounge presents itself with a new name and a new location. What has remained, however, is the Media & Creator Lounge Breakfast as a joint start into the day. We look forward to seeing you!

## 09:00 a.m. - 10:00 a.m. EUROBIKE HUB, Portalhaus WOMEN IN CYCLING

Women in Cycling in cooperation with the Young Mobility Network is inviting to breakfast, intellectual input and networking. The focus of the networking breakfast is getting to know each other, showing the variety of women working in the bicycle industry and supporting

#### 09:30 a.m. - 06:00 p.m. RACE TRACK, F10

each other.

#### CARGOBIKE EUROCUP

The CARGOBIKE EUROCUP provides different races by and for the Cargobike community and is intended for the pleasure for all participants. Registration is open from 09:30 to 12:30, followed by an exciting day with different races ranging rrom relay races to special class runs and much more.

#### 09:30 a.m. - 05:30 p.m. DEMO AREA

#### **TEST TRACK powered by Brose**

With the Test Track, EUROBIKE offers the opportunity to try out the latest bike models in the fresh air and experience real riding fun.

### 10:00 a.m. - 05:00 p.m. EUROBIKE HUB. Portalhaus

#### **BIKE TRAVEL FORUM**

In the focus of the BIKE TRAVEL FORUM is the collaboration between tourism and industry. The common central question of how cycling can be made more attractive for everyone unites the players. The format will feature presentations on the joint business ecosystem, the vision of a joint data hub and impulses for a cooperative political development work. The BIKE TRAVEL FORUM will be rounded off by a networking format and masterclasses in the afternoon.

## 10:00 a.m. - 06:00 p.m. **CAREER CENTER**

#### **CAREER CENTER**

The CAREER CENTER as a platform for career opportunities in the bicycle and mobility sector is aimed at supporting companies in their search for trainees and young professionales in times of shortage of skilled workers. In addition to workshops, training sessions, shows and the jobwall, panels and presentations on the big stage complete the format.

#### 10:00 a.m. - 05:00 p.m. FUTURE MOBILITY FORUM

#### SUSTAINABILITY TRACK

On Friday morning, the bicycle associations, together with the Bike Brainpool think tank, will for the first time announce the guidelines for a sustainability strategy for the German industry and the climate pledge at European level. Furthermore a platform for sustainable materials will also be presented. Parallel to this, as well as in the afternoon program, topics of the circular economy, EU recycling requirements as well as cargo bike rental systems as opportunities for a more sustainable bicycle world are on the agenda.

#### 10:00 a.m. - 01:00 p.m. FUTURE MOBILITY FORUM

## LAUNCH OF GUIDELINES TO THE GERMAN SUSTAINABILITY CODE

The associations ZIV Zweirad-Industrie-Verband e.V., VSF Verbund Service und Fahrrad, Zukunft Fahrrad and Bike Brainpool present the guide to the German Sustainability Code (DNK) for the bicycle industry, which is intended



to help companies in the bicycle industry report on their sustainability activities and develop a sustainability strategy. With a simultaneous translation, the Launch of Guidelines to the German Sustainability Code will be in German and English.

#### 10:00 a.m. - 10:30 a.m. SPORTS & PERFORMANCE STAGE

## B&W INTERNATIONAL PRESENTS DUNCAN SHAW

"No bike, no business". Duncan Shaw is a professional trial biker and travels the globe with his bike. Together, we are writing a success story with B&W's flight-ready, rugged and secure transport solutions. The bike cases not only protect Duncan's bike, but also provide the opportunity to put on a great show: Have fun!

#### 10:00 a.m. - 05:00 p.m. EUROBIKE HUB, Portalhaus

#### **SUSTAINABILITY TRACK**

Friday is all about sustainable development. From circular economy to recycling targets to sustainable supply chains, the Sustainability Track will highlight ways to make the bicycle industry more sustainable and environmentally friendly.

## 10:00 a.m. - 05:00 p.m. ACADEMY STAGE

#### **EUROBIKE ACADEMY**

The EUROBIKE ACADEMY is from experts for experts and presents exciting talks and conferences on the newest innovations, business solutions and trands in the cycling industry. How can

companies present themselves better online, what digital solutions are available and what design innovations are currently revolutionizing the market. Find the answer to those questions and more at the EUROBIKE ACADEMY STAGE in hall 8.

## 10:00 a.m. - 01:00 p.m. FUTURE MOBILITY FORUM

#### LIGHT ELECTRIC MOBILITY

From hoverboards to electric scooters, electro mini cars or segways, the light electric mobility sector has more to offer than e-bikes. This growing industry is changing our transportation system and provides many alternaitves for car users.

#### 10:00 a.m. - 05:00 p.m. Sports & Performance Stage

The Sports & Performance Stage is the first place to go for anyone interested in improving their sports performance in cycling. This requires not only the right equipment, but also an understanding of your own body and the right mental attitude.

#### 02:00 p.m. - 05:00 p.m. SPORTS & PERFORMANCE STAGE

#### **GRAVEL TALK**

Here you can find the latest developments of what is probably the most versatile form of the bike under one roof. From the right equipment to different models to the right driveability, the gravel talk offers all the information about the gravel bike. The GRAVEL TALK will be in German.









## DIRK ZEDLER ON: FORK STEERER TUBES MADE OF CARBON THE NUMBER ONE CAUSE FOR RECALLS

Light and ultralight road bikes, time trial bikes, cyclocross and gravel bikes usually have carbon steerer tubes. For 20 years, such steerers have been the number one cause for recalls in the cycling industry. Manufacturers, dealers and users are equally called upon to ensure their bikes are safe.



The biggest names in the cycling industry are always competing to achieve the best ergonomics, handling properties and, of course, the lowest weight. It comes as no surprise that carbon with its captivatingly good properties is the most sought-after material for lightweight builds. Early attempts to use the material for frames and forks during the late 1980s and early 1990s were often unsatisfying, making aluminium the most popular lightweight material for a number of years. In 2003 Scott pioneered the first large-scale production frame weighing less than 1,000 grams with its CR 1, and since then the carbon wave has been unstoppable.

Tremendous progress has been made with carbon as a bicycle material. Nowadays, no user of any wellestablished brand needs to be afraid of the once dreaded 'sudden death', i.e. abrupt and total failure of their frame. The rims of disc brake wheels, cranks, handlebars and seat posts have also become very reliable. Only steerer tubes keep causing problems.

What exacerbates the situation is that impending steerer tube failure often occurs on the inside, i.e. under the stem, spacers and headsets, invisible from the outside. We know from the many related recalls we were involved in over the years that riders do not notice the impending failure. The deterioration becomes apparent only once the handlebar including the stem comes off in the rider's hands – a picture known from many a spectacular race-day photo. Unfortunately, with the handlebar detached from the fork, crashing is unavoidable.

## Hidden defects with many potential causes

There are many reasons why this high-performance material is difficult to

master when used for steerer tubes. The influencing factors include:

- 1. The quality of the steerer tube
- 2. The quality of the expander or compression plug
- 3. The quality of the stem
- 4. The installation conditions
- 5. The quality of installation and maintenance

All this means that manufacturers have a hard time getting to grips with the problem. In cases where all components are left as they were in series production, the manufacturer is able to optimize points 1 to 4, leaving only installation and maintenance. This is where the trouble starts. Many tinker with bikes without the right tools (e.g. a good torque wrench) and useful aids, which in this case is a carbon-specific assembly paste to increase friction between the components.

The installation conditions are another point that often leads to deviations from the bike's original state. Bicycles are typically supplied with 30 to 45 mm worth of spacers underneath the stem. Riders aiming for a more competitive position take out the spacers and place them on top of the stem. It is a recipe for disaster because the stem is no longer clamped tight at the height of the expander and the steerer tube can fail over time due to pressure at a soft spot. Therefore, having the steerer tube cut by a professional after a trial ride is indispensable. This means no more than a 5 mm spacer should remain on top of the stem.

Simply opting for a different stem can also lead to failure. Some stems have sharp edges on the inside and their clamping surface may be too small, which can also reduce the steerer tube's service life. Selecting a stem without checking it for compatibility with carbon steerers potentially adds a breaking point to the bike.

#### **Deficient standard**

One of the reasons for the many recalls could be that some manufacturers strictly adhere to the bicycle standard. Until recently, the standard did not prescribe any checks in this area, although the author of this article published details on the risks and causes of carbon steerer tube failure as early as February 2000. Publications on helpful test procedures have been available, and our lab has for years housed nine testing systems designed to investigate carbon steerer tubes very realistically in their original setups, i.e. with their specific headsets, adaptable head tube and stem lengths and any number of spacers.

The recently updated standard disappoints once again. Instead of adopting the load cycles and forces which stems and handlebars have undergone for many years according to the standard, the numbers used for steerer tubes were significantly reduced. Under these circumstances, we will never see carbon steerer tubes that are truly safe for all purposes.

Manufacturers would do well to stringently test carbon steerer tubes as part of the system with the rest of their components. Additionally, they need to inform dealers and users and let them know what they should pay attention to for any required ergonomic retrofitting or maintenance tasks.

Users should never tinker with a high-tech material like carbon. Without the requisite know-how and special tools, they will only put themselves in harm's way.

Dirk Zedler



#### **DIRK ZEDLER**

Since 1993, Dirk Zedler has been an analyst and expert witness on bicycle accidents and product failures for courts, bike and insurance companies, and private individuals. He got his start in the industry by working for a large bike shop from 1986 on, and now holds the respected advanced engineering degree known as "Diplom-Ingenieur."

Courts have recognized Zedler as an officially appointed and sworn expert on bicycles since 1994, and on electric bicycles since 2014.

The Zedler – Institute for Bicycle Technology and Safety has used this wealth of knowledge, derived from his and his teams work in thousands of court proceedings and expert's reports not only in Germany but from the US to all over Europe, to enhance research and development in the bicycle industry.

The Institute sets the standards for the bicycle industry. It develops and builds testing equipment that is used by manufacturers to improve the riding performance and safety of their bikes, and by leading European bicycle magazines to test them. The Institute's work provides a basis for European and American manufacturers to communicate with their Asian suppliers. Manufacturers can buy test equipment from the Institute or use its state-of-the-art testing labs.

The Zedler Institute also prepares risk analyses, conformity papers, workshops, recall papers und user manuals for bicycles and pedelecs. These manuals, now available in more than 40 languages, help consumers use their bikes properly — and in many cases have protected manufacturers from liability.

Our experts draw on the wealth of experience gained through several thousands of expert's reports to train experts from in and outside the bike industry, such as automotive experts.

What we have learned from court cases, the proceedings of the market surveillance authorities and recalls is the content of our training courses for bicycle manufacturers. As a result, they are in a position to set up CE conformity processes internally. For more information, visit www.zedler.de.

#### **SQLAB'S NEW APP:**

## A FITTING WAY TO **BOOST SALES**

With its new Profiler app, German parts and ergonomics specialist SQlab is looking to advance the fitting know-how of bicycle dealers. This knowledge helps increase sales and get rid of overstock.

When competing with D2C brands and online shops, one asset of traditional brick and mortar retail stores is their expertise in finding the right bicycle in the right size for the customer. And to further add to the joy of riding by optimizing the position on the bike and various contact points such

as the saddle, grips and pedals. **SQlab [Hall 11.1 / B24]** is a specialist in this field. With its new Profiler app, it aims to further deepen the knowledge of bicycle dealers and their staff in terms of fitting and ergonomics.

Based on a set of measurements such as the distance between the sit bones, the grip width and the foot



An English-language version of SQlab's Profiler app is being launched at Eurobike

type and a measurement of the customer with a camera, the SQlab Profiler app is a digital sales guide that speeds up the search for the right frame size and geometry, recommends fitting products and generally adds to the speed and the precision throughout the sale of a bicycle while also increasing the chances of additional

sales of soft goods or parts.

"The SQlab Profiler app is a supportive sales tool for brick and mortar stores and their staff that may well help dealers to increase their turnover and to sell off overstock more easily," SQlab's general manager Tobias Hild explained. **LvR** 





The ultimate pocket pump Weighs just 30 grams



# ABIMOTA BETS ON INNOVATION AND SUSTAINABILITY

Once a project to promote made-in-Portugal bicycles and parts, Portugal Bike Value has morphed into a highly efficient network of companies. Behind this success is Portugal's Association of the Two-Wheeler Industry Abimota.



General manager Gil Nadais in the test lab at Abimota's headquarters in Agueda, Portugal.

Within a dozen years Portugal has become Europe's most important supplier of e-bikes. Its exports exceeded 2.7 million units in 2021, with the 3 million mark likely having been reached

in 2022. After all, the value of the exports of Portugal's bicycle industry grew by more than one third year-on-year to € 812 million last year. Still even experts will be hard pressed to name bicycle brands hailing from Portugal. The reason for this is that most of the production in Portugal is OEM business done for well-reputed European brands, and much of it is focused on e-bikes as the industry's most dynamic segment by far.

This fast rise has been a consequence of the Portugal Bike Value project, co-financed by Compete and Portugal 2020 and initiated as a follow-up to an earlier "light mobility" program by Portugal's Association of Two-Wheeler Industries Abimota [Hall 9.2 / B20-B28] in 2012. "Motivated by the fast growth of the e-bike market and following the concept of a bottom-up cluster with some front runners such as RTE, SRAM, Miranda, Rodi and Ciclo Fapril, our goal was to promote cooperation between the companies that form Portugal's bicycle industry – many of them family-owned SMEs", as Abimota's Secretary General Gil Nadais recalls. This cooperation

was key to compete with rivals in Asia and Eastern Europe.

"The flourishing bicycle business attracts a lot of new players. To make sure that Portugal remains competitive as a place to produce bikes, constant improvement is key and Abimota is looking to support its members in this," says Portugal Bike Value's investment consultant Sérgio Ribeiro. Apart from intensified cooperation with academic research institutes. Abimota's in-house test laboratory and its staff plays a key role. It offers a helmet test lab in the basement and the country's most comprehensive test lab for bicycles and parts on one of the upper floors. A new innovation centre called "Bikinnov" with its own laboratory is about to open, offering services from concept to design to industrial production.

As Abimota explains, Portugal wants to be a part of a network solution for Europe that constantly improves through competition. "Portugal's strategy is to bet on quality, flexibility and proximity to the markets rather than to join a race to



Sérgio Ribeiro (left) and Gil Nadais present a high-end carbon road bike made in Portugal at Abimota's Eurobike booth.

the bottom chasing massive volumes. After all, there's always another country that will be betting on the mass-production of cheap bikes. That pathway would be in contradiction with Abimota's sustainability goals. The association prefers to see Portugal's bicycle industry as a sustainable player," explains Ribeiro.

#### **EXHIBITOR PROFILE: LIGHTMOBIE**

# FROM ELECTRONICS TO BIKE SHARING SOLUTIONS

While many of the companies within Portugal's bike industry have quite a long history, things are different with Lightmobie. This specialist for bike sharing solutions is profiting from the diverse expertise of its mother company.



Lightmobie's CEO José Mota with some sharing bikes and lots of kids bikes.

As a late addition to Portugal's bicycle industry, **Lightmobie [Hall 9.2 / B28]** was founded in 2019 under the roof of a corporation known for assembling electronics, supplying soft- and firmwear for the automotive industry and producing lights for

the public sphere, the health sector and retail stores. "We already were doing business in terms of electronics, software and public infrastructure with Globaltronics and Lightenjine, so getting into bike sharing with Lightmobie was a logical next step," explains CEO José Mota. "All the more so as urban centers are changing quickly with authorities looking to boost bicycle use and reduce car traffic."

Since free floating models tend to cause a mess, Lightmobie has been opting for docking stations from the very start. But the company is offering free floating options if authorities wish so as well. Mota's timing was spot-on as Lightmobie has rolled out sharing bike systems in more than 20 cities across Portugal and some more cities in Spain within less than four years - in the middle of a pandemic. Mota does not fear that bike sharing cannibalizes the sales of bicycles, either. "On the contrary, I think that bike sharing gets more people on bikes. The real challenge are digital natives that grew up without riding bikes, and bike

sharing is an easy way to get them into the saddle," Mota argues.

Lightmobie has also won a tender from Portugal's ministry of education to supply 18,000 kids bikes for schools and 3,000 larger bikes for juveniles and teachers. Apart from the hubs, tires and steel cranks most parts needed for these kids bikes have been sourced in Portugal. Thanks to the in-house know-how in terms of metal works, software and electronics Lightmobie has quite an impressive vertical range of manufacture - not only for the docking stations and the terminals it calls "totems" internally, but also for the sharing bikes themselves. "We build wheels, offer the assembly of bicycles to third parties as a service and we also can manufacture alloy frames,", says Mota. "That leaves electric assistance drives, coaster-brake hubs and parts like tyres to be sourced globally."

At this year's Eurobike Lightmobie will launch a new sharing bike station with an integrated touchscreen and a longtail cargo bike with a steel frame



Lightmobie's docking station for bike sharing programs.

and space for two kids seats on the carrier rolling on a 24-inch wheel up front and a 20-inch wheel in the back. Since Lightmobie has no consumer business, the company has opted for Eurobike's three-day B2B package, exhibiting on the second floor of hall 9. LVR

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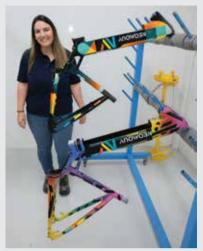
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#### **PORTUGAL'S UNIBIKE**

## RAPID RECOVERY FOR PORTUGUESE ASSEMBLER

When Unibike lost its factory due to a large fire in the summer of 2019, the company's owner Sergio Ramos turned catastrophe into an opportunity. Four years later, the company is thriving at a new location, expanding its headquarters to create space for more manufacturing.



Co-owner Paula Ramos shows the intricate paint jobs Unibike is capable of. These are limited edition frames from French designers now on display at Eurobike.

Like many companies in Portugal's bicycle industry, **Unibike [Hall 9.2** / **B26]** is a family-owned enterprise. Originally founded as Avantis back in 2001, the company qualifies as a small to medium enterprise with a staff of 170. Shortly before losing its factory due to a large fire in June 2019, the name was

changed to Unibike and construction of a new headquarters started in March 2020. Despite issues with pandemicrelated travel restrictions, operations started one year later at the new facility, which has a total floor space of 12,000 m2. While the painting department and the assembling department each cover 5,000 m2, the remaining 2,000 m2 are used as offices and show room. At the time of our visit, the show room had been turned into a temporary warehouse due to a lack of space.

At the same time Unibike's headquarters were expanded by another 3754 m2 that will be used as a warehouse and allow for more streamlined and efficient operations in the assembly department. Due to the rapid growth of its business - turnover went from EUR 4.5 million in 2020 to EUR 28.5 million in 2022 — Unibike has had to rent external warehouses and move parts and components needed to build bikes around on a daily basis. "95 percent of the assembled bicycles at Unibike are e-bikes. As for the services we offer, we do assembly, painting or both -with the latter making up for 87 percent of the company's turnover," as business manager Jorge



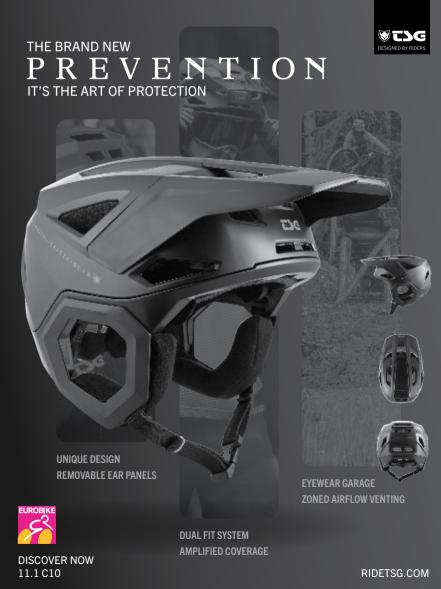
Construction of the new headquarters of Unibike was finished in the spring of 2021.

Mosca explains. "To cope with the high demand, we are planning to install an additional assembly line and a third wheel-building line this year."

The standout department of Unibike without a doubt is its state-of-the-art paint shop that features separate lines for water-based wet painting and powder coating. Here robots and human beings share the work load. One specialty of the company is painting carbon frames and parts, with some well-known brands relying on the expertise of the Portuguese company. Operating without solvents and relying

on water-based wet paint is part of the effort to reduce the carbon footprint of Unibike's activity. Another aspect of this effort are the solar panels on the roof that produce 48 percent of the electricity consumed by its operations. With additional panels to be placed atop the expanded headquarters, solar power is set to provide up to 70 percent of the firm's electricity needs. This push for sustainability combined with the proximity and quality of its production and the flexibility it offers are the main assets of Unibike and key to its ongoing success story.





### IN CYCLES, PORTUGAL

## **GROWING WITH INNOVATIVE CUSTOMERS**

As an assembly service provider, In Cycles has seen dynamic growth in turnover over the past few years. The company is a fitting example of Portugal's rise to become a key supplier of e-bikes within Europe and the factors behind this development.



In Cycles's export sales manager Filipe Mota with an 'Eleven' brand e-utility model.

The origins of the In Cycles Bike Group **[Hall 9.2 / B26]** may go back as far as 2009, and its own brand Eleven Bikes was launched in 2011. But the first ten years were rather quiet and by 2019 the staff only amounted to 40 people, with the annual turnover amounting to 5 million euro. However, things began to change in the spring of 2020, when the company moved into a 40-year old motorcycle factory with a floor space of 20,000 m2 on the outskirts of Barrô, a small town south of Agueda. "We basically ripped all the existing machinery out, repainted the place and mounted four bicycle assembly

lines and a paint shop that can do both powder and wet painting", explains export manager Filipe Mota. The investment proved well-timed as demand for e-bikes in Europe skyrocketed during the Covid pandemic.

At its new facility, In Cycles has a capacity to assemble up to 1300 bicycles a day – one e-bike every 300 seconds and one conventional bicycle every 140 seconds. Of its staff of 280 people, 40 are assigned to the quality control team, wearing light grey vests within the factory. "We are particularly proud of our efforts in terms of production preparation and properly documenting the standard operation procedures for every step of the assembly, which is done by another 6 employees", as Mota explains. The turnover of the company saw an even stronger growth than its staff numbers, reaching 65 million Euro in 2022. But that's not the end of the firm's expansion: In Cycles is about to add another 10,000 m2 to its headquarters, mainly for painting operations.

At the time of Show Daily's visit, the factory was running at 80 percent of its capacity due to the ongoing slump in demand, and the warehouse was well-filled with finished and packed bikes for brands from various countries.



Formerly a factory for motorbikes, the headquarters of In Cycles have been purposed for the assembly of e-bikes

Most of those bikes were e-bikes with motors mostly sourced in Far East, with some kids bikes and BMX bikes thrown into the mix. "About 25 percent of our business is for brands who follow a D2C business model and thus have higher demands regarding the quality and consistency of assembly", according to Filipe Mota. "In general we are looking to have a lot of customers from different countries and to serve different markets, so there is no cluster risk. And if we consider a concept or product to be promising, we are ready to start at low MRQs. This has worked well for us in the past." And it is very likely to continue to do so. **LVR** 



A look at the assembly line of In Cycles with a QC officer on standby.







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#### **EXHIBITOR PROFILE: SRAM PORTUGAL**

## A MARATHON A DAY - IN CHAINS

For leading component manufacturer SRAM, Portugal is a crucial link in the supply chain. The reason for this is that all SRAM chains are produced in Portugal – at a factory that has a history dating as far back as 1968.



Of its global staff of more than 5000, two thirds of its employees are based in Taiwan. But **SRAM [Hall 12.0 / A18]** also runs a factory in the outskirts of Coimbra in Portugal. This factory originally produced chains for the automotive industry - first Peugeot and then Renault - under the Transmeca name and then became part of Fichtel Sachs which in turn got acquired by SRAM in 1997. Due to the vast experience in terms of producing chains, the proximity of Porto's harbor and steel

producers in Germany and Spain, SRAM decided to fully dedicate the operations of this factory to making bicycle chains for all of its markets.

Over the years, more and more production steps have been brought in-house to streamline operations and to ensure consistent quality. "Production volume grew to 9.97 million meters of chain in 2022. That's equivalent to 42 kilometers of chain produced every working day, and lately almost 50 percent of this output has been the high-end

12-speed variety—a share that has seen a significant rise compared to 2019," says SRAM Portugal's general manager Isabel Gomes. "75 percent of the revenue of this location remains in Europe, while 23 percent is shipped to the Americas and only 2 percent goes to Asia."

To cope with increasing demand SRAM is planning to produce some chains in Taiwan in the future, but Coimbra will remain the heart of the company's global chain production. Apart from special surface treatments needed for the black, gold and rainbow finishes, the Coimbra factory performs all steps of the production in-house, relying on state-of-the-art machinery. While the assembly of pins, rollers and links has been largely automated, other production steps are still done manually. This particularly is true for the assembly of Zipp wheels and Time pedals that is happening 300 meters further down the road at a rented facility.

Like most companies, SRAM
Portugal is anxious to minimize its
eco footprint. Gomes says measures
include "treating wastewater to reuse
it in production, using plant-based
grease, finding a use for the excess
heat that the heat treatment furnaces
create and reducing the use of plastics



SRAM Portugal's general manager Isabel Gomes shows some of the chains produced at the plant.

by increasing the percentage of recycled materials for aftermarket packaging." And since SRAM owns an additional plot of land measuring 19,000 m2 on the other side of the road, it still has room to grow with the market.

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# OUTFOXING CHALLENGES BIG AND SMALL

Some of the most intriguing stories hide behind unassuming facades. As with Sangal, a Portuguese assembly plant run by a Dutch manager who was looking for an alternative to producing in China – and who's launching another offering at this year's Eurobike show.



For a long time Antonius Goossen had his Trenergy e-bikes produced in China, mostly for the Dutch market. But when the EU commission decided to impose heavy anti-dumping duties on madein-China e-bikes in the summer of 2018, this business model became unprofitable. So Goossen had to find a new place to get his e-bikes assembled, putting a clear priority on Europe. Goossen acted quickly, acquiring the brand of Sangal [hall 9.2 / B28], a Portuguese bike maker that had hit hard times in the 1980s. He then acquired and adapted a factory to the assembly of e-bikes and hired back 15 experienced workers to begin production.

The biggest investments went into the wheel-assembly lines, while the existing assembly lines were kept in place. At the time of the Show Daily's visit in May 2023, only one of the two lines was operating due to lower demand. Due to this lower demand and better availability of parts, Sangal will also start building conventional bikes by Q4 2023. According to Antonius Goossen, Sangal is ready to increase its production: "A third assembly line will be installed in June, and that will be a hanging line better suited to assembling e-bikes with mid-motors. In 2024 we plan to install one more hanging line."

As soon as demand returns to higher levels, Goossen is considering renting a neighboring factory building. As a specialist for Dutch-style e-utility bikes, Sangal is focusing on OE production for customers in the Netherlands, Germany and Scandinavia. And while Goossen puts Sangal's MRQ at one truck load of standard bicycles or roughly 170 units, the sweet spot of



in the assembly of urban e-bikes with full fenders and chain and skirt guards.



Parts and components for the assembly of bicycles in the warehouse of Sangal.

the company is at 5000 to 8000 bikes a year per customer. At this year's Eurobike show, Sangal is launching its own Sphere e-bike brand. These bikes are low on labels and branding and can be customized for existing or new brands looking for "off the shelf" e-bikes to rapidly enter the market without the need for lengthy development. Originally this launch had been planned for 2022, but the night before the show started all the bicycles, except one, were stolen. ■ LVR



## **ASTRO TECH'S SMART E-BIKE & THERMOPLASTIC FRAMES** PRESSING AHEAD WITH **CONNECTIVITY AND INTEGRATION**

Back in February 2021, Astro Tech and Darfon Electronics announced a joint venture. The goal was to speed up the development of next-level e-bikes with advanced connectivity and integration. At this year's Eurobike show, this cooperation is bearing fruit, and Astro Tech has some more tricks up its sleeve.

Within a dozen years, e-bikes have morphed from looking like slightly makeshift to constructions that feature clean looks and appealing designs thanks to advanced integration. Another strong trend is the connectivity of ebikes - to consumers through apps, but also to bicycle dealers, manufacturers

8.0 / I10]. By using thermoplastic rather than Early prototypes of a smart e-bike thermoset composites, Astro Tech greatly with advanced integration were enhances the already on display at last year's recyclability of carbon frames. Eurobike. This year these prototypes have evolved into sleek deep-instep frames made of aluminum, with a battery. advanced sensors to detect crashes and theft attempts, a GPS tracker and

and fleet operators through cloud-based servers. From over-the-air updates to the early detection of possible issues and personalized communication with existing customers, this IoT connectivity opens up a lot of possibilities. This was one of the main reasons for Astro Tech [Hall 9.1 / C26] to enter a joint venture with Darfon Electronics [Hall

shock absorber integrated into the seat tube, an in-tube

> the necessary IoT components to send the data collected to

the manufacturer's server through the cloud. The rear carrier, lights and fenders have also been designed to offer seamless integration, and for added luggage hauling capacity a front carrier can be mounted to the suspension fork up front.

All relevant electronics are packed into a compact smart module with a 3-in-1 antenna. While the Bluetooth protocol is being used to connect the smart e-bike to a smart phone, tracking relies on a built-in GPS/GNSS antenna and the communication with the cloud and the servers of manufacturers on the LTE protocol. As for the in-tube battery, the default version has a capacity of 540 Wh with an optional 626 Wh battery being offered as well. Astro Tech has kept an eye on structural integrity of the deep-instep construction and taken care that the entire frame can be built and assembled efficiently on an industrial scale

To lower the carbon footprint and further increase the automation of its frame-building operations, Astro Tech is betting on thermoplastic carbon and a production process that has been used to build aeroplanes for quite a while. Thermoplastic sheets reinforced with continuous carbon fibre strands are formed by compression moulding. After all excess material has been cut off, the two halves of the frame are joined to form a structurally sound unit. Apart from the high degree of automation, this process also makes recycling scrapped frames or excess material a whole lot easier than with thermoset carbon fibre constructions. LvR



The clean lines of Astro's smart integrated e-bike hide a whole lot of technology.

## SEARCH ENGINE SIMPLIFIES COMPONENT SOURCING FROM TAIWAN FIND TAIWAN COMPONENTS AND SUPPLIERS **QUICKLY WITH BICYCLE CLUSTER**

The Bicycle Cluster search engine is the brainchild of Alfred Tsai, who set up his company, Critical Cluster, in 2020. The initial idea for the project was sparked by the frustration he encountered working as a journalist for cycling publications.



Alfred Tsai at home base in Taichung

Before setting up the search engine, Alfred worked in the media industry for 10 years and as a journalist and photographer in the bicycle field, he frequently attended trade shows to get the latest news. He was frustrated by the difficulty of finding precisely the products he wished to report on. "Unless you know which companies

manufacture the product you're after, it's a matter of going from booth to booth and asking around," he said. The inherent inefficiency of that process was the catalyst for the creation of Bicycle Cluster.

Critical Cluster is based in a downtown Taichung office. The startup received a boost from the Microsoft for Startup Founders Hub assistance program in 2023. Alfred and a sales representative work out of the Taichung office, while a Taipei-based software engineer handles the development of the two search engine projects currently being developed, www.bicyclecluster. com and www.tbw.com.tw.

The Bicycle Cluster website is a dedicated web-based search engine which enables very fine tuned search of the several hundred Taiwan manufacturers and brands who have so far signed up on the platform. Searching for a product along with one or more specifications returns a results page with the product and brand. There is even an option to compare two or three products side

by side. Select your products on the search results page, click the button and the brand, model name and other key specifications appear in a popup window. You can also set up a meeting without leaving the platform.

The project has been largely focused on making the trade show experience easier. Thus the booth number of a company participating in a trade show is also displayed on a product entry where a brand is indeed participating. An initial focus on Taipei Cycle has expanded into a vision for revolutionising the more low key Taichung Bike Week.

Alfred's first foray into Taichung Bike Week was in the event's 2022 return from its pandemic hiatus of two years. It was a small scale event and lacked even a show guide. Bicycle Cluster arranged a prominent display at the entrance to each venue. Visitors could immediately access the the website, search for their products as well as discover which hotel the brand had either its room or booth.

Alfred generally sees his mission



Different branded products can be compared side-by-side

as lending a helping hand to trade shows. "The Bicycle Cluster system is very useful for in-person exhibitions," he explains. "It helps them as well as helping us to modernise the industry through the digitisation of component search." ■ GR



#### THE JOY OF SHORT SUPPLY CHAINS

## "MADE IN GERMANY" REDISCOVERED

There's a lot of talk about the de-industrialisation of Europe. With the Covid-19 pandemic disrupting global supply chains, the wisdom of outsourcing all of the production has come into question. In response, many German companies have rediscovered the "Made in Germany" and the advantages of producing close to the markets - but also some challenges.



Daniel Bremicker, general manager mobile security at Abus

Starting in the 90s, many industrial manufacturers started to move their production from Europe to the Far East — mostly to China. This outsourcing yielded higher profits, filling the pockets of investors and shareholders. The bicycle industry followed in the steps of other sectors. Taiwan's bicycle industry invested heavily in additional production capacities in China as well, and for a while this looked like a win-win situation for everyone involved. Some German suppliers were part of this move: while Humpert [hall 12.1 / B23] had been producing up to 4.5 million handlebars per year at its German headquarters in its heyday, that number shrank to just half a million units as aluminum handlebars with a 31.8 mm clamping diameter became the norm and could not be produced profitably in Germany.

Other German suppliers decided to move part of their production to Asia to meet the increasing demand of assembly plants in Far East. One example of this is Abus [hall 12.1 / **A29]**: while the production of bicycle locks has been carried out in Germany since the foundation of the company in 1924, Abus is banking on producing close to markets with high demand. "More than 30 years ago we set up a subsidiary in Asia with its own management but close links to the parent company in terms of production and development. But over the last 20 years production in Germany has seen stronger growth," recalls Daniel Bremicker, general manager mobile security at Abus. Following the expansion of its factories in Rehe and Jahnsdorf, the frame locks of Abus can now be "Made in Germany" as well. At both sites, Abus has its own machine engineering and tooling departments and the company also educates and trains the next generation of experts.

Despite its strong industrial footprint in the Schwäbische Alb area next to its Bad Urach headquarters, Magura [hall 12.0 / B08] is a similar case, as CEO Michael Funk explains. "Short supply lines offer the same advantages, namely flexibility and fast deliveries, in Far East as they do in Europe. For this reason, Magura has



Chairman of the board and CEO at Gustav Magenwirth GmbH & Co. Michael Funk

set up production in Taiwan while still being one of the few companies in the bicycle industry to carry out mass production of key components in Germany." While the injection moulding department is highly automated and runs constantly in three shifts, the assembly of the various brake systems still relies on a lot of human labor that is all the harder to find as higher skilled workers are needed. This was one of the reasons many companies relocated their entire production to Asia, a move which backfired during the supply disruptions of the Covid-19 pandemic, provoking delayed deliveries and shortages in goods.

Long supply lines have other negative implications, as the recent past has shown. SKS Germany's [hall 12.1 / A26] distribution manager Marcel Spork explains that the company has stuck to domestic manufacturing because "keeping all the steps in-house, from concept to prototype and then production has huge advantages in terms of quality and the protection of intellectual property. For this reason SKS has been relied on producing in Germany since the company was founded in 1921." Long distances, different time zones and mentalities and language barriers can cause all kind of issues and misunderstandings as well. And while frequent intercontinental trips were seen as a minor hassle by most product managers before the pandemic, the travel restrictions imposed from 2020 to 2022 proved to be more problematic.

For Robert Heine, member of the board at Heine + Beisswenger Gruppe, parent company of internal transmission hub maker 3x3 [hall 8.0 / J20], physical presence simply cannot be substituted by virtual meetings. "Apart from advantages in terms of reliability and the actual ability to supply goods, close proximity is a big plus when keeping a close eye on quality control, manufacturing conditions and compliance with environmental guidelines – the latter being key aspects in terms of sustainability." Proximity to the markets not only makes for shorter delivery times but also helps to reduce the emissions associated with



Marcel Spork, distribution manager at SKS Germany



The founder and CEO of SQlab, Tobias Hild



Humpert is bringing alloy handlebar production back to Germany with the help of robots

An assembly line in the new factory of Ebike Advanced in Rieste

transporting goods around the globe - an important element in reducing the eco-footprint of the bicycle industry.

Another big issue with long supply lines is a lack of flexibility, linked to the question of how to get to a realistic forecast. Consumer sentiment has been extremely volatile over the last three years, from the first shock in the early days of the pandemic to skyrocketing demand in key markets such as Europe and Northern America that provoked a mad rush for goods, followed by a slump in demand caused by inflation and uncertainty after Russia's attack on



Abus has been producing most of its locks in Germany - and is further investing in this



# FRONT BRAKE, REAR BRAKE, BBAKE

YOU CAN NOW RELY
ON THE MAGURA CBS
FOR BRAKE BALANCE.

**HALL 12, BOOTH B08** 



The parts that are needed to assemble a hydraulic disc brake lever at Magura



Plenty of machines and not a whole lot of humans in Magura's injection molding factory

Ukraine. "With frames made in Asia, I get two large deliveries a year and can only adjust my order once per model year. It's a different story with our Advanced frames built by composite injection molding in Germany — I can order smaller batches of frames month by month, which is key to keeping up with quick changes in demand as we've experienced in the last three years," explains Helge von Fugler, CEO of

## Ebike Advanced Technology [hall 12.0 / A06].

While the reshoring movement was already gaining traction before the pandemic, due to the EU's anti-dumping duties against Chinese-made e-bikes, the many disruptions wrought by Covid-19 further accelerated the trend. Bicycle brands started to look for alternatives within Europe to source the frames, components and parts they needed - and to get their bikes assembled closer to their markets. And since Germany is the largest bicycle market in Europe, "Made in Germany" became a sought-after attribute. It has always been that way for gearbox specialist Pinion [hall 12.0 / B18], as Head of Marketing & Design Dirk Menze points out: "We chose the Stuttgart region in Southwestern Germany for our headquarters from the very start as this is the heart of Germany's automotive industry, and we are tapping into this world-leading know-how to keep innovating in our field of expertise."

The same goes for SKS Germany, where 90 percent of the turnover is produced at various sites in Germany. As Marcel Spork puts it: "During the pandemic, the advantages of producing close to the markets became very obvious. We were much more flexible and could react to changes in the market



Precision and consistency are key at the Heine + Beisswenger Gruppe

quickly. The big challenge for every industrial player looking to manufacture in Germany are the differences in average salaries, certainly when compared to the Far East. But some of the comparative disadvantage can be compensated with know-how, a strong brand and ongoing investments in terms of automation. At SKS, we just expanded our product portfolio into alloy carriers and invested in machinery to produce these. We have also invested to expand the production of composite fenders and next we plan to expand both the warehouse and the offices."

Humpert is looking to bring back the production of volume segments of its portfolio that were outsourced over a decade ago, according to marketing manager Katarina Humpert: "We are currently working on bringing the production of alloy handlebars back to Germany. For this, we have developed and installed two fully automated machines at our main facility in Wickede. Mass production of alloy handlebars with a clamping diameter of 31.8 mm is about to start." Ergotec's new Active Flex grips are also made in Germany, but by a production partner. Humpert is looking to set up a similar solution for the production of stems and seat posts as well, pointing to shortened delivery channels and reaction times, the reduced need to build up stocks in warehouses and the advantages in keeping control of the production and making it more sustainable as the main advantages of bringing production to Germany.

Things are a bit different with ergonomics specialist **SQlab [hall 11.1 / B24]**, as the company's founder Tobias Hild points out: "From the start we have relied heavily on



SKS: tooling is vital part of high-quality manufacturing



SQlab has started to have some of its top-end saddles produced at Oechsler



Technological leadership is built on constant R&D efforts, and Pinion is no exception in this

production in Taiwan, and we've always been happy with the quality, the cooperation and the pricing. But when we wanted to try new materials and production technologies, the long distances proved to be a problem. At the same time we linked up with a senior employee of BASF, and from there we got into contact with Oechsler as a potential production partner in Germany. One result of this cooperation that is also competitive in terms of pricing is the new 611 Infinergy Ergowave Active 2.1 saddle that will hit the market in Q3 of this year, and another result is our modular concept ClipON, a world's first." According to Hild, another advantage of producing in Germany is that calculating the carbon dioxide footprint of each product is much easier.

Ebike Advanced is a similar case as it was one of the development partners of V-Frames, a spin-off of

Saxonian injection molding specialist Isoco, in finding ways to build bicycle frames from thermoplastic composites. The solution Advanced and V-Frames came up with is highly automated and allows for the production of one e-bike frame every 90 seconds. At the end of its lifecycle or if a frame does not pass quality control, it can be shredded to a granulate and reused to build new frames. While this is a promising step towards a circular economy, the big challenge lies in the high tooling costs that need to be offset by sufficient volume.

Only a few of the companies that Show Daily reached out to produce large volumes in Germany. Since the "Made in Germany" label is supposed to signal quality and a certain exclusivity, this makes sense. And as a motor for ongoing innovation, Germany remains a driving force within the bicycle industry.

## **NEW!**





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- 2.5MM HARDENED STEEL BARS with tightened rivets
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- Includes easy to install TRANSPORT BRACKET
- •Only 5.75" when folded





KRYPTONITE Hall 12.1 Stand A17







#### **OVERVIEW: DRIVETRAINS**

# NEW DRIVETRAIN CONCEPTS PUSH MOBILITY FORWARD

Bicycle drivetrains are starting to look less and less like what we we're used to. The gears and chains that have propelled riders for generations are being challenged by cutting-edge technologies and design breakthroughs. From a total reimagining of the drivetrain concept to radically revised electronic shifting systems, bicycle drivetrains are rapidly evolving. It's all about smooth, intuitive shifting, little or no maintenance, and rider customization. Not everyone wants 21st century technology however — some riders just want reliable parts to keep them rolling toward the finish line or across town. Here at Eurobike you can find the latest developments in drivetrains, both tried-and-true and cutting-edge.



How do you get new users to embrace e-biking as a form of transportation? Call it "individual motorized transport" or an "active vehicle." Same goes for bicycle drive systems — call them "pedaling environments," of which there's currently only one. The CIXI [8.0 / E02] Pedalling Environment (CPE) refers to the entire system that propels an active vehicle, from user configuration to pedaling, shifting, navigating, and braking. Central to the CPE is the PERS (Pedaling Energy Recovery System) electronic crankset. Conceived as an OEM product for e-bike and active vehicle manufacturers, the PERS is a chainless, pinion-less, maintenance-free crankset engineered to adapt pedal resistance according to the rider's style and to optimize battery consumption through regenerative braking (which also reduces mechanical braking). The system is modular and works with rear hub motors, Tritek [8.0 / O21] batteries, and lights from Supernova [12.1 / B15] and Busch+Müller [12.1 / A30]. The CPE/

PERS concept is an effort to transform regular transport into active mobility in a highly accessible and adaptive way for both bike manufacturers and users. The resulting system is easier to assemble and integrate into frames than conventional transmission systems, is simple to use without manual gear shifting, and allows manufacturers to keep in touch with their customers through the companion Active Pilot app.

Swiss startup ratioX [F12.0 / **E14]**, is tackling the daily commute with its own fully stepless, automatic gear system for commuter e-bikes. The patented system uses a Continuously Variable Transmission (CVT) to allow for a constant pedal speed with smooth and continuous automatic shifting under load. The mechanism is fully enclosed to protect it from the elements and to eliminate the need for regular maintenance. Compared to existing transmissions with similar gear ranges, ratioX boasts the lightest enclosed bicycle gear system available - even encroaching upon the weight range

of exposed derailleur systems. ratioX has been designed to be integrated into the frame of hub motor e-bikes and works seamlessly with a belt, chain, or driveshaft. This gear system is ideally suited to speed pedelecs and cargo bikes. CIXI PERS (Pedaling Energy Recovery System)



Until now, an e-bike drive has consisted of two separate systems: a shifting system and a battery-powered motor, which are often made by different manufacturers. Despite these symbiotic partnerships, shifting performance, wear, and maintenance can become issues resulting from even the slightest bit of incompatibility between the two systems. Of course the solution is to bring the entire drive system under one roof to ensure flawless functioning, which is exactly what Pinion [12.0 / B18] has done. Pinion's Mission ON.E brings together its proven gearbox technology and a full-power electric motor in a complete, fully-integrated drive system that combines the shifting system and motor in a single unit. Central to the system is the Motor Gearbox Unit, which connects the motor, drivetrain, sensors, and control systems. Five years of dedicated research and development went into the MGU to devise a way for uniting a brushless full-power electric motor with Pinion's gearbox in a compact package on par with mid-drive motor e-bikes. To make it all work precisely and efficiently, Pinion has patented a whole host of internal sensors to continuously gauge input torque, motor speed, the position of the shifting shaft, and the rider's cadence and speed. This multi-sensor design has been engineered to detect and respond to the smallest inputs to achieve one of the system's chief goals: a natural riding sensation.

While Pinion has toiled tirelessly at perfecting the internals of its e-drive system, there's still the rider to consider and, to that end, Pinion has taken a modular

approach

to the system's design. Several distinct configurations and versions of the MGU are available, depending on individual preferences, and each version has either nine or 12 gears with a gear range of up to 600 percent. The system's software has been programmed to offer Comfort and Performance settings for efficient commuting, long-distance touring, or off-road riding. There's a dedicated version for speed pedelecs. Each version has a different motor and gearbox configuration that can be tuned to the rider with settings tailored to the intended use.

**3X3 [8.0 / J20]**, which made its world debut at Eurobike last year with its own 9-speed internal gear hub, called the Nine, has returned this year with two new shifting systems. The E9 is an electric 9-speed gear set that uses wireless communication and CAN bus to shift in response to rider input. A radio signal transmits the command to shift to the actuator, which sends the command to the motor so that shifting can happen. 3X3 claims that the shifting speed is comparable to that of SRAM's AXS system.

the shifting speed is comparable to that of SRAM's AXS system.

A nifty feature of the E9 is its automatic downshifting while standing, which

Pinion Mission ON.E drive system



#### **Brose Antriebssysteme auf der Eurobike:**

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Halle 8.0 Stand I08

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Miranda cranks made from recycled aluminum and 100% renewable energy

makes it easier to get rolling again without having to stomp on the pedals to start riding. The E9's low-fi kin is the R9, a rotating 9-speed gear set that shifts using two Bowden cables and a gear shifter. The R9 is a lowmaintenance solution "geared" toward conventional bikes but equally ideal for e-bikes. Both shifting systems are compatible with the Nine.

3X3 is a brand under the umbrella of the highly specialized manufacturing company, H+B Hightech, which focuses on future-proof engineering. Parts are manufactured and assembled in Adelmannsfelden, Germany, according to Industry 4.0 standards to ensure that excellent quality can be combined with high volume production. The



Rotor 2INpower SL power meter

company is committed to sustainable manufacturing and its European location shortens delivery routes to most of its customers.

One of the companies most committed to sustainability isn't some small startup that can nimbly pivot to sustainable practices, it's Europe's largest drivetrain parts manufacturer. Miranda Bike Parts [9.2 / C22] has literally forged (and machined) its reputation by producing aluminum cranks, chainrings, and chainguards at its massive facility in Águeda, Portugal. Starting in 2019, Miranda has upended its production processes and now manufactures cranks made from recycled aluminum with 100 percent renewable energy. If that wasn't enough, the company measured the CO2 emissions per crank and discovered that each crank uses 0.0016 kg of CO2 to produce. While others set trends in product design, Miranda has forged something greater that's worth copying again and again.

Power meters have become as much a part of the drivetrain as cranks, chainrings, bottom brackets, cassettes, and chains. Eight years

ago, Rotor Bike Components [11.1 / CO9] entered the category and has been working on optimizing technologies to improve performance, developing lighter and more compatible meters. Making its debut at Eurobike, the 2INpower SL is an extra-light version of its award-winning dual-sided power meter for road bikes. Regarded as the lightest dual power meter on the market, the new model tips the scales at 530 grams (with 170 mm cranks). Rotor has also reduced the weight of its Inspider power meter for mountain bikes by 32 percent compared to its previous version it now weighs just 105 grams. Both power meters support ANT+ and Bluetooth Smart connectivity.

Even if a traditional drivetrain is a mashup of components, it's nothing without all its parts. Rumba is **Thun's [12.1 / C29]** new bottom bracket with external bearings that can be paired with cranksets from several manufacturers. Designed and produced in Germany, the first version of the Rumba is available for cranksets with a spindle diameter of 24 mm and for 68 mm and 73 mm threaded (1.375 x 24 tpi) bb housings.

There are always going to be trendsetters in drivetrain development yet not everyone

Rumba bottom

prefer the reliability of proven parts, **S**-Ride Bicycle Components
[9.1 / D21] offers a range of drivetrain components that rival existing products at prices bracket from Thun

is an eager trend fol-

lower. For users who



The M500 series from S-Ride

well below expectations. New for Eurobike is the M500 1x10-speed series for downhill. The trigger shifter is compatible with a 11-28/30/32T cassette; the "zero delay" rear derailleur with trapezoidal design boasts smooth shifting and stronger chain stability.

Road and gravel components are equally as current with dual control levers, responsive derailleurs, and high strength alloy cassettes. The total price for the S-Ride M500 shifter and derailleur comes in at a lean 128€.

As the cogs of change keep on turning in drivetrain development, increasing mobility by bike is driving out old assumptions in favor of new concepts to get more people to ride. It's exciting to see new inventions ad-

dress the age-old problem

of human behavior. With ever more sustainability on the product front. resistance to "going by bike" is becoming more futile all the time. WB

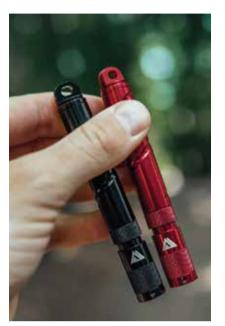


Dual Scale Gauge Floor Pumps Giyo Pumps

#### **OVERVIEW: TOOLS AND PUMPS**

## PRO TOOLS TO KEEP YOU ROLLING

It's always best to be ready for mechanical issues before they strike. Whether this means sticking to a maintenance routine to stave off breakdowns or ensuring you're equipped to deal with unexpected eventualities while out and about, we've rounded up the latest tools and pumps to keep you rolling. From workshop stands to automatic inflators, each is informed by the need to keep up with the latest standards and consumer trends.



KOM offers an all-in-one solution to fixing holes in vour tubeless tyres

KOM Cycling [9.1 / BO4] has a new trail and roadside tubeless tyre repair product. Its Tyre Repair Tool Pro promises to provide an all-in-one tubeless tyre repair solution that fits easily amongst your carry-along kit. Housed within a sleek aluminium carrying case are the tubeless repair essentials of a CO2 inflator, valve core remover, repair strip plugs, and a tyre insertion fork. Also unique in including an integrated inflator, it accommodates the necessary sealing strips, leaving you needing only to add a CO2 cartridge to get yourself rolling. The entire collection weighs just 30g, making it among the lightest kits available.

Daysaver's [8.0 / C11] Essential8 multi-tool is incredibly light and straightforward yet boasts excellent functionality and usability. Weighing just 33g, it takes the form of a classic Allen key. This familiar L-shape offers two different lengths, allowing you to apply the correct torque. What's less familiar is the interchangeable nested bits. With two located on each side of the tool, these common hex and torx fittings can be turned around and inserted into each other. The result is a tool offering eight functions while



Neat design allows the Daysaver to pack a punch despite its diminutive size

retaining workshop-style ergonomics. It sits at the heart of a range of products that includes an add-on tyre lever and chain tool upgrade and a slew of innovative carrying and storage options for on and off the bike.

The bright orange Rennkompressor from **SKS [12.1 / A26]** is known for its near indestructibility. A workshop staple for over 50 years, the latest Rennkompressor NXT upgrades the original's essential elements to meet the demands of the modern world. This new version ensures more volume with its taller steel body, while its die-cast aluminium base and non-slip rubber pad guarantee a secure grip. The folding, plastic-coated metal feet can be quickly snapped into place for transport, while its beech wood handle is constructed to sit comfortably in your hand. Infinitely rebuildable, it continues to be made in Germany.

Fumpa's [9.2 / G49] most instantly recognisable products are its rechargeable inflators. The nanoFumpa is the firm's newest unit. Like its sibling designs, you simply push the unit onto the valve, and it effortlessly inflates your tyres with a digital gauge to guide you. The nanoFumpa is the smallest unit Fumpa currently produces and weighs just 100g, making it ideal for weight-conscious road cyclists or mountain bikers. The device uses a brushless motor to pump a road tyre to 90psi in 100 seconds and has a maximum pressure of 110psi. You'll get one or two inflations per charge depending on the volume and psi required, with recharging taking around an hour. Sitting alongside its range of inflators, you'll now also find the Fumpa Gauge. This rechargeable digital pressure gauge weighs just 30

on your keyring. French brand Michelin [11.0 / A12] also thinks battery power might be the best solution for inflating your tyres. Its Battery Air pump could easily be mistaken for a conventional compact pump. At 25cm long and weighing 600g, it's relatively svelte. However, it includes a battery and motor that can pump a tyre up to 116 psi. There's even an inbuilt light to help you do so in the dark. Up to eight tyres can be inflated from a single charge. However, the pump can also function conventionally, with the user providing the pumping action if needed, so you'll never be caught out. Whichever mode you choose, you'll benefit from a multifunctional pump head that features a flexible hose and

g and is small enough to fit



Fumpa's miniature inflator is perfect for riders in a hurry

in-line gauge, plus attachments for Schrader and Presta valves.

**TopAction** [9.0 / B06] is another firm aiming to remove the arm ache from inflating your tyres. Its GA02 portable rechargeable pump is a compact and rugged unit that's small enough to carry in a jersey pocket. Its motor and rechargeable 2,000 mAH battery inflates your tyres to a preset pressure. Featuring a clear LCD digital screen displaying How many products

real-time pressure, it also includes

a torch to aid in working in low-light conditions. Capable of working on a range of vehicles and valve types, it's able to

TopAction offers a

to inflation tyres.

make a trend?

With four products in a row, you could be forgiven for thinking that pumping up your tyres using muscle alone is going out of fashion. Lynx's [9.2 / D14] battery-powered E-blow 2 bicycle pump makes inflating a bicycle tyre effort-free. It quickly inflates your tyre to the preset desired pressure with information displayed via a bright and clear digital display. Its medium size will fit into a pannier or backpack and ensures high pressures can be achieved repeatedly.

**Zefal [11.0 / B10]** has a slew of exciting products on show this year. These include the AFA 8 Plus. This compact eight-function multi-tool integrates neatly against your frame and is designed to keep the tools you need for minor field adjustments and repairs close at hand. Its holder has been specially developed to



Michelin's hybrid pump with battery-powered inflation offers the best of both styles

accommodate the matching multi-tool while fitting discreetly beneath vour water bottle cage. Inside the case, you'll find 2, 2.5, 3, 4, 5, and 6mm hex wrenches, a T25 Torx wrench, a flathead screwdriver, and an 8-12 speed compatible chain tool. Crucially, there's also a bottle opener for cracking into après ride refreshments. Elsewhere on Zefal's stand, you'll find its range of pumps. The most diminutive of these is the Road Micro. It's also capable of mounting neat-looking solution beside your bottle cage and weighs 95g despite a robust

> reversible head construction. Products made by Feedback Sports [11.0 / B03] are a familiar sight at elite races. So expect to see many examples of the firm's new Pro Mechanic bicycle repair stand in the pits at upcoming Grand Tours. An update of the firm's flagship repair stand,

all-aluminium construction and

this new version gains upgraded clamp jaws, clutch components, and mast hardware. It builds on the durability and ease of use the stand was already known for while making it even more straightforward to get bikes in and out. Alongside stands. Feedback Sports also makes various tools. The latest addition to these is due to be released at Eurobike. The newly redesigned Range Click Torque Wrench



Lynx hops aboard the auto-inflation bandwagon

An update of the classic SKS pump with features for the modern age reach a colossal 150 psi.

The Fumpa

Gauge

provides

accurate

pressure

readings

instantly



This stand from Feedback Sports is both portable and stable

#### Oxford's Covert tool hides within vour crank axle

matches a moderately compact size to workshop quality performance. It features a solid, tactile click-torque function, a wide measurement range, and user-friendly ergonomics. It arrives with 13 tool steel bits and comes packed in a protective and weather-resistant TPU foldup style case.

#### UK-based Oxford Products [9.2 / A23]

offers a vast range of items, including many different tools and pumps. Among these are two cool compact carry-along tools that caught our eye. The first is the Torque Covert 7 Crank Multi-Tool. This neat tool fits inside hollow cranks with a spindle greater than 21mm in diameter, including models

from Shimano and SRAM. It attaches via a neodymium magnet for secure retention and can be popped out when needed, allowing you to deploy one of six interchangeable bits or the integrated chain breaker. Similarly neat is the Oxford Tubeless Puncture Repair Kit. This little aluminium tube contains all you need to fix a tubeless puncture, including an in-built insertion tool plus 15 spare tyre plugs. Once your tyre is airtight again, you could do worse than employ the firm's latest Airtrack Pro 2.0 Track Pump to inflate it. This steel pump features a smart head compatible with Presta and Schrader valves plus a top-mounted gauge and can achieve up to 160psi.

Shimano-owned PRO [11.0 / B20] is well known for making various components and tools. These two strands are now neatly united in the Smart Bottle Cage. This adjustable drinks holster features mounting points for many of the firm's products, including mini tools, a mini

The capsule containing Oxford's

tubeless repair kit opens to reveal a built-in insertion tool







PRO's Smart Bottle Cage keeps tools and refreshments close to hand

pump or CO2 cartridges. In addition, two tyre levers can be placed alongside, while a clip-on storage bag can be attached underneath the holder to provide space for a spare tube and other small breakdown accessories. Meaning you'll be both well-hydrated and prepared. The entire assemblage will only add 80g to your bike.

Noted for its distinctive blue branding, Park Tool [11.1 / A27] has a new range of brushes to help you keep your bike in tip-top shape. The BCB-5 Professional Bike Cleaning Brush Set contains professional-grade cleaning tools for scrubbing dirt and grime. Included are a soaping brush for making an initial pass over the bike, a tapered bottle brush for working on big and small areas, a long-reach straight brush for nooks and crannies. a drivetrain brush, and a soaping sponge. All feature long ergonomic handles for leverage and comfort. The

soaping brush, bottle brush and straight brush feature bristles made from tampico, a natural fibre derived from the agave plant. Tampico is exceptionally durable, resists chemicals, and holds moisture well, so it's both environmentally friendly and an ideal material for cleaning brushes.

Birzman [11.1 / B30] has been busy refining existing

designs and creating a few new ones. Its

This tiny multi-tool from Zefal comes with a holster that fits below a standard bottle cage

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#### DG-BO SEATPOST TOOL

The DG-BO Seatpost Tool (DG - diameter yschulz. gauge, BO bottle opener) from by,schulz is a highquality, precisely implemented inner diameter gauge made of anodized aluminum for bikes. The easy-to-read scale is lasered into milled pockets of the large cylindrical steps and thus visible even after years of use of the

40.0

31.6

tool. The 13-step seatpost gauge is designed to determine the inner tube diameter for steel, titanium, carbon and aluminum frames. The hole in the head of the gauge allows handy placement on the tool wall. A stainless steel bottle opener for after-work beers is cleverly integrated, making this the perfect gift for bike freaks!





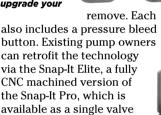
These new brushes from Park Tool go easy on your paintwork and soft on the environment

new Chain Keeper works like a dummy hub and is compatible with QR and 12mm thru-axle dropouts. It features a free-spinning pulley wheel, allowing the derailleur to shift even when the wheel is removed, making it ideal for cleaning and maintenance work. Its polymer spacer provides abrasion protection against dropout surfaces, while its CNC-machined aluminium and steel construction ensures this should be a long-lived workshop assistant. Elsewhere the firm has been updating its pumps, many of which now gain the Snap-It Pro head. This patented Presta-specific valve head offers quick and precise engagement that won't decouple under high pressure. Simply pull the collar up, place it onto a Presta valve, then push down and turn the collar to engage. After inflation, pull the collar up and the valve head away from the Presta valve to

Giyo's space-saving GF-55B floor pump can shrink by a quarter when not in use



head upgrade.



Finally, dedicated pump maker **Giyo** [9.1 / **B29**] has developed a solution for riders after a full-size track pump but with limited space in which to store it. Its GF-55B pump features an innovative rotating base that, when closed, sees the unit shrink by around 25%. Leaving you more space in your cupboard or in the boot of your car, it expands instantly to provide full-size inflation. It also means that shipping is more efficient and allows Giyo to reduce its overheads and provide

competitive pricing. It's not the brand's only clever solution to a common problem. Its GM-25D is an adaptable pump equipped with a new CNC screw-in twin-valve pump head. This pivoting design has been created specifically to solve the issue whereby unscrewing your pump can accidentally remove the core of Presta valves causing air to leak from the tyre. If you've had this happen to you while out riding, you'll know just how exciting a development this is. **JD** 

The GM-25D compact pump from Giyo should put an end to accidentally removed valve cores





#### **OVERVIEW: HELMETS AND ACCESSORIES**

## RIDER-TO-RIDER COMMUNICATION, S-PEDELEC CERTIFICATION GAIN **GROUND**

Rider-to-rider communication is an emerging theme in helmet technology and accessories at Eurobike. With the vast majority of riders carrying a smartphone, it's already easy to call a friend to find out where they are, but that means stopping and getting your phone out. And there's no quarantee they'll hear it ring!



The Punks audio system allows multiple riders to communicate over any distance

**Aleck [11.1/D30]** - the brand that recently acquired Tocsen crash sensors – will be presenting Punks at Eurobike, which it says is "the first true wireless, near-ear audio and communication system for cyclists."

The Punks unit attaches to a helmet strap and delivers crystal clear sound thanks to built-in near-ear drivers and a wind-blocking dual-microphone system. Punks uses Aleck's free app (available on iOS and Android) to deliver unlimited-range group communication; you can choose walkietalkie-style push-to-talk, or Party mode with unlimited participants. They're IP65 rated and lightweight at just 16g, and the slim profile means they don't interfere with vision on the bike. The app offers other functions beyond rider communication, such as a friend finder which allows you to easily locate a ride buddy if they've missed a turn on the route.

Tocsen [11.1/D30] continues to offer its crash sensor as a third-party solution to helmet manufacturers. The sensor can measure the speed and force of impact, and it can use your smartphone to automatically alert an emergency contact for extra peace of mind when riding.

Momes [11.1  $\check{\ }$  A21] is launching a completely new assistance system for the first time at the Eurobike. The Osynce Guard is the world's first helmet with an integrated head-up display (USEE HUDi) and tyre pressure display. The USEE head-up display presented by Momes a few years ago has been further developed and can now be coupled with the smart Schwalbe AirMax air pressure sensors. Also new is an interface to radar sensors from



The O-synce Guard can connect to the new Schwalbe AirMax tyre pressure sensors

Garmin and Bryton. The USEE head-up display shows data from connected ANT+ sensors, and connected to a smartphone USEE works as a second display and can show turn-by-turn navigation data from the Naviki1 app. USEE can also send ANT+ sensor data to your smartphone. The display is compatible with all electronic shifting systems, and can show the current gear and the battery status. Ambient light is used to make the LCD display visible in your field of view, and an LED array to keep your data visible after dark.

**Sena** [11.1/D31] is another company that's offering rider-to-rider communication, this time integrated into its own helmet. Sena's R2 EVO is a smart helmet for road cycling, featuring Sena's Mesh Intercom which allows riders to communicate handsfree within a half mile radius. The Mesh Intercom platform keeps riders in range connected even if one rider moves out of contact, and there are

nine channels available. Audio is delivered through integrated speakers located above the rider's ears; there are no earbuds block out traffic noise, keeping you more aware of what's going on around you. You can pair your phone to the helmet to build groups of friends to talk with, and the app can also control the in-built tail light. You can play music through the speakers from your phone, too. For off-road riders Sena offers the M1 Evo trail helmet that also incorporates the Mesh Intercom system.

Cosmo Connected [9.0/B11]

crash sensor offers its Ride smart light either as a standalone unit or as a package with its Fusion helmet. The light is magnetic and Cosmo Connected offers a base kit to fix it to a third-party helmet; it can also be fitted to a saddle. The light is bundled with a bar-mounted remote, which gives access to turn indicator functions via the LED array. The Ride light also contains a crash sensor, and pairs with Cosmo Connected's app, which gives you the option to nominate three "Guardian Angels". These contacts can receive real-time updates of your location, or receive an emergency message if the light detects you've been in a crash.

The Fusion helmet is an urban-style model with a full-width lifting visor. It's adjustable for head sizes from 55cm to 60cm, and features a removable and washable foam liner. There are strap and helmet reflectors for extra visibility, and it weighs in at 452g with the Ride light attached.

Fischer [9.0/C08] also offers a crash sensor, called FIND.U, which is says is "a smart and safe companion for bike tours and excursions on horseback, on skis or for other

2.5cm square and 20g it's an unobtrusive addition to any helmet, and easily fitted thanks to its 3M adhesive pad. Again, the FIND.U relies on a smartphone connection: if it detects a crash an alarm will sound on the phone, and if the user doesn't cancel it the app will send location data to a list of emergency contacts. It's a good match for many of Fischer's own helmets, for example the Urban Plus Brooklyn, which came incorporates a out as the best bicycle

helmet in terms of accident

protection in the Stiftung Warentest

light and reflective straps to ensure

(07/21). It features a large, bright rear

Cosmo's

Ride light

outdoor activities". At



Fischer's FIND.U sensor can be fitted to any helmet with an adhesive pad

good visibility at night.

The Evolo [Cycle Chris, 9.2/ D18] HM-EVZ999 Smart Bluetooth Helmet also features an integrated speaker system, which connects to your phone via Bluetooth. Evolo says







The HM-EVZ999 has integrated speakers with a 10-12hr runtime



speakers will run for 10-12 hours on a single charge. As well as the speakers, the HM-EVZ999 has turn signal LEDs that are controllable from a barmounted remote, and accelerometer-controlled braking lights.

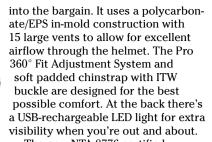
The Lynx Visor Pro from **Falko [9.2/D14]** is another helmet that features a full visor. In fact you get two – a clear one and a smoked one – with a tool included to easily swap between the two. The Lynx Visor Pro is NTA 8776 approved, which means that it's legal for moped and speed pedelec use. There are 10 vents to keep you comfortable when riding, and the LynxVisor Pro is available in two sizes to fit head sizes from 55cm to 61cm.

Another helmet that's certified for e-bikes is the **Safety Labs [12.1/A07a]** E-Bahn 2.0 MIPS, which also features MIPS protection and lighting



The E-Bahn 2.0 MIPS has 15 large vents for excellent airflow

Beon's Ebike-Reverse can be used as an open or full-face helmet



The new NTA 8776-certified Ebike-Reverse helmet from **Beon [9.2/E22a]** can be used either as an open-face helmet or as a full face, with the chinguard folding behind the helmet. There's a full visor, and both the helmet shell and the chin guard are constructed from carbon fibre for the lightest possible weight. Beon has been making motorcycle helmets in Meizhou, China, since 2004, branching out into e-bike helmets in 2019.



The Wingback is a new entry level lid in the Italian-made Abus road range

**Abus [12.1/A29]** is also in the speed-pedelec market with is new NTA 8776-certified helmet, the Purl-Y. Available in three sizes, the helmet has integrated ventilation channels for balanced climate control and ventilation. There's insect netting in the ventilation openings which prevents insects from entering the helmet. The Purl-Y also features a finely adjustable retention system and the new Flap Divider, an innovative strap distributor, to guarantee an excellent fit. Long hair or a plait can be threaded to the back of the helmet through the ponytail outlet so that it doesn't block the rider's field of view. The Purl-Y is available with a magnetic rear light with four brightness levels. It can be recharged via the integrated Micro-USB socket.

Abus already has a four-helmet road range that's made in its own Italian production facility. The Wingback is a new entry-level model in that range, which Abus says "combines the fit and innovations of its established sister models with a timeless

and sportive urban
performance design".
The Wingback features
deep air channels for
effective ventilation, and
sewn strap junctions
that don't need to be
adjusted. The Wingback
is compatible with the Abus
OUIN crash detection system.

The **TSG [11.1/C10]** Geo is certainly something different, and TSG describes it as "a revolutionary new look in urban bike helmets". Created in collabora-



Agu's Transonic and Subsonic helmets are wind tunnel tested

tion with the founder of Papertrophy, the helmet's shell incorporates the unique angular design mimicking the award-winning company's paper creations. "I had the idea of an angular helmet design in my head for a while," says TSG Managing Director Ruedi Herger, while explaining how the collaboration came about. "I couldn't bring it to life on my own, and when I discovered Papertrophy's creations, I immediately got in touch with Holger to collaborate in the creation of this unique-looking helmet. In my opinion, the result is amazing!" The Geo features a 10 vent cooling system and an easy to adjust Dial Fit System with two sizes of fine-tuning pads for a perfect fit. You also get a removable LED rear light and reflective straps and print, which combine to add to the helmets safety credentials and visibility on the street.

TSG will also be showing its Prevention helmet, which is a customisable multi-purpose open-face enduro



The TSG Prevention features tool-free removable ear panels

helmet. The Prevention features tool-free removable low-profile ear panels that allow you to customise your protection on the trail. The helmet also features a robust in-mold construction, with an impact-absorbent dual-density EPS liner. TSG says that it is also "supremely lightweight for unimpeded shreddability", and it features TSG's Dual Fit Systems for maximum comfort. A unique zonal venting and airflow system keeps your head cool even when the trails heat up.

**Cratoni [11.1/C03]** is a company that has you covered whatever type of riding you like to do. For road riders

there's the C-Airlite helmet, and the main talking point is the weight: at 180g, this is one of the lightest helmets currently on the market. You get 32 vents for maximum ventilation and a 270° retention system. It's available in five different colours. The Gravoq is a new gravel helmet that's available in a range of suitably-muted colours. It's a 17-vent design with a full 360° retention system and the option to add a C-Safe crash sensor. Enduro riders will be most interested in the Madflex MIPS Recco helmet, which offers increased head coverage and a breakaway visor, as well as 17 hyper vents for big airflow. You can choose to augment the passive Recco sensor with a C-Safe one, and the Madflex has been designed to work in tandem with Cratoni's C-Revel Pro goggles.

**Agu [11.1/D33]** is showing two helmets that have been developed and tested in the wind tunnel in cooperation with the Technical University of Eindhoven. The Transonic made

its debut at the Tokyo Olympics in 2021, and both it and its sister helmet, the Subsonic, have been developed from

the ground up to be as fast as possible without compromising on safety. "We've not only looked at wind resistance at the front of the helmet but also how the air flows through the helmet and especially how it exits the helmet. You are looking for a way to minimise the low pressure behind the helmet, which would cause drag." the company says. Both the more open Transonic and more minimally-vented Subsonic include MIPS technology to protect against rotational injuries.



#### **OVERVIEW: EXOTIC DRIVES**

## **ASSISTANCE OFF THE BEATEN PATH**

As the e-bike market matures, alternative concepts are emerging that take into account the special needs of electric assistance – and its effects on other components. From mid-motors with integrated gear boxes to serial hybrid systems, some interesting products are being displayed at this year's Eurobike.





With Brose, an established supplier of mid-motors presents the Concept Drive as a mid-motor with an integrated gearbox.

As appealing as state-of the-art mid-motors may be in terms of weight distribution, support and aesthetics, they come with some drawbacks. The additional stress put onto drivetrain components shortens the lifespan of narrow chains and 12-speed cassettes, resulting in quickly rising operating costs. Of course, you can resort to an internal transmission hub instead of a derailleur-based drivetrain. While this solution works well for utility bikes. it does not cut it on full-suspension mountain bikes as it shifts the center of gravity too far backwards and increases the unsuspended mass. The challenge to

Reacting to feedback, Okawa has decided to rework its AT60 motor and gearbox unit.



eliminate fast-wearing drivetrain parts without changing the weight distribution and handling of an e-bike has kept the R&D departments of many suppliers and bike brands busy.

Probably one of the most interesting new products at this year's Eurobike is the MGU from **Pinion [hall 12.0 / B18]**. Following its acquisition by Bombardier Recreational Products, this specialist in high-quality gearboxes



The large-diameter hub motor of Pendix's eDrive IN serial hybrid system cranks out up to 70 Nm of torque - per wheel!

has decided to step up its game. Since its gearboxes are competing for the same space on e-bikes as mid-motors, i.e. the bottom bracket area, they were not an option for a large part of the e-bike market. With the MGU, short for Motor Gearbox Unit, Pinion wants to change this, broaden its way

into the OE market for
e-bikes and simplify
things for everyone by
combining the motor
and the gearbox. This
allows for the use of
either a belt drive
or single-speed
chain and solves the
issue of fast-wearing



drivetrain components. A look at the technical data of the MGU reveals a very promising product indeed.

To save weight, Pinion puts the entire unit into a compact magnesium die-cast housing. As for the gearbox, you get to choose from a 9-speed version with a range of 568 percent or a 12-speed version with a range of 600 percent, and gear changes are lightning fast as the system works electronically. The motor comes with comfort and performance settings and four modes of support. Since the gears are part of the motor, the maximum torque it offers depends on the selected gear, peaking at 160 Nm in the smallest gears and averaging at 85 Nm. With weights between 4 kg for the 9-speed MGU and 4.1 kg for the 12-speed version, the weight penalty is not that bad - all the more so as the weight is in the right place, up to 600 grams can be saved with obsolete drivetrain components and the resulting system needs much less maintenance.

Another well-known supplier to work on the combination of mid-motor and gearbox and rolling out a matching product at Eurobike is Brose [hall **8.0 / 108]**. Its Concept Drive unit goes one step further though as it offers automatic intelligent transmission courtesy of a continuously variable gearbox with no torque interruption whatsoever. Thanks to this innovative technology you get the right gear ratio for every situation, and at the same time there are no exposed drivetrain components such as a rear derailleur that could get damaged or bent. Designed for upscale city and trekking e-bikes, the Concept Drive  $48\,\mathrm{V}$  mid-motor is expected to be ready for the 2025 model year.

French company

Valeo [hall 9.2 /

C30] has been an early mover in this regard. Coming from an automotive background, it decided to branch out into the bicycle business in 2017.

Its first products aiming at the cargo bike market were shown to the public in 2020. Since then a lot of details have been improved and the design has been refined. For fast charging Valeo's Cyclee system runs on a voltage of 48 V and can crank out a continuous power of 750 Watt – for the EU market, this is being throttled to the legal 250 Watt. At 130 Nm the torque is where the Cyclee system really shines – and the fact that this mid motor also houses a 7-speed transmission with 450 percent range that Valeo has licensed from their French compatriots Effigear [hall 9.2 / B01].

At last year's Eurobike, newcomer Okawa Motor Technology [hall 8.0 / H20] premiered a large mid-motor unit called the AT60. The original plan was for a four-speed gearbox with a range of 250 percent to be part of the motor. But based on feedback at the show and after, Okawa went back to the drawing board to reconfigure this motor to include an 8-speed gearbox with a wider 450 percent range. This is needed to get fully loaded, large cargo bikes moving while still having the necessary bigger gear at hand to keep going at 25 kph.

The concept of combining a mid-motor and gearbox in one unit has been picked up by **Pendix [hall 8.0** / **E24]** as well: having been acquired by the Johnson Electric Group, this German supplier will be presenting its first mid-motor with integrated gearbox for the OE market at Eurobike. While no technical data were available before the show, Pendix claims

that the modular construction of its gDrive mid-motor builds on proven components of its parent

of its parent company and promises

Pinion's engineering staff has solid experience in the automotive world - and has packed this knowledge into the MGU unit.



Despite its compact size, Pinion's MGU unit houses a mid-motor and an electronic gearbox with up to 12 gears.

real-life advantages not only in terms of industrial production, but also of sustainability and repairability.

While the combination of midmotor and gearbox aims to eliminate issues with bad chainlines and fast wearing drivetrain components, the serial hybrid concept goes a radical step further. Officially recognized as a solution compliant with existing regulations for e-bikes by the EU com-

mission, the serial hybrid concept entirely eliminates any form of transmission of torque – usually a chain or a beltdrive connecting the cranks to the rear axle.

Instead, the cranks are only linked to a compact unit that generates electricity. From there, the electricity is sent to a hub motor – or two in case of a trike. This concept is particularly interesting for any constructions rolling on more than two wheels, as it eliminates the challenge to get the drivetrain forces distributed to more than one wheel.

The pioneer for this technology hails from South Korea: while the Footloose (a compact folding urban e-bike with no chain or beltdrive) may not have been a big commercial success, **HL Mando Corporation**[open air ground F10 / D19] has been improving its SPM Pedalrite serial hybrid system for the use in various heavy-duty applications, varying



from pedal-driven microcars such as the Hopper to large cargo trikes for commercial use. The system's main components are an alternator with a bottom bracket spindle, one or more electric hub motors and a battery to store excess electricity and support the human effort. Naturally these components can be customized to meet the need of customers.

As a well-reputed supplier in the automotive industry, **Schaeffler Automotive [hall 8.0 / G24]**teamed up with hub motor specialist **Heinzmann** to develop the Free
Drive system. Whether in 2-, 3-, or
4-wheel applications, the absence of a mechanical connection between the generator and motor means that Free
Drive allows for maximum flexibility in the bicycle architecture and a freely

configurable pedaling sensation tailored to the requirements of the bicycle and the needs of the rider, while ensuring minimal wear. Consisting of a pedal generator, drive motor, battery powerpack and a human-machine-interface (HMI) and generating a continuous output of 250 Watt, the entire Free Drive system is sold by Heinzmann.

With Pendix [hall

With the Free Drive system, electricity is being generated when pedaling.

8.0 / E24], a third supplier has a serial hybrid system in its portfolio with the eDrive IN. Based on its experience with crank and bottom bracket-based retrofit assistance drive systems, Pendix has created a low-maintenance solution that does not skimp in terms of support. The large hub motor dishes out up to 70 Nm of torque, and its internals can also be combined with wheels that do not work with conventional spokes and rims - think of automotive-style cast or forged rims. Pendix claims its direct drive system to be gearless and silent and emphasizes its low need for maintenance. LVR



The Cyclee unit is the latest evolution of Valeo's combined mid-motor and gearbox.





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#### **OVERVIEW: EYEWEAR**

# SUNGLASS MAKERS DELIVER LENS TECHNOLOGY... AND SWAGGER

The growing trend toward wider sunglasses on barely-there frames is changing the appearance of the pack, while lenses targeting cyclists are getting supercharged with technology. Here's are some of the innovations in the segment you can try out here at Eurobike.



Among the smartest technologies in cycling eyewear is **React [Optrel** Sports: Hall 11.1 / D27], a Swiss brand that hit the market just a few months ago. "It adapts to the light conditions so fast and seamlessly that you won't even notice," said Patrick McDermott, React's chief executive. He explains that the technology works with liquid crystals integrated into the inner layer of the eyewear. The liquid crystals in the lens lighten and darken in response to changing light conditions in just a tenth of a second. The glasses do not require any batteries or charging device, as the liquid crystals are powered by integrated solar cells.

Another strong point is that although the glasses are polarized, digital displays can still be viewed comfortably. They also have integrated protection to make them resistant to water and scratches. "It's so different from anything in the market that we position React as a different category," said McDermott.

The ShadeTronic technology used by React belongs to a leading supplier of welding helmets. It's particularly relevant in this industry, where workers are intermittently exposed to the brightness of fire. But the owner decided the broaden the technology's scope by targeting the consumer market with technical protection eyewear. "Cycling was an obvious

Looking sharp with the Loam from TSG

choice, because riders are exposed to fast-changing lighting conditions," said McDermott.

It took more than eight years to transfer the technology from its industrial application to the consumer market. React then built a team to market the handmade glasses in the cycling market and it teamed up with Stefan Küng, the Swiss cyclist. Full-scale marketing and sales in the Germanspeaking markets began this year, and North America will follow in September.

TSG International [Hall 11.1 / C10]

is moving into the market for sports sunglasses this year with the Loam. These performance wraparounds were created with mountain bikers in mind, but they could be used by many other athletes who don't mind a bit of swagger.

"We got off to a great start with our ski, snowboard and bike goggles," says Nadja Herger-Bondarenko, head of marketing at TSG International. "This paved the way for our first sports performance sunglasses, the Loam."

S-Phyre

evewear from

Shimano with Ridescape

The Loam is equipped with interchangeable, impact resistant polycarbonate lenses, with UV and AV

protection. To ensure long-lasting clear vision and durability, they have scratch resistant, antifog and hydrophobic coatings. The lens is fitted securely to the rider's face with a lightweight and flexible frame, with an adjustable ultra-grip rubber nose pad and arm



tips for added comfort.

"We designed the Loam for our team riders and their sports," said TSG. "But their secure fit, durability, uber-cool styling, and all-round protection give them universal appeal."

Julbo [Hall 11.1 / D08] is making a statement at this year's Eurobike with its sunglasses and helmets for cyclists. Already recognized as a leading supplier in the market for sports eyewear, Julbo developed the range of cycling products with input from Groupama-FDJ team riders.

The French company said that its cycling eyewear stands out for the technical quality of its lenses and its streamlined design. Julbo's three highlighted sunglasses for cycling are all lightweight and stacked with technical features, from the Density to the Edge and the Frequency. They use vented photochromic lenses as well as oil-repellent coating to prevent marking, and anti-fog coating on the inner surface.

#### **Shimano [Hall 11.0 / A16]** is

building on its Ridescape lens technology with its latest S-Phyre eyewear. It includes a magnetic system to rapidly swap the lens, as well as an entirely updated design without lower rims.

"It's aligned with the trend, a wide lens that is a little more square and quite protective," said Perrine Devin, Shimano Europe product

planner for eyewear and footwear.
Ridescape lenses emphasize colors, and they highlight objects and surfaces unique to each riding environment.
Environments that would normally be washed out,

dull or flat become more clearly defined, vibrant and vivid, Shimano says. The group has distinct options for road, offroad and gravel, and varying weather conditions.

Targeting performance riders, the Torica sunglasses from **Scott Sports [Hall 12.0 / A22]** provide a wide field of vision. They offer an outstanding peripheral view due to the toric lens, a technology that works to neutralize the effect of the lens' curvature. The Torica features straight, rubber temples to more easily and comfortably integrate into the helmet.

Alpina Sports [Hall 12.1 / B36] is spotlighting the Sonic, which has

several features for extra stability in the saddle. The bridge is adjustable, and there's rubber on the arm tips to make the eyewear comfortable.

The lens is relatively wide, to prevent air and debris from getting into the rider's eye. The Sonic is available with four lens technologies.

Load Modular is **Briko's [Hall 11.1**/ **B06]** offer-



Alpina's Sonic

ing for the mountain biking market. The Italian group explains that it has a modular construction, meaning that it offers protection from light and debris, but it can easily be transformed into lighter eyewear. This model has an optical adapter, to offer the same protection for riders with prescription lenses.

Briko's sunglasses with modular construction





React Optray



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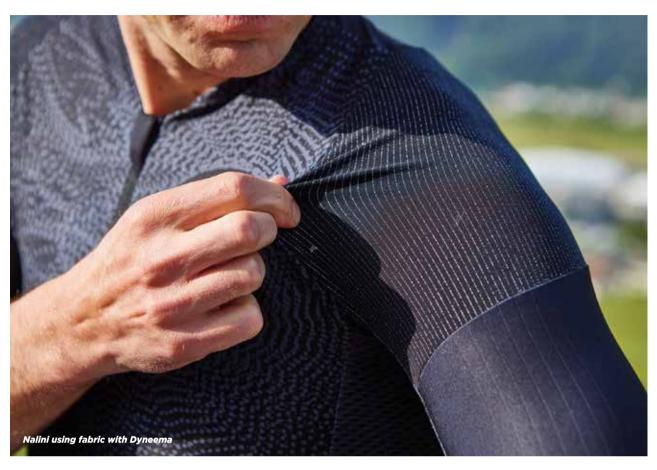




#### **OVERVIEW: PROTECTION GEAR**

#### **TECHNOLOGY FLEXES PROTECTIVE GEAR**

With smart material mixes and foam technology, protective gear makers are targeting just the right combination between light weight and protection.



**Evoc [Hall 11.1/C08]** has spent many months working on its Liteshield Flex technology, launching this year. The brand is already established as a leading player in the market for mountain hills and winter exerts.

bike and winter sports protector backpacks. After long research on material mixes and geometries, it hit upon a structure that provides the optimal mix of flexibility and protection.

Evoc said that Liteshield Flex absorbs up to 95% of impact force and that its special TPE blend and geometry provide "superior ergo-dynamic flex." Both the flexibility and the impact protection are consistent across different temperatures

Liteshield Flex has led Evoc to revise its entire range of protection wear, which includes protector vests,

crash pants, enduro shirts and more. A distinctive lattice structure ensures abundant airflow for the torso protector. At the same

At the same time, Evoc has worked on sustainable solutions for this range. It expects to launch a complete recycling process for the Liteshield products in its protection wear range.

Komperdell
[Hall 11.1/A19] argues
that protectors are
often stiff, bulky and

uncomfortable, but it has created a multilayer construction that enables it



Armour Jacket by Komperdell

to turn out light, flexible and breathable joint protection for riders.

It helps that an entity belonging to the same group as Komperdell has its own Austrian manufacturing capacity to turn out protection foam. The Dual Density Foam is used in Komperdell's protective gear for winter sports and cycling. Last year it decided to work on the development of more flexible knee and elbow protectors.

"We use the same raw materials, but we have developed a combination that makes the protectors much more flexible than before," said Josef Kerschbaumer, managing director at Komperdell.

The light and breathable joint protectors use soft-shell inserts and perforated mesh. The thickness of the layers is mapped precisely to combine protection with flexibility.

The knee guards come in three versions, some with straps to be worn over trousers, others more tight-fitting to be slipped on. Light and breathable, the third version has an equivalent for elbows.

**Scott's [Hall 12.0/A22]** Soldier elbow and knee guards have been designed with a hinge construction. This makes them more flexible, giving more freedom of movement.

Nalini [Hall 11.1/B13] has created protective jerseys and bib shorts integrating Dyneema. This polyethylene fiber has high tensile strength, purportedly fifteen times stronger than steel.

Nalimi's Dyneema kit consists of a

jersey and bib shorts. A Kinetech fabric integrating Dyneema is applied to shoulder panels for the jersey, and hip panels in the bib shorts. The Italian apparel maker said the fabric has high abrasion, cut and tear resistance, but it remains aerodynamic, breathable and lightweight. **BS** 





Protection by Scott Sports



Evoc is showing its Liteshield

Flex torso protector









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#### OVERVIEW: BAGS & PANNIERS FOR GRAVEL & BIKEPACKING ALL PACKED UP FOR BIKE ADVENTURES

Bag makers are making creative use of space on bicycles and turning out yet more practical packs to cater for growing demand in the market for gravel biking and bikepacking adventures.



#### Ortlieb [Hall 11.1/C12]

has been riding the bikepacking wave with surging demand for its seat packs. While black rolltop bags consistently lead the rankings of Ortlieb's most-wanted products, they have been joined by a seat pack of 16.5 liters.

This year the German supplier has revised its Gravel Pack, a set of



lowrider bike panniers with a capacity of 14.5 liters. With this system, the center of gravity is kept low on the bicycle, even if you're carrying plenty of luggage, meaning you'll be able to bring along extra gear on your bikepacking trip.

The mounting system has been changed with the

Ortlieb Gravel Pack

Quick-Lock L3.1 system, which allows the one-handed hooking and removal of the bags. The pack remains firmly affixed to the rack, even on rough terrain.

Other adjustments have been made to the shape and closure of the Gravel Pack. The roll closure of the waterproof pannier ensures that your gear stays dry even under tough conditions. The abrasion-resistant material used for Ortlieb's bikepacking gear is sturdy and light weight. It's PVC-free and made in Germany.

After the launch of its bikepacking range at last year's Eurobike, **Evoc** [Hall 11.1/C08] has added a nine-liter version of its handlebar pack Boa. It provides quick access to your belongings on both sides, and the roll-in ends make the volume adaptable. The handlebar pack uses a patented

Boa Fit System, which makes it very easy to mount. It fits neatly on the

handlebar and stays put, even during bumpy off-road usage.

Evoc says that it fits every type of handlebar, from mountain bikes to road bikes. "All cables have space, even when gripping the top handlebar there is nothing in the way," the



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The back of Vaude's Aqua

Announcing the New Twin Mode High-flow and Cooling spray mode "SprayMe" Series Bottle from V-Grip



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Standard



the famous waterproof

strap, which features a

waterproof outer pocket.

now uses a tough Cordura



supplier adds.

With its welded seams, the pack is waterproof as well as dirt-repellent and abrasion-resistant. Windbreaker jackets or other small equipment can easily be tied under the elastic cords on the outside of the bag.

Vaude [Hall 11.1/C14] has updated its Aqua bikepacking range to incorporate extra smart features and more recycled materials. The back Lotus makes plate for an Aqua Box of 24 creative use liters requires about three kilos of defective of household plastic waste from Germany's "yellow bag" scheme. But the latest Aqua pannier integrates other recycled materials as

The handlebar bag in this Aqua range has been restyled. It has

been enhanced with a multifunctional cord at the top of the bag, and a shoulder strap. Vaude adds that the Aqua handlebar

bag is made in Germany and Klickfix-ready.

Camelbak [Hall 12.1/ **A23]** is joining the trend with an offering of seven products for bike packers in its M.U.L.E. range. They include five bike bags,

a bottle holder and a bikepacking reservoir. The water-resistant frame pack has a secure and adjustable attachment and tube clip.

The two-litre Quick Stow is compact and lightweight, with a large bike valve for easy hydration on the go. The cap with the on-off valve can be used for cooking in camp.

tires

The Lotus [Hall 9.1/D31] brand has an eco-friendly take on the bikepacking saddle bag with its ReTire. Marketed by Shine-Ho Knapsack & Bag, Lotus uses defective tires as a holder, which gives it a striking appearance.

At the same time, the ReTire is sturdy and it has plenty of user-friendly features. The bag is made with waterproof, and scratch-resistant materials.

Its waterproof inner storage compartment can be easily accessed for quick packing and unpacking. Lotus adds that there is a mesh pocket on top of the inner bag for extra storage.



Agu's upcycled handlebar bag

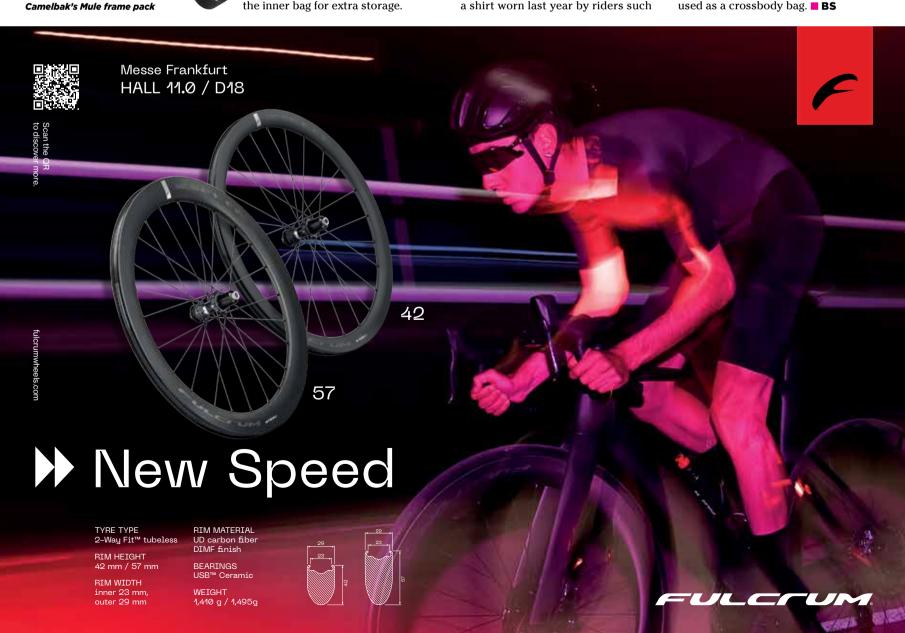
Topeak [Hall 11.1/C22] has come up with a stylish handlebar duffle. The slim tubular bar bag features a full-length zipper for easy access, and added buffer material to reduce the rattling sound from your keys, coins and other stuff crammed in there for the ride.

The green initiative from Agu [Hall 11.1/D33] for bikepacking bags is a range of upcycled products, which reuse materials from damaged rain jackets, panniers and Team Jumbo-Visma shirts. If you can get your hands on the Upcycling handlebar bag, you may be carrying around a shirt worn last year by riders such

as Jonas Vingegaard.

Agu's inaugural Upcycling range was made in partnership with an Amsterdam workshop. It includes handlebar bags as well as bidon slingbags and keychains. The bags are all unique, because they use discarded Agu apparel cut into new patterns.

Apart from the fabric, the zippers, buttons and pockets have been reused for the Upcycling range. Leftover materials from the upcycled products, which could not be used for this range, have been recycled. The Upcycling handlebar bag has a shoulder strap, so that it can also be used as a crossbody bag. **BS** 



#### AFFORDABLE E-SHIFTING BY WHEELTOP

Electronic shifting need not be only for cyclists with deep pockets.



of the derailleur, if needed.

Lanxi Wheel Top Cycle Industries showed the EDS OX for MTB at Eurobike in 2022. Since then the company has further improved the system and adapted the triggers to be usable on other types of bikes with drop-bars.

to set the desired cassette size at the derailleur and fine tune the position

The EDS OX is available in three versions: a long-cage version (guide

wheels at 93mm) suitable for MTB and flat handlebar trekking bikes. It supports a maximum cassette size of 52T. A medium-cage version is also available (guide wheels at 75mm) for flat handlebar road bikes (trekking, touring) and folding bikes with wheels of 18 inches or above, supporting cassetts of max 42T. Finally, a shortcage version (guide wheels at 58mm) designed for wheels up to 20 inches. Maximum cassette size is 28T.

The fine tuning of the derailleur is done in steps of 0.2mm. Communication between the shifters on the handlebar and the derailleur is done via both NT+ or Bluetooth protocols. The lithium-ion battery is mounted on the back of the derailleur. It lasts for around seven riding days or roughly two weeks depending on rides and usage. The derailleur is recharged via a cable with a magnetic connector. The shifter requires the replacement of the universal CR2032 knob battery. The long-cage derailleur and battery weigh 400 grams and the shifter 65 grams.

WheelTop is mainly an OEM manufacturer of bicycle transmission components including crank sets, sprockets, and derailleurs. Established in 1951, the firm moved into the development of high-end bicycle components in 2015.

## STEPPENWOLF RETURNS REBORN TO BE WILD

During the mountain bike boom of the 90s, Steppenwolf was a hot brand with high-profile athletes on its team. After some ownership changes and years in rough waters, the brand is being relaunched at this year's Eurobike show by Zweirad Union eMobility.



Under the "be wild" monniker, **Zweirad** Union eMobility [hall 12.1 / A13] is relaunching the Steppenwolf brand as its most sporty e-bike brand to date. While the details on the specific models are only being disclosed at the show, some information has already been made available beforehand. With its line-up of a total of 18 models Steppenwolf will cover three main segments, ranging from e-mountainbikes with up to 160 mm of travel, SUV-style e-utility models, and models with a deep-instep frame. These bikes will cover a price range from €3800 to € 6700 and will be exclusively sold through IBD channels.

All Steppenwolf models are equipped with mid-motors supplied

by Shimano. While the frames are produced in Far East, the painting, assembly and final testing are all done at the headquarters of Zweirad Union eMobility in Sangershausen, Germany. With frame designs that stand out from the masses, sports-oriented geometries and high-quality specifications, Steppenwolf intends to become much more than just another e-bike brand. The goal is to bring the brand back to its old glory. Before Eurobike the website only offered a countdown, but as soon as the show has opened its doors all the information on the 18 models and three model lines of Steppenwolf will be available on www. steppenwolf-bikes.com. ■ LVR







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#### **OVERVIEW: LIGHT-SUPPORT EMTBS**

# ALL THE FUN WITHOUT THE EXTRA WEIGHT

A new breed of e-mountainbikes follows the logic that sometimes less is more. By cutting down on both torque and battery capacity, more and more brands are rolling out lightweight models that appeal to sporty riders and don't skimp on the fun in technical terrain.



For years, the dominating trend with e-mountainbikes has been to increase the maximum torque and the capacity of the battery. After all, unlike the power of the motor these parameters are not limited by law. So they lend themselves to a competition between suppliers and e-bike manufacturers. Naturally more torque will drain the battery faster, so the latter need to grow as well. The gradual increase of both torque and battery capacity have resulted in heavy e-mountainbikes – to the point that the weight starts to have a negative impact on the handling. This is one reason why a growing number of brands has been launching "light support" varieties.

The other reason is to appeal to the group of riders that still has not been convinced to switch to e-mountainbikes. By reducing the support and battery capacity, the weight can be brought down as well - to a point where fully-suspended e-mountainbikes with frames made of carbon hit the scales at under 15 kg. Early movers in this segment include Fazua with its Ride 60 and Ride 50 assistance drive systems, Mahle with its X35 and X20 systems and Specialized with its customized SL 1.1 mid-motor. Lately, the choice of such systems has been attracting additional suppliers, as evidenced in the light drives overview in yesterday's Show Daily.

The concept of lightweight e-mountainbikes is to blend the characteristics of both e-bikes and conventional mountain bikes and to demand more effort from the rider. After all, the lightweight systems do not multiply a rider's input by the factor 3.7 to 4 but rather just double it. While this might be a deal-breaker for riders who have gotten used to heavy e-mountainbikes, it might be the right strategy to get additional riders to convert from their conventional rides onto a lightweight e-mountainbike. Appropriately, most of these models do not come with large displays but very minimalist HMI solutions instead, combining a mode switch with a small display for modes and battery status.

The new iLight platform of **Superior [hall 11.0 / B08]** may well be the most endurance-oriented lightweight e-mountainbike with full suspension on display at the show. With its main frame and swingarm made of carbon, this bike offers advanced integration of all cables and lines and a progressive geometry that combines a slack head angle with a steep seat tube angle. With drivetrain and brake components from Shimano, Rock Shox

suspension and Schwalbe tires mounted to DT Swiss wheels, plenty of proven components can be found in this bike.

The big news is the assistance drive system as Superior relies on the novel Performance Line SX from Bosch eBike Systems for the iLight series.

The same new Bosch system sits in the bottom bracket

components and parts, the Saturn Swift weighs about 19 kilograms. For its new Epium all-mountain plat-

Wh. Due to the choice of more sturdy

form, NOX Cycles [hall 12.0 / F10] relies on the Ride 60 assistance drive system from German supplier Fazua. Thus you get a maximum torque of 60 Nm and a battery capacity of 420 Wh. To keep the weight low, the Epium's frame is made from carbon fibre in Europe, weighs only 2.7 kg and comes with an adjustable geometry thanks to the brand's Flex Linkage system. By combining 160 mm of travel front and rear with 29 inch-wheels and wide tires, NOX Cycles offers a package capable of tackling technical terrain with ease. The Epium has already won a German Design Award and will be offered in three builds, ranging from

Nicolai specializes in alloy frames - and the Saturn Swift as the brand's first light support e-mountainbike is no exception.







Dirtlab's e-Menace as an e-mountainbike.



Core to Pro and Moon as the top-ofthe-line offering.

Last year, the Bavarian TQ Group launched the TQ-HPR50 system at Eurobike, opting for Trek as its launch partner. While the supplier is not exhibiting at the show this year, there are lightweight e-mountainbikes with this compact system on display, including the Rapcon Pmax TQ by Simplon [hall 11.0 / C10]. Its main frame and swingarm are made of



carbon fibre and weigh as little as 1850 grams - before installing the assistance drive system, that is. Still you get to choose between 150 mm of travel front and rear when riding 29-inch

wheels or 170 mm up front and 165 mm in the rear when going for a reverse mullet set-up with a 27.5-inch wheel in the back. A flip chip at the lower shock mount allows

for an adjustable geometry.

Another brand that decided to cooperate with the TQ Group and build a light-weight platform around the TQ-HPR50 system is Scott Sports [hall 12.0 / A22]. The Lumen e-Ride combines a carbon frame and swingarm with the IST kinematics where the shock sits in the seat tube just above the compact mid-motor. While the small display of the system has been fitted into the top tube, a minimalist

mode selector can be found on the handlebar. All cables and lines have also been nicely integrated and routed internally from the handlebar. Despite hitting the scales at just 15.5 kg, the Lumen e-Ride

still is quite a capable emountainbike as it rolls on 29-inch wheels and offers 130 mm of travel front and rear.

Maxon for the

lightweight Bike

With a geometry tailored to eat miles in A typical example for an terrain, Superior's all-mountain model with a lightiLight will please weight assistance drive system enduranceon board is the e-Menace from minded riders. Dirtlab, which can be found at the booth of Maxon [hall 8.0 / J26]. This Taiwanese brand had been a developing partner of

Drive Air system from the very start, and the e-Menace is based on the brand's versatile

Menace all-mountain and enduro platform. Available as a frameset with an e13 crankset or as a frameset with crankset and suspension components from DVO, the E-Menace can be built to weigh as little as 15 kg. As for the travel, you can opt for either 130 mm or 145 mm in the back and combine that with either 140 to 150 mm or 150 to 160 mm up front.

motor and also exhibited at the Eurobike booth of Maxon [hall **8.0 / J26]** is the Literider e-Ultimate of Swiss brand Thömus. From the geometry of the carbon frame to the selection of parts and components and the travel of 120 mm front and rear, this e-mountainbike can be

trimmed to weigh less than 15 kg and is clearly aiming at enduranceoriented riders. But thanks to an adjustable geometry the Literider e-Ultimate's travel can be increased to 150 mm up front and 140 mm in the rear, making for a light e-mountainbike capable of tackling choppy terrain as well. LvR



still cope with rough terrain.



#### **OVERVIEW: CHAMOIS/PADS**

#### **CYCLING PADS GET CUSHIER AND GREENER**

Pad makers are packing yet more technology into their products to cushion your rides, while upgrading their operations to become more sustainable.



Such investments have intensified at Dolomiti Pads [Hall 9.2/G59], a specialist from Italy. It works with carving technology, which allows it to precisely map the density of its pads with up to five layers of foam. They have become even more comfy with the integration of patented hydrophobic foam.

The foam doesn't absorb moisture, so it doesn't collapse, and the pad remains fresh," said Martino Bontorin, chief executive at Dolomiti Pads.

The supplier has again upgraded the technology with a hydrophobic foam that can withstand pressure of 20 kilopascal. This high-density and resilient foam is particularly suitable for gravel biking because it helps to reduce vibration during the ride, said Bontorin.

Dolomiti's hydrophobic foam is used for the Aria pad, while the high-density and anti-vibration pad is the Pave. Both are being shown at Eurobike this year, in conjunction with more ergonomic shapes.

With demand for its technical pads soaring in the last years, Dolomiti has enlarged its annual capacity to 2.5 million pads. It uses more automation, which makes it easier to control production, and Bontorin also pointed to "huge improvements" in sustainability.

The brand's carving technology enables it to do away with plas-The Pave from Dolomiti Pads.

tic-based This pad from Dual thermo-adhesives. A Press targets recycling company bikepackers. regularly drops by to pick up trash left over from cutting foam layers, to be reused for mattresses, pillows or boxing bags.

Bontorin added that Dolomiti uses recycled bags to pack products, its pads integrate more recycled fabrics, and it has also installed solar panels on the roof of its production facility in San Zenone degli Ezzelini, near Bassano del Grappa.

Sustainability is on the agenda at Dual Press [Hall 9.2/D17] as well. The company behind Dr Pad works with water-based color printing, yarns made from recycled polyester and castor oil, and bio-based fabrics. The Italian supplier adds that it recycles foam scraps discarded in production. They are tightly packed, compressed and picked up by recycling firms.

Among Dr Pad's latest pads is the Touring Trekker, which is made for bikepacking. It's a compact product to be inserted in cycling shorts for a more comfortable ride, but the same shorts could be used for a stroll in the city or other activities. The pad uses a highly elastic foam to support longer rides, and the back is made of perforated recycled fabric to make it more breathable.

Teo Sport [Hall 9.2/G63] has implemented the ReUp project, to make pads that reuse scraps left over from cutting fabric. The company explains that standard pad production involves cutting of fabric to specific shapes, which creates fabric waste. But it has

found ways to turn the discarded foam into a material that can be used to make more eco-friendly cycling pads. The ReUp process transforms the waste into new support inserts. They are then reshaped and applied to seat pad bases made from recycled fabrics. Teo Sport's initial estimate is that this process will reduce its production waste by 90%.

Teo Sport's latest performance pad is the Armadillo Floating, which combines several technologies for road and gravel pads. A standalone insert is affixed to the soft base of the pad with special seams in just three points, meaning there's no glue between the base and the foam.

Teo Sport said the structure increases breathability and ventilation, and it ensures faster drying. The surface in contact with the skin remains flat but anatomical, due to the shaping of lateral flaps.

Another project by Teo Sport is a partnership with Wilma, a French women's cycling apparel maker, to create a menstrual pad. Their Bloody Oueen prevents chafing, it ensures quick drying and is able to absorb the equivalent of two pads without leaving humidity or stains on cycling pants. The pad provides protection for menstruating riders for up to six hours.

Like other women's pads created by Teo Sport, the Bloody Queen is designed to reduce pressure when the rider's weight shifts forward on the bike saddle. Teo Sport said it has permission to produce the Bloody Queen pad for other brands. **BS** 

## **CYTECH COVERS TOUCH POINTS**

Just four years ago, Cytech [Hall 11.1/ CO5] used technology from its cycling pad business to launch seamless glove palms for road, gravel and mountain biking. This year it's complementing that offering with insoles that adapt entirely to the shape of the foot.

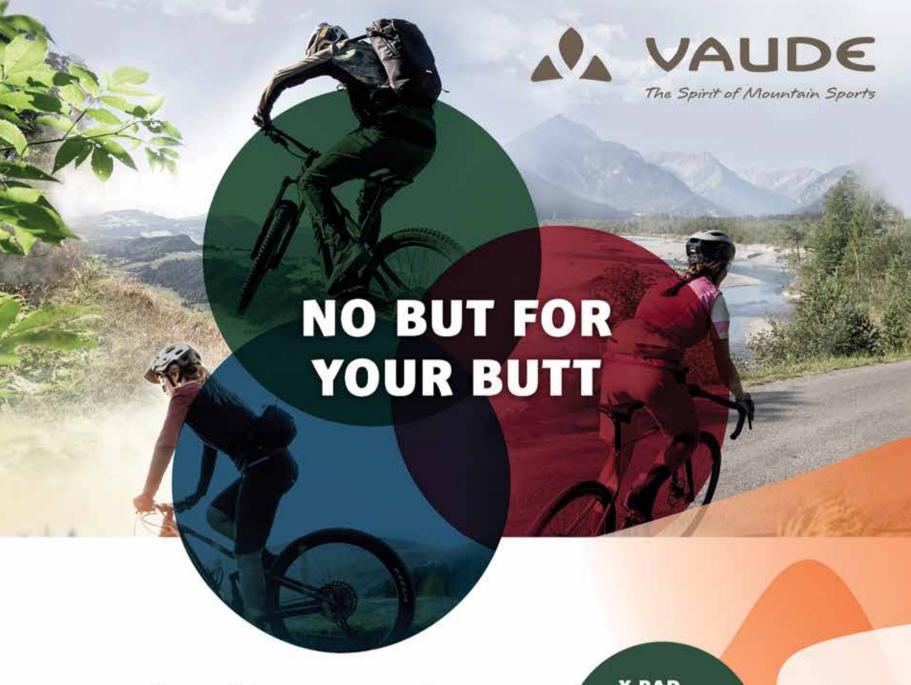
With the launch of InsoleTech, the company behind Elastic Interface is applying its technology to all three contact points between the bicycle and the rider, from the saddle to the handlebar and the pedals. The three products together form its Total Ride Comfort package. "InsoleTech is essentially a chamois for the feet and it is engineered to deliver power, maintain movement, and maximize control," said Irene Lucarelli, who heads up marketing at Cytech.

The pad maker used its anatomic thermo-molding technology and other capabilities to create its insole. With the use of molds and counter-molds, it made pre-shaped insoles that are meant to be pliable, not stiff. "They're engineered to support the foot and minimize discomfort during any style of cycling," said Lucarelli. Cytech said the insoles provide arch support and they reduce pressure on metatarsals. Their structure improves stability, and it makes efforts more efficient for riders who are pushing hard on the pedal. InsoleTech is breathable and flexible, which may be most beneficial for longdistance riders, cyclocross racers or mountain bikers who walk or run with their bike. Cytech has long been a leading supplier of cycling pads. Last year's Eurobike saw the launch of the N3X chamois, which is made with 3D-printed padding. Consisting of seamless and pre-shaped palms, PalmTech is meant to be inserted into gloves. Seven months ago, Cytech reinforced this part of its business with the acquisition of Pasasport, an Italian manufacturer of gloves and other sports gear. Its products target

cyclists as well as skiers



InsoleTech from Elastic Interface



# 3 comfortable seat pads for a perfect ride thanks to uncompromising innovation.

In order to offer the best possible comfort level for each type of biking activity, we've developed three new seat pads for our biking pants and shorts. In four studies with sports universities, we analyzed a variety of biking positions and the pressure points they create for both female and male cyclists. This helped us to ensure that each pad guarantees outstanding comfort during the activity for which it was designed.







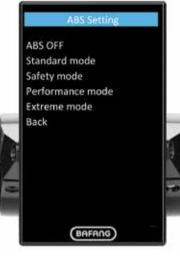


**OVERVIEW: DISC BRAKES** 

## NO STOPPING THE POWER OF DISC BRAKES

Once considered overkill, disc brakes have taken the bicycle market by storm. With general acceptance comes diversification: there are suitable products for every need, from gravel and mountain bikes to utility and cargo bikes. And yes — ABS looks like it's here to stay.







Consumers can change the settings of Blubrake's ABS system through the control unit of their e-bike

With the CRS C2 and CRS

up its game.

C4 models. Clarks is stepping

While some die-hard road cyclists still insist on riding rim brakes, the bicycle industry has decided to go all-in on disc brakes years ago. The only new models still coming our way with rim brakes are for children or positioned in very low price brackets not found at independent bicycle dealers. But since needs differ vastly from daredevils probing their limits on a mountain bike to elderly commuters on utility e-bikes and fully-loaded cargo bikes —disc brakes have

become more diverse as well. The results can be seen at this year's Eurobike, ranging from key suppliers to new offerings on the market.

Germany's Intend BC [open air ground F12 / F09a] has built an excellent reputation for its suspension components and its upside-down forks in particular. With the Black Forest and its trails right in the backyard of its Freiburg headquarters, this young company aims for the custom performance

market. The first disc brake from Intend BC, the Trinity, is typical: with a 4-piston caliper made of two precision-machined pieces of 7075 aluminum, brake pads with alloy cooling fins and brake levers that combine ergonomics and low weight, this brake stands out in terms of looks already – but there's much more to it.

The Trinity disc brake is the result of five years of development, taking into account feedback from expert riders. Intend BC wanted to set a new benchmark in terms of modulation, heat tolerance—and ease of maintenance. To

the company precision-machines all parts of the Trinity from 7075 aircraft aluminum, relies on a radial piston lever with low weight and has increased the amount of mineral oil circulating in the system. As for the brake pads the firm has taken the smart

reach these goals.

decision to go for the same size as needed for Avid's Code system, so you can choose from a wide selection of compounds and brands right from the start.

When it comes to spare parts and large volumes, **Clarks Cycle Systems [hall 9.1 / D29]** is well-known in the industry. But this supplier wants to

up their game, so it has created CRS as a top-end label (the name stands for Clarks Race Series). For now, the portfolio of CRS consists of hydraulic disc brakes for mountain bikes and e-mountainbikes with two or four pistons, running on mineral oil. For maximum rigidity and precise braking the calipers of both the C2 and the C4 version are CNC-machined from a single block of solid aluminum, and the brake pads come with cooling fins. The ergonomic levers feature lever-reach adjustment and the floating rotors are CNC machined from stainless steel and mounted to alloy carriers.

If you are into classic rock and tongue-in-cheek humor, **Hayes [hall 12.0 / C01]** may have the right upgrade for your mountain bike. Its powerful four-piston brake system Dominion A4 will be available as a limited edition with both lever and master cylinder and the caliper getting a purple anodizing treatment. The result is called Dominion Purple Hayes, a clear reference both to Jimmy Hendrix and to the company's own legacy. Hayes brought a limited-edition Purple Hayes disc brake to

Magura's CBS system links up the levers and calipers to help less skilled riders use their

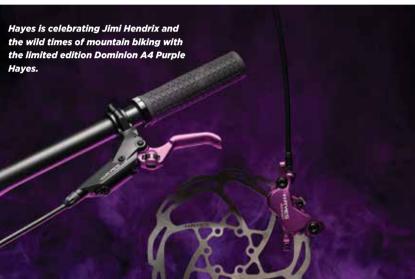


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the market in the year 2000 when the market share of the brand was significantly higher than it is today. Fittingly these limited-edition disc brakes were first presented at the Sea Otter Classic in April. While **SRAM [hall** 12.0 / A18] does not launch anv entirely new disc brakes at this year's Eurobike, there are some notable news regarding the brake levers. For mountain bikes, the new Stealth brake As the most affordable disc brake from Magura to date, the MT-A2 is clearly aiming levers put the brake line closer at the OE market. to the handlebar thanks to an

Blubrake's ABS module now can be combined with disc brakes from Shimano as well.



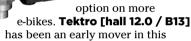
improved angle of the connection for the line. This is meant to facilitate the internal routing of the hydraulic brake lines and unclutter the handlebar. But that's not all: as part of the new Apex and Apex AXS groupsets aiming at road bikes and gravelbikes, SRAM has no less than three new brake levers ready: apart from versions with combined electronic or mechanical shifting function for dropbars, there is another hydraulic Apex brake lever specifically built for models with flat handlebars.

With the MT-A2, **Magura [hall 12.0**/ B08] is launching a new entry-level hydraulic disc brake that comes with a lot of features of the company's more sophisticated model lines. The lever and the master cylinder are injection moulded, with the clean design fitting a wide variety of bicycles. Since this is a product that aims at the OE market and large volumes, a particular focus has been put on the ease of assembly and maintenance. While the combination of three-finger

brake levers and two-piston calipers might not sound like a performance-oriented product, the MT-A2 comes with the same five-year warranty for leaks and is approved for system weights of up to 150 kg – so it can do its job on e-bikes as well.

Another novelty from Magura being launched at Eurobike is aiming at utility and cargo bikes that are often used by less skilled people. To avoid them being overwhelmed by too much braking force and make sure they get the best out of their hydraulic disc brakes without risking going over the handlebars, Magura has developed the CBS (Combined Brake System). The brake lines from both levers are guided to a small, mechanical unit no larger than a box of cigarettes that can be integrated into the bicycle frame. From there, the hydraulic pressure is evenly distributed to both calipers, preventing the front wheel from locking up and causing crashes.

Speaking of preventing nasty crashes due to a locked-up front wheel: after some initial hardships ABS technology seems to have matured far enough to become



a viable

regard as the development partner of Italian ABS specialist Blubrake. Since the main focus of Tektro is to serve the OE market and to be compatible with as many other components as possible, this key supplier has invested in making its brakes work

with the second generation of Bosch eBike System's ABS

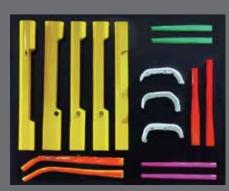


Sram has the right lever.

system as well. The result was first shown at Taipei Cycle Show back in March and will open up more markets for Tektro.

A second push with Tektro has been for clean cockpit solutions on utility e-bikes. For this the company has come up with a three-finger lever









Tektro's and TRP's hydraulic disc brakes now also work with the second generation of Bosch eBike's ABS system.

with a very simple design and a hydraulic exit port that puts the brake line parallel to the handlebar. One more advantage of this brake lever is that it works with Tektro's wider 5 mm brake lines. The larger amount of hydraulic oil being circulated not only helps to reduce overheating and to make for a more forgiving brake action for less skilled riders — it is also a necessity for a hydraulic disc brake to work properly with Bosch's second generation ABS system for e-bikes.

Eager to offer an ABS solution for e-bikes as well, **Shimano [hall 11.0 /** 

A16] has teamed up with Blubrake to get its hydraulic brakes to work with the Italian ABS system. This step was facilitated by the fact that Shimano has been relying on mineral oil for its hydraulic disc brakes. First samples were shown at last year's Eurobike, but expect this cooperation to be way more advanced this time around and probably to even show up as original specification on some 2024 models at the show. As far as Blubrake [open air ground F12 / E10] is concerned, the Italian company has added an option to select four settings for





## BINDE DEINE GÄSTE!



#### **NEW PRODUCTS**

#### **KRYPTONITE KEEPER MINI FOLDING LOCK**

This folding lock offers security in a compact package. Rather than a standard shackle, it uses 2.5mm hardened steel bars and tightened rivets. This allows the lock to fold down to a compact size yet leaves it capable of expanding to provide a sizeable 80cm of useable locking length. Nevertheless, it remains lightweight at only 560 grams.



#### NECO NECO2-1(H323MP) **HEADSET**

This headset helps bike makers integrate brake and transmission cables neatly and without restricting handlebar rotation. The design of the 35-degree opening on the top cover makes the introduction of both sets of cables as smooth as possible. The cover

itself is made from nylon fibre, which reduces friction and ensures the cables aren't scratched, 8 / Joi

SKS

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**MUDGUARD** 

This quick-to-attach mudguard

widths of 56 and 75 mm width and

comes with a rear light featuring a rechargeable battery that can also

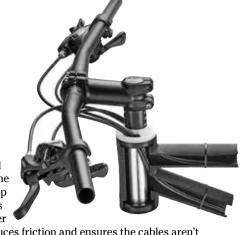
be easily attached to the luggage

rack via an adapter. 12.1/

can be mounted under your luggage rack in just a few simple steps and offers protection against spray water. It is available in

**AND REAR** 

LIGHT





#### PRO-LITE NTERNATIONAL **BRACCIANO PTT**

A new wheelset that's available in versions tailored to road and gravel riders. Pro-Lite's new PTT hubs feature a clutched drive with an all-tooth engagement design. Made to work with disc brakes, the hubs also allow for straight-pull spokes and e-thru axles for superior power transfer. Like all of Pro-Lite's wheels,

they're 100% built by hand. Hall 9.1 / CO6



#### **SEATYLOCK** X LOCK **SYSTEM**

Stop wheels and seatposts from going missing. The Seatylock X lock system currently spans three separate applications. These are axle nuts to protect the wheels on solid axle bikes, axle bolts to protect quick-release style wheels, and seatpost clamp kits to preserve your seatpost and saddle. Seatylock also offers co-branding solutions on products, including the X Lock system.



#### **GRID SKIN** SHORT **SLEEVE JERSEY**

The Q36.5 Grid Skin Short Sleeve Jersey uses the newly developed 4D printing technology GRDXKN®: this technology safeguards the skin from abrasion in the event of an accident. The laser cut sleeves and the smooth-running front zipper complete the package, making this jersey a top performing, incredibly protective top for both experienced cyclists and amateurs. A2



then backed by a shock-absorbing

promote airflow to keep you cool,

while the Pro 360° Fit Adjustment

Finally, a rear light provides extra

System lets you fine-tune the fit.

EPS liner. Its 15 large vents

visibility, Hall 12.1 / A07a

### CYCLES

The Tail Hitch L moves the GSD's trailer mounting points further back, making it possible to tow a trailer for cargo, kids, or pets and still use other GSD accessories for greater carrying capacity. To tow a bike with the GSD, just add the Bike Tow Kit which includes multiple tube sizes to fit most fork spacings.



#### TAIL HITCH L + BIKE TOW KIT



## XPEDO THRUST

The Thrust Arrow road pedal by Xpedo offers adjustable q-factor to get the perfect fit. Innovative design features q-factor adjustments on each pedal with its modular Posi-Plus body design. The Thrust Arrow allows you to dial in your knee tracking and pedal stroke accurately from 53mm to 63mm for optimal stance. Featuring Xpedo's race-proven triple-bearing design along with a solid 62mm cleat contact area for maximum power transfer. Cleats are available with  $6^{\circ}$ float (red) or fixed (black). Weight: 300g per set Hall 12.1 / A10



#### **ROCCIA TPU** TUBE

Barbieri's new Roccia TPU tube is designed for e-bikers. Traditionally, TPU tubes have appealed to weight-conscious cyclists. However, e-bikers are less interested in weight saving than sturdiness and puncture resistance. These new tubes are built with this in mind. According to the firm's laboratory tests, they're over three times more resistant to failure than standard butyl tubes. Hall 9.1

#### **ALHONGA**

#### HJ-HT534 FOUR-PISTON BRAKE

Cargo-bike-focused four-piston disc brakes developed to control bikes carrying oversized loads safely. These brakes also feature a parking device and cut-off sensor options. Developed and tested based on the EN15194 standard with more than 350kg loading, their makers claim 30% higher braking force than similar products. Designed for easy installation and maintenance, they're compatible with existing mineral oil and pads. Hall 9.1 / A20



#### CLARKS CRS C2 BRAKE

A robust CNC lightweight two-piston hydraulic disc brake set. Each calliper has self-adjusting pistons with machined heads for reduced friction. Ergonomic two-finger brake levers offer sensitive braking plus lever reach adjustment. Supplied with aerospace-grade aluminium floating rotors that feature stainless

steel braking bands, along with hoses and mineral oil. Hall



#### SHOCK RAGE-IS DROPPER POST

Kind Shock's Rage-iS dropper post is now available in the popular 27.2mm size. This means gravel riders can benefit from a unique design that marries a 65mm drop with up to 30mm of air-sprung suspension to provide comfort and control. Despite an affordable price point, the post offers premium features, including a one-piece forged stanchion and head that houses the easily accessible air valve to adjust preload and dropper return speed. Hall 9.1 / B15

#### **NEW PRODUCTS**



#### DAYSAVER AG ESSENTIAL8 MULTITOOL

The Essential8 is a workshop-quality multitool offering seven of the most common hex heads plus a Torx 25 function. Despite a low weight of 33 grams, it offers everything it takes to save the day on a ride. With its Allen key shape, it ensures ideal accessibility. At the same time, its two different lever lengths mean you can always apply the correct torque. Hall 8 / C11



#### DP MOTOR M120MD MID-DRIVE MOTOR

This super powerful mid-drive motor comes with a rating of either 750 or 1,000 watts and can produce up to 170Nm of support. Able to work to 25 or 45-kph cut-off points, it's an excellent option for aggressive mountain bikers or speed pedelec riders. Its makers claim a near-silent operation along with a 6.2kg weight. Hall ?? / ??

#### KT DYNAMO HUB

KT's light and compact dynamo outputs 6W3V of power to illuminate the path on dark nights. Supports QR and TA axle designs and can accommodate rim or disc brakes. For detailed specifications and further information visit us in Hall 9.2. Hall 9.2 A07





#### FUMPA MINIFUMPA

The miniFumpa bike pump is a convenient and environmentally friendly alternative to CO2 canisters. With a higher-density battery, the miniFumpa can inflate three tyres from flat on a single charge, while pressures of over 120psi can be managed easily. With its enhanced durability, it aims to be the perfect companion for any cycling group. Hall 9.2 / G49

#### HAFNY MULTI-ANGLE

#### ADJUSTABLE BIKE MIRROR

The HF-M952S-FR08 has three pivot joints which can be adjusted to any desired angle. It is foldable so you can park or store your bike easily. The body is made of fiber-reinforced nylon, and fits handlebars of 14.8-23mm in diameter. Available in three different sizes (62mm, 68mm, 98mm), this mirror also has a choice of HD glass lens or anti-glare blue lens. Hall 9.1 E40

#### TAYA 55TH ANNIVERSARY SPECIAL PACKAGE

Taiwanese chain maker TAYA is preparing to celebrate its upcoming 55th anniversary in 2024. As a precelebration, it's introduced a special package featuring two chains enclosed in a single box. This unique design reduces

packaging and is part of TAYA's commitment to ecological values. The firm will be looking to collaborate with its global distributors to participate in this limited-time campaign. Hall 9.1 / B40



#### GP-98 PUMP

This aluminium mini pump features a T-handle with a unique anti-pinch function. This locks the handle to prevent it from hurting your fingers and palm as you inflate the tyre. Clever features don't end there. It also includes a smart head that automatically adapts to work with Presta and Schrader valves.

#### KIND SHOCK G1C GRAVEL DROP BAR

This full-carbon gravel drop bar offers extensive ergonomic design refinements to enhance control while reducing fatigue. Its slight 16mm rise gives the user a heads-up riding position, while a gentle 18-degree flare in the drops adds clearance for when the terrain gets choppy. At the same time, its variable thickness carbon fibre composite construction balances flexibility and stiffness where needed. Hall 9.1 / B15



#### MIRANDA CARBON CRANKS

Miranda Bike Parts presents its new carbon cranks, precision-manufactured in Portugal. With sizes ranging from 150mm to 175mm and various interfaces for the major e-bike drives, these cranks offer exceptional versatility. Advanced production methods endow these carbon cranks with unparalleled durability, establishing them as one of the lightest and most resilient options on the market. Hall 9.2 / C22

#### AUTORQ DURATORQ

The duraTORQ from Autorq is a durable torque sensor for electric bikes. Guaranteed to perform and engineered for the most challenging conditions. This robust & versatile torque sensor is designed for standard JIS interface specifications. It is the most reliable dual-sided torque sensor in the market.









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#### MIRIDER MIRIDER ONE

In one of our most striking colours to date, 'Acid Green', the MiRiDER One has been carefully crafted using a combination of advanced technology, superior style, and quality components to bring you the ultimate electric folding bike.

Hall 9.0/B10

# CROPS BENLOCK FOLDING U-LOCK

An iF design award winner in 2023. The Benlock balances weight, ease of handling, and security performance. The unique shackle of this D-lock folds in the centre for compact storage and transportation. However, the lock's enhanced portability promises to come

without a reduction in security. There's also a dedicated space for a smart tag for anti-theft tracking. Hall 9.1 /





**BRYTON** 

#### **NEW PRODUCTS**



A new set of brakes from Magura featuring the power to stop vehicles with a total weight of up to half a ton. Created for heavyweight cargo bikes, the brakes use technology transferred from the firm's motorbikes products. Like other models in the range, they prioritise ease of servicing and use mineral oil. Hall 12.0 / B08



#### MIRANDA CHAINFLOW 3D CHAINRINGS

Miranda's ChainFlow 3D chainrings, made in Portugal, integrate patented chain retention technology. This best-in-class solution improves ride smoothness, reliability, and outperforms standard narrow-wide options in durability. Available in direct mount with interface options for all major e-bike motors, these chainrings provide a versatile fit. Manufactured using 100% green electricity and ensuring very low CO2 emissions in production, they also represent a sustainable choice in cycling components. Hall 9.2 / C22

#### **V-GRIP**

#### ONE CLICK MAGNETIC BOTTLE AND CAGE

This minimalist magnetic bracket is designed with three different entry points. It's ideal for use on bikes with limited frame space and lets you remove your bottle from the right, left, or centre. Securely holding your bidon, its durability and level of retention mean it's suitable for gravel or mountain biking. At the same time, a low-weight and slick design should also win fans in other disciplines. Hall 9.1



#### **NOVATEC**

#### PRO LEVEL D902SB REAR HUB

This hub is suitable for heavy-duty e-cargo and e-mtb bike applications and offers a step up from Novatec's teamlevel products. This sees the arrival of an enlarged 40 teeth and four pawl freehub mechanism with a more robust oversized bearing design. Available with steel or alloy cassette bodies and axles, weights are 540 and 370 grams, respectively. Supports all three major driver types. Hall 9.2 / A37



#### VALEO VALEO CYCLEE

The Valeo Cyclee system combines a 48V electric motor and an adaptive automatic transmission. Built around the bike's pedal assembly, it allows instant adaptation for each individual user. The system's predictive algorithms learn from the rider and anticipate their pedalling style to offer the optimal gear in any given situation. This innovative pedal-assist electric bike drive enables a claimed eightfold reduction in cycling effort. Hall 9.2 / C30

#### SQLAB KIDS LINE

SQlab brings its 20 years of experience in ergonomics and component manufacturing to bear on the problem of producing components for young riders. Its Kids Line covers saddles, handlebars, and grips. The first of these comes in twin sizes, along with three different colourways. All Kids Line products are based on existing SQlab designs and have been adapted for children in cooperation with medical professionals. Hall 11.1 / B24

#### **LITEMOVE**

#### PORTABLE MAGNET VISIBILITY LIGHT

The small but powerful TL bike light series has a built-in rechargeable battery of up to 40 hours

of run-time, featuring 5 different LED light patterns. Integrated USB connector for cablefree charging that can be easily plugged into a USB port and charges in just 1.5 hours. Flexible mounting options for any bike seat post, handlebars,

backpacks or apparel with a simple clip attachment. Hall 12.1/ C18



#### **NEW PRODUCTS**

## ORTLIEB TOPTUBE-BAG

This waterproof top tube bag offers a 1.5-litre capacity, plus a silicone cell phone holder, so you'll always remain in the loop. It attaches via an innovative adapter system known as the Tube-Lock, which allows it to be fitted or removed in an instant. The bag's magnetic closures make it the ideal storage place for anything that needs to be quickly accessed while riding.



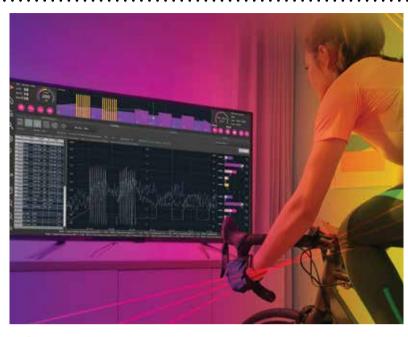
#### STEIGUM.DE

## THE PERSONAL MOBILITY REVOLUTION

At SteigUm.de, everything revolves around the mobility transition and the shift from cars to bicycles. The SteigUm calculator illustrates personal savings in terms of CO<sub>2</sub> and microplastics, time for the gym, and money, using examples such as additional vacation trips or visits to the cinema or restaurants. Integrating SteigUm.de into your website generates content and provides added value for users.

Hall 8.0 / M03





## ICTRAINER INDOOR CYCLING SOFTWARE

IcTrainer's app offers an affordable alternative to the established platforms. In addition to displaying metrics for controlling indoor training, many entertainment options are available. These include workouts, real routes, video-group chats, cadence-matched music, and recreation of your GPX tracks. There's also an integrated browser for video streaming from services like Netflix and YouTube. The software is compatible with almost all operating systems, training platforms and bike trainers. Hall 11.1 / C15



**Bicycle Cluster** 

# A Platform That Connect

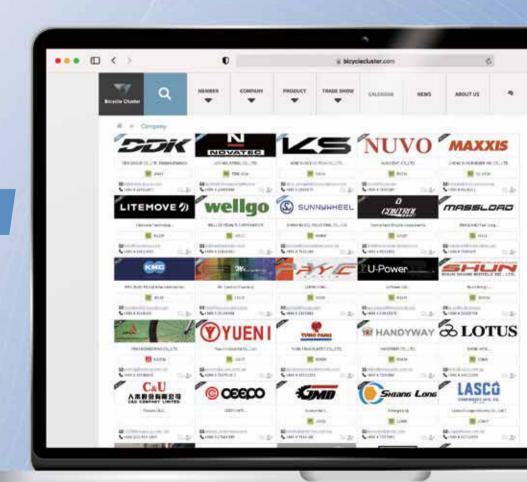
Suppliers And Buyers

**Efficiently** 



**Bicycle Cluster** 

Email / service@criticalcluster.com Website / www.bicyclecluster.com





## SUSTAINABLE PRODUCTS

Velo has developed several different processes to minimise its waste and environmental impact. As a result, it now reuses foam wastes via an in-house recycling process that sees this material re-purposed and returned to saddle production. The same goes for its grip cores which now utilise recycled EVA material. Both developments have eliminated waste going to landfills with no loss in the quality of the final products. Hall 12.1 / A10



#### 3-SPEED AUTOMATIC GEAR HUB

An automatic hub for a simplified rider experience plus improved mechanical integration for bike builders. The new Bafang 3-speed automatic hub has precise shift points of 25 and 32km/h. There's no need for an additional shifter and cabling, as actuation is managed entirely within the hub. The design is particularly suitable for e-trekking, e-city and e-cargo bikes, while the entire system weighs only 1.7kg. Hall 8.0 / J18

#### BIKE FUN

#### ROCK MACHINE WHIZZ

The Rock Machine Whizz's unique frame design can handle travel options from a trail-tailored 140mm, through to an all-mountain capable 160mm, before topping out at a bike park shredding 180mm. It aims for further versatility via its open-top tube configuration and an easy-to-maintain design that features exchangeable dropouts, an oversized head tube, and a seat tube ready for an extended 200mm dropper post.



#### **NEW PRODUCTS**

#### **MESSINGSCHLAGER**

#### **MOTUL BIO CLEAN**

Motul Bio Clean offers effective parts cleaning while being environmentally friendly and efficient. Its water-based cleaning fluid is suitable for various surfaces, including steel, stainless steel, aluminium, plastic, and painted finishes. Along with effective cleaning, it promises reduced disposal costs, lower environmental impact, and a more user-friendly formulation for improved occupational safety. It's a great addition to any workshop and will contribute to the well-being of employees and the environment.

Hall 12.1 / A19





#### RATIOX

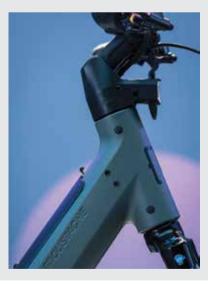
#### STEPLESS AUTOMATIC TRANSMISSION

RatioX manufactures stepless automatic transmissions for e-bikes based on the principle of continuously variable transmission. This lightweight and low-maintenance solution transforms cycling by allowing users to concentrate on riding. The unit sits in the middle of the bike beside the bottom bracket. Taking care of shifting and drive functions, it allows for the removal of all controls from the handlebar. Hall F12.0 / E14



#### SAMOX RAM40 CRANKSET

This crankset with direct-mount chainring is designed for all kinds of riders. Its simplified composition is visually striking and increases durability by cutting down on the number of components needed. At the same time, it also simplifies servicing and reduces weight. Available in several popular configurations.



## **MOUSTACHE BIKES**

Not Just a bike, but a new day. 'J' is the product of a two-fold intention: to produce with a short supply chain and to create an e-bike incredibly simple to use. Keeping it simple is complicated! Moustache has created a unique two-part aluminium frame with no welding, integrating motor, battery, suspension and produced in France! Aimed at bike lovers as well as complete beginners, 'J' is reinventing the e-bike experience with its simplicity and represents a new day for Moustache and the industry.

Hall 12.0 / A08

#### **PROMOVEC**

#### SCANDINAVIAN DRIVETRAIN

Are you also thinking green? Promovec's Scandinavian drivetrain is a step towards a greener future within E-mobility; production and development in Denmark, Sweden, and Norway. With our E-kit solutions you can built and combine in close cooperation with us. Hall 8 H22





#### BARBIERI ROCCIA TPU TUBE

Barbieri's new Roccia TPU tube is designed for e-bikers. Traditionally, TPU tubes have appealed to weight-conscious cyclists. However, e-bikers are less interested in weight saving than sturdiness and puncture resistance. These new tubes are built with this in mind. According to the firm's laboratory tests, they're over three times more resistant to failure than standard butyl tubes. Hall 9.1 / DO4



## **COMODULE GUARDIAN**

Comodule's Guardian is a smart anti-theft solution for e-bikes, enabling safety features like GPS tracking, movement alerts, and a digital lock. The connectivity solution includes a compact IoT module and a rider app. Guardian is easy to integrate into any e-bike and it's compatible with all main drivetrains. Hall 8, booth 130

#### **VAUDE**

#### MOAB PRO TECH

VAUDE's first MTB flat pedal shoe with cleats, with BOA L6 fit System. Compatible with common Click systems, the Moab Pro Tech is front and side laminated with TPU for protection against splash water and dirt. The upper fabrics are partly made from recycled materials, reducing energy consumption and CO<sub>2</sub> emissions by up to 50% while



#### **NEW PRODUCTS**

# hamois Travel Pack

#### RIESE & MÜLLER **DELITE4**

The Delite4 is ready for a challenge, whether long rides, bumpy forest paths or steep climbs. Its high-quality frame features a unique Control Technology suspension system and integrated rear carrier. It's driven by a powerful Bosch Performance Line CX motor and a 750Wh battery to offer freedom and flexibility. Fully equipped



#### **SCHWALBE TACKY CHAN** TYRE

German tyre-makers Schwalbe claim this is the fastest downhill tyre in the world. It's been proven by overall World Cup winner Amaury Pierron and is optimised for precision riding in technical conditions. It features more stable shoulder lugs compared to the brands' Magic Mary for increased lateral support, plus long braking edges to allow the rider to brake later.



#### **ASS MAGIC**

#### **CHAMOIS CREAM TRAVEL PACK**

Ass Magic's essential oil, lanolin, and synthetic beeswax-based chamois cream in convenient sachet-sized servings. Perfect for sticking in a jersey pocket or adding to a compact pack list, each contains a single application's worth. Ideal for travel, touring, or adventure racing, it's been tested at the famously demanding Cape Epic bike race. Hall ?? / C1



REV II (short for REVOLUTION 2) is Thun's new product line featuring 100 % CNC-machined (in Germany) crank arms for upscale e-bikes with central motors. REV II crank arms feature the iconic window that already made Thun's infamous REVOLUTION crankset a showstopper in the 1990's and are available with different surface options such as Polished, Black (as illustrated in the picture) and Bicolor Chrome Black. Hall 12.1 / C29

**FAS Series** 

## **MOTOR**

#### MO80MD MID-**DRIVE MOTOR**

DP Motors' MO80MD mid-drive motor manages an efficiency of over 80%. It's designed for general use and can produce up to 80Nm of torque and speeds of up to 25 or 32kph. Its profile makes for clean integration into the frame, a fact helped by its sub 3.5kg weight. EN15194 and ISO13849 certified.

#### M065MD MID-**DRIVE MOTOR**

The M065MD is a road-focused mid-drive unit from DP. It aims to maintain the characteristic silent and smooth riding the brand is known for while providing up to 60Nm of torque. It's been designed to neatly integrate into the bike and offers a weight below 2.8kg. It's EN15194 and ISO13849 certified.

#### M120MD MID-DRIVE MOTOR

This super powerful mid-drive motor comes with a rating of either 750 or 1,000 watts and can produce up to 170Nm of support. Able to work to 25 or 45-kph cut-off points, it's an excellent option for aggressive mountain bikers or speed pedelec riders. Near-silent operation along with a 6.2kg weight.

#### RAM40 (MTB)

Upgraded (FAS) fixed axle-bolt Lightweight CNC'd chainring.

Durable 2-piece crankset structure. Standard 24mm OD spindle Easy-to-use non-drive side tension adjuster.

Customizable for different chainring interfaces

Compatible with Shimano Cues and SRAM systems.





Hall 12.0 | B07

#### **NEW PRODUCTS**

#### **CAMELBAK** M.U.L.E.TM **FRAME PACK**

The new M.U.L.E.TM on-bike pack is water resistant, has a secure and adjustable attachment and tube clip. It is built to withstand tough terrain and comes with a OUICK STOWTM 2L Bike Reservoir in two different sizes, large (4.5L of total capacity) and small (3L of total capacity) to keep the rider

always hydrated and ready to explore. Hall A23/121



#### **PANASONIC**

#### **GX ULTIMATE**

The GX Ultimate is Panasonic's most powerful and advanced motor unit. With a torque of 95Nm and a weight of only 2.95kg, this mid-motor is made for use in demanding e-MTB and trekking conditions. Despite its powerful output, it benefits from a compact housing that's easy to integrate for frame makers. Hall 8.0 / H24



#### TREND **POWER TECHNOLOGY**

#### **SLIM-TUBE** 540/600 **BATTERY**

These new batteries from Trend Power are offered in 540 and 600Wh capacity versions. Each delivers a compact and lightweight design and intelligent charging support. They're compatible with multiple 36V e-systems and can be integrated above or below the downtube. They can also be twinned with the firm's REX-250 range extender battery pack.



# WINGBACK

HELMET

Abus follows its GameChanger. AirBreaker, StormChaser and PowerDome helmets with the WingBack. This model focuses on urban riders and uses many features found elsewhere in the range. It's also produced in Abus' Italian manufacturing facility. The helmet features a slim shape, substantial air vents and comes in three sizes. At the same time, it still manages an attractive entry-level price point.

#### **M1 SPORTTECHNIK**

M1 400.SX

The all new M1 400.SX, a full-suspension e-bike with new Bosch Performance SX motor, 400 Wh battery and an optional Range Extender with 250 Wh, is a true all-rounder: cruising on all terrain with the GT edition, bike adventures with the CC edition, endless fun with the AM edition, unforgettable adrenaline descents with the EN edition or experiencing sporty luxury with the WorldCup



#### **NIGHTBLAZR HELMET LIGHT**

The NightBlazr aims to ensure 360° visibility on the road in low light. It does this by adding electroluminescent light blades that attach via the vent holes in your helmet. White at the front and red at the back, the system provides excellent side-on visibility and an output of 310 lux. It's also weatherproof and offers a run time of up to 12 hours following 100 minutes of charging.



#### FPD-C41 **PEDALS**

compatible with the popular Look Keo-style cleats. Making it easy for users to locate spares, they offer an affordable entry to clipless pedalling and feature an aerodynamic design along with a sealed bearing construction. Their fitting is achieved with a 6mm Allen key for neat integration with the crank. Weight is 296g per pair.

#### **PATENTED** ONE-PIECE **FORGED FORK**

iary company, 3D Technology, Inc. has developed an innovative bicycle front fork constructed from aluminum alloy forged as a single part without seams or welds resulting in a significantly stronger and safer front fork. A variety of fork designs can be produced using our 3D-forging technology to suit bicycles of every category. Hall 9.1 / CO5

#### **ARMOR** LA BICI **REAR** CARRIER

This alloy rear carrier is aimed at e-bikes and is compatible with an integrated light system. The matching design of the two elements allows the light to perfectly follow the curved shape of the carrier for improved aesthetics and wide-angle visibility. The rack itself is extremely robust and features oversized struts for stability. Hall 9.1 / A17





#### S 3

# UNIBIKE TAKEOVER TO SUPPORT NEOMOUV'S EXPANSION

Neomouv wants to target new markets with more customized products and service, following its acquisition of Unibike in Portugal earlier this month.

The French brand of e-bikes **Neomouv [Hall 9/ B11]** agreed to buy 80% of Unibike's capital through its parent company. The stake was divested by Sergio Ramos, who built up the Portuguese e-bike assembly and painting specialist.

"When you can manage painting and assembly, you can offer a better service to your customers," explained Philippe Vaxelaire, Neomouv's majority shareholder and chief executive, at the firm's Eurobike stand yesterday.

Vaxelaire said that ownership of the Unibike facility would make it easier to adjust production for smaller runs and specific markets. The brand from La Flèche sold about 30,000 units last year, some 80% in the French market.

The buyer added that the takeover would make Neomouv more agile, and provide it with more security for its assembly and painting.

Conversely, Neomouv's insights into the industry could serve other Unibike customers, Vaxelaire said. "We know how to manage the supply chain and we have a certain knowledge of e-bikes," he said, with a hint of understatement. That includes a strong network of component suppliers.

However, both parties insist that Neomouv and Unibike will continue to be run separately, which will make it easier to properly support Unibike's other customers.

An engineer, Vaxelaire moved into the bike business by acquiring Eazy Mouv in 2003. This makes Neomouv one of the earliest players in the European e-bike market, Vaxelaire added.

Unibike has been Neomouv's manufacturing partner for several years. After the complete rebuild and expansion of its factory in Soza, it has a capacity for assembly of about 250,000 e-bikes per year.

But its painting facilities are perhaps most distinctive, with a capacity of about 1,000 frames per week for wet painting, 1,800 frames per week for powder coating and 300 to 400 per week for carbon frame painting. Just as importantly for Vaxelaire, Unibike's wet painting is water-based, without solvents. Portugal's prime minister, António Costa, made a point of checking out the plant just last week.

The acquisition was supported by Neomouv's shareholders. They include Sodero Gestion, a regional French invest-



Philippe Vaxelaire from Neomouv (in the driving seat) and Sergio Ramos from Unibike.

ment firm. The shareholders all agreed to take part in a capital increase of €2.7 million. Several banks are supporting the project as well.

Vaxelaire said Neomouv stands out for its riding assistance and its price quality ratio. It will launch its own app in the next few weeks in partnership with Trackap, a French firm, for tracking and maintenance purposes.

Unibike was entirely rebuilt after a devastating fire in 2019. The entire plant's surface roughly tripled to 15,000 square meters. Unibike will be profiled in today's edition of the Show Daily.

It was in part due to the pressure of this reconstruction that Ramos decided to exit. He is at Eurobike and continues to advise Vaxelaire. His two daughters, Paula and Victoria, held on to their



Portugal's Prime Minister, Antonio Costa, racing Philippe Vaxelaire on a Neomouv bike at Unibike's factory

minority stake in Unibike.

Ramos said he received offers from several financial investors and larger companies but preferred to sell to his long-time partner. ■ BS

# YFLAB MAKES EUROBIKE DEBUT WITH HIDDEN GPS TRACKER

Slovenian-based developer of GPS tracking solutions **YFLab [Hall 8.0 / B49]** officially enters the bicycle industry at Eurobike with its full-featured BikeFlare VISIO bike GPS tracker and alarm.

BikeFlare VISIO is an anti-theft tracker hidden within the handlebars. Two modules with a total weight of 80g can be tightly fit on most bikes with standard-sized handlebars (17 - 22mm diameters). It can be installed either by clients themselves or at the bike stores.

BikeFlare VISIO has integrated Magenta's (formerly T-mobile) e-sim card, compatible with 2G and LTE networks in 130 countries. With a €129 price tag, subscription prices starting at €3.15/month and a two-year warranty, it presents great value for an advanced GPS, Wi-Fi, and Bluetooth tracker with a sound alarm.

#### Two Alert Types

The user is always protected, as the automatic Bike-Has-Moved alert is activated 5 minutes after the bike is idle. Any suspicious movement

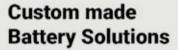
will generate a Bike-Has-Moved notification.

However, for the best protection, users should manually arm the BikeFlare-Alarm when parking or storing a bike. They can choose between discrete and audible alerts depending on their preference. Their phone will receive high-priority sound notifications even in do-not-disturb mode. If the audible alarm option is active, the siren on the bike will go off.

There are many other useful features such as geofence alerts, sharable bicycle passport, live tracking, and location history.

YFLab specializes in safety and security GPS

tracking solutions. The company was established in 2020 with a strategic investment of the Slovenian National Automobile Association. Its mission is to help customers protect some of the most precious things in life. For more information, visit www.getflare.eu.



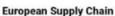


Viridus is a Danish battery manufacturer. We produce highquality and high-performing battery packs for the e-mobility industry.



Come visit us in Hall 8, Stand H22







Scandinavian Battery Pack



Batteries of EU origin



Viridus A/S - Langdyssen 6 - DK-8200 Aarhus N - Info@viridus.com - www.viridus.com

#### **3D PRINTED TITANIUM ROAD BIKE**

#### **PILOT SEIREN: A BIKE THAT'S FIT TO PRINT**

Dutch company Pilot has unveiled the latest development in 3D printed bikes with its Seiren 3D printed 100 percent titanium road bike.



Tim Blankers with Pilot's 3D printed titanium Seiren road bike

The Seiren represents a turning point for the Dutch company, which established itself in 2013 with the debut of two custom titanium mountain bikes. Just a year later the company began making production titanium bicycles. Now with the Seiren, **Pilot [11.0 / C01]** has integrated 3D titanium printing into its range of bicycles.

Benefits to the printing process include a thinner wall thicknesses, which results in a lighter and stronger frame without stress points. The Seiren's frame weight is only 1150 grams compared to the Celes's 1700 grams. The fully built display bike currently tips the scales at 7.2 kilograms, but Pilot is confident that the Seiren can

reach the hallowed 6.8 kg minimum race weight established by cycling's global governing body with further modifications to the bike's build.

Printed in Germany in approximately eight hours, each Seiren is first produced in three pieces, which is one of the limitations of current 3D printers. The separate parts are transported to Pilot in The Netherlands where they are assembled. After each piece has undergone surface treatment to smooth over superficial irregularities left behind by the printing process, the pieces are then heat treated to strengthen them. The pieces are bonded with glue and sandblasted to finish. The frame is 100 percent recyclable with minimal waste produced during the manufacturing process.

The seat tube-to-frame connection is the Seiren's standout – if not attentiongrabbing – feature. The S-shaped tube is a deliberate design to accommodate the current state of 3D printing yet Pilot claims it also has performance benefits to yield a cushier ride.

Pilot claims that by producing the Seiren locally, overseas transportation is eliminated, and working conditions can also be more vigilantly monitored and maintained. At the same time, this supports local economies, both directly and indirectly.

In the past, printing bike frames

has opened up the possibility of total customization but given the sizing variables and the current state of 3D printers, printing custom bikes may remain aspirational.

"Printing custom bikes has its limits," said Tim Blankers, marketing and communication manager for Pilot. "We say we make 'customized mass production' bikes."

Instead, the Seiren is "made to order" according to the specific requirements of a customer's order, which may be misinterpreted if the customer is expecting a custom bike experience. The customer does have some control over the bike's design, for instance the bike can be printed with a front derailleur mount or not. The pre-production process enables rapid adjustments to personalize the customer journey.

The current version of the Seiren is a prototype that's slated for a thorough product test in October of this year. The bike will be sold as a complete bike with top-of-the-line groupset options from Campagnolo [11.0 / C08], Shimano [11.0 / A16], and SRAM [12.0 / A18]. Production models of the Seiren will be available at the beginning of 2024. The current suggested retail price for the Seiren is €17,000. ■ WB

#### SEASONED OUTDOOR BUSINESS MANAGER TO REINFORCE KONA IN EUROPE

Frank Heissat has taken up an assignment to structure **Kona Bicycles [Hall 11.0 / D01]** in the European market, taking over the regional leadership from Jimbo Holmstrom this month.

Heissat was on hand at Eurobike yesterday to explain that the brand wants to take more advantage of Kona's potential across Europe, the Middle East and Africa.

The Frenchman indicates that he wants to intensify partnerships with some retailers and come up with new ways to sell bikes – allowing both parties to make sufficient margins.

Formerly with Oakley and Dakine, Heissat is highly familiar with the bike market. He is widely recognized in the sports and outdoor industry, where he worked for companies such as Nike, Puma and Le Coq Sportif. He has another assignment as interim chief executive of Movement, a Swiss ski brand.

Heissat became involved with Kona through Kent Outdoors, a U.S. group of water sports and outdoor brands that bought the business in January last year. His initial assignment as general manager for Kona Europe is until the end of this year.



Frank Heissat at Eurobike yesterday

"It's about structuring Europe in a different way, really defining the development plan, the roadmap to sustainable and responsible growth, and setting up a platform that could help the group to onboard other brands as well," Heissat said.

Kona was established in Europe under Holmstrom's leadership, with warehousing in the Netherlands and the U.K., and distribution across the regional market.

Heissat found that Kona is



Kona is live-building bikes at its Eurobike stand

strongly appreciated in Europe, across the gravel and bikepacking market as well as commuting and mountain biking. But he reckons that there is a substantial upside for the brand from Scandinavia to Iberia and South Africa.

Kona staff are live-building bikes at Eurobike – including an aluminum version of the ProcessX that will be used by Noah Hofmann, the Austrian rider.

#### **E-BIKE RENTAL SERVICE**

### RIESE & MÜLLER LAUNCHES **E-BIKE SUBSCRIPTION PLAN**

More than 150 German bike retailers have agreed to take part in a rental service launched by Riese & Müller, which could help it reach a wider range of customers. The high-end German bike company piloted the subscription concept last August, and it's now decided to implement it around the country.

Four bikes are on offer, with monthly prices starting from €49 for a Nevo with a commitment of at least two years. This e-bike model has a recommended retail price of nearly €4,650.

Wanda Kesel, team lead concepts and innovation, explains that Riese & Müller is responding to demand from a group of customers who are not eager to own vehicles - or who may not want to invest a substantial sum all at once.

"Our bikes are high-quality and therefore not the cheapest," said Kesel. "This gives us the opportunity to offer our bikes to people who maybe can't afford a large amount of money at once and those who want to test a bike for more than just one test ride at the dealer."

Riese & Müller has created a special online platform for its rentals, where customers pick their bike and frame size, and their preferred dealer. The company will then pre-build the bike and dispatch it to the dealer. After a quick fitting, it will be handed over to the customer. The dealer will be the point of reference for any maintenance and repairs, which are included in the package.

Kesel said that the project has been well-received by retailers.

"They understand why we do this," she said. "They have customers who are hesitant because of the price of e-bikes, and they have customers who ask for leasing options," she said.

About 400 riders have become active rental customers so far. The plan is that they will be able to purchase their bike after the expiration of the minimum subscription period - at the recommended retail price, minus 90% of the rental fees that they have already paid through their subscription. Kesel said that this option is planned for launch in July.

Along with the Nevo, the rental bikes include two newer urban and lightweight bikes with more connectivity, and the Multi Tinker cargo bike. The shortest rental involves a commitment of at least six months, while the longest period is two years.

The 150 participating dealers are a subset of Riese & Müller's sales network of around 800 retail partners in Germany. Those on the rental platform are part of the brand's "hybrid dealer



Wanda Kesel, team lead concepts and innovation at Riese & Müller

concept." This means that they are partners for its online sales platform, among other projects.

Kesel said that Riese & Müller will continue rolling out rentals in Germany before a potential launch in other

markets. As she explains, the company previously had fewer direct touch points with end consumers. "We're still looking at what we need to do to make this scalable," Kesel said, not least for the automation of some processes.



#### ORCK TEAMS UP WITH CHINESE GIANT

Markus Storck, a well-known premium player in the German bike industry, has entered a German-Chinese joint venture. At this year's Eurobike two brands and 25new e-bike models are being launched.

As one of the biggest bicycle manufacturers in China, Golden Wheel produces two million bicycles and 300,000 e-bikes a year and is active in the European market mainly via its Totem [hall 12.0 / BO4] brand. This is mainly sold at low price points through D2C channels. But thanks to the joint venture now set up with Markus Storck, Golden Wheel is about to significantly increase its presence in European markets. The new company is called E:Raddar Europe and is based in Idstein. The two new e-bike brands hitting the market are called E:Raddar and Upland.

The E:Raddar models stand out

with some unique features. They rely on proprietary mid-motors called E:Raddar ER90, Einstein ES80 and Einstein ES60, run on 48 V and use a modular battery system with 240 Wh, 480 Wh or 720 Wh capacities. The models also offer advanced connectivity solutions derived from motor sports and a digital rearview mirror that links a camera mounted under the saddle to the smartphone on the handlebar. Storck is taking a leading role in product development and is also responsible for the distribution of the new e-bikes. The assembly of the e-bikes will be handled by the company's own assembly operation.

As part of the joint venture deal Markus Storck's high-end premium bikes made of carbon will become available in China as well. LVR

#### STROMER AND DARFON **NEXT-GEN CERAMIC BATTERY TECHNOLOGY**

Known for offering some of the largestcapacity batteries in the bicycle world, Swiss speed pedelec specialist Stromer is partnering with Darfon on getting the next generation of e-bike batteries to market. The claimed advantages of the solid-state ceramic battery sound very promising.

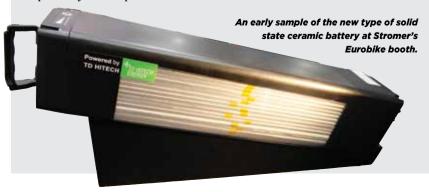
Speed pedelecs provide support up to 45 kph. This powerful support and the typically longer distances covered with fast e-bikes come at a price, as they rely on large-capacity batteries. Swiss premium speed pedelec specialist Stromer [hall 12.0 / A09] has set new benchmarks in terms of battery capacity before, maxing out at 1440 Wh on its flagship model. For its batteries, Stromer has been relying on Taiwanbased TD Hitech Energy from the start. In 2020, this company was acquired by its compatriot Darfon

[hall 8.0 / I10]. Now Stromer has teamed up with Darfon and TD Hitech Energy to bring a new battery technology to the market.

According to Stromer co-CEO Tomi Viiala this solid-state ceramic battery promises big advantages: "Compared to lithium batteries, this new technology reduces the risk of fires significantly, and more importantly the charging can work at temperatures as low as -20°C and be 5 to 10 times faster. This should cut the charging time for our largest batteries from six hours to 20 minutes. Needless to say, this is going to be a real game changer.'

Don't break open your piggy bank just yet however — according to Viiala, this new technology won't be commercially available until 2027.

LvR



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#### **ADVERTISING INDEX**

A-Forge Enterprise	39	FPD Industry	42	Neco back c	over
A-Pro	31	Fulcrum Wheels	41	Okawa Motor Technology	18
Alfred Thun GmbH	11	Fumpa Pumps	13	Ortlieb Sportartikel GmbH	40
Armor Manufacturing C	Corp. 49	Giyo/Co-Luck ent.	28	Robert Bosch GmbH	8
Astro Tech	21	Grofa	53	Samox/Chuan Wei	57
Bafang	front cover	Gronbla A/S	42	SIBMX	16
Barbieri	62	Hafny	45	Splendor Hotel Taichung	48
BMD Bohemia s.r.o.	4	Joy Industrial Co., Ltd	17	SteigUm.de / fast2work GmbH	50
Brose	27	Julbo	37	Taipei Cycle	63
by,schulz GmbH	30	Kryptonite	25	TSG International	16
Critical Cluster	55	KS/Kind Shock	19	Vaude Sport GmbH	47
Crops Co., Ltd.	38	KT / Kun Teng	15	Velo	43
Deutsche Bahn Connec	t 35	Magura	23	V-Grip/Chen Whua	40
DP Motor	7	Messingschlager	front cover	Wellgo	9
Econo powered by Comtron d.o.o.13		Miranda	2		



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# VELCO TEAMS UP WITH SHIMANO FOR CONNECTIVITY

Velco has struck a partnership with Shimano, to integrate functions of its digital ecosystem with Shimano Steps systems.

"We worked together with Shimano to provide a complete solution to their customers, the e-bike brands – hardware and software, compatible, certified, with warranties," said Pierre Régnier, Velco's chief executive and co-founder.

#### **Velco [Hall 9.2/ C32]** is a French company that started in

2016 with Wink Bar, a connected handlebar. But in recent years it's shifted its focus to a wider range of solutions relating to connected mobility. It has been building up a more complete ecosystem, which uses a compact IOT device dubbed the Mobitrax. Velco offers functionality for end users as well as bicycle brand owners and fleet managers.

Velco has already worked with Shimano as well as suppliers such as Polini, Valeo, Bafang and Bosch. But due to the intensified partnership, e-bike brands using Shimano Steps will have uncomplicated access to anti-theft and maintenance features from Velco. Others focus on the rider's security, such as a crash detection.

"We're the off-the-shelf solution



Pierre Régnier, Velco's co-founder and chief executive.

for Shimano," Régnier said at Eurobike yesterday. "This means that the e-bike brands save a lot of time implementing the Shimano Steps and Velco solutions."

The chief executive added that Velco will develop more features together with Shimano customers, which will help them to differentiate through their connectivity solutions.

This could relate to features such as the shutdown of the electric assistance of the bike, alerts for technical errors or low battery levels. ■ BS





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