

icbr 2022

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Interview with Gunter Flinspach, ebike Systems Management Consulting at Robert Bosch GmbH, keynote speaker at the International Battery Recycling Congress ICBR 2022

ICM: What is the current context for Light Means of Transport (LMT) batteries?

Gunter Flinspach: Lithium-ion technology is the enabler of the success story of light electric mobility. Over 5 million eBikes have been sold in the European Union last year. This makes the eBike the most successful electric vehicle in Europe and the driver of a sustainable mobility transformation. A growing number of eBikes goes hand in hand with a growing number of batteries. So efficient collection and recycling schemes for defective or used batteries are of high importance for a sustainable eMobility and a circular economy.

ICM: What are the key challenges facing this market?

Gunter Flinspach: First of all, we need to have proper recycling schemes in all countries. At the European level there is still much potential for improvement regarding the collection and recycling efficiency. But even in countries like Germany where such solutions exist, we have to make people aware of it. A lot of people do not know that they can return batteries that have reached the end of their life cycle at their bike dealer. So, it requires an effort from all stakeholders to educate and motivate the customers to return batteries. And secondly, we have to create awareness that recycling is the only proper way to handle eBike batteries at the end of their lifetime. Lithium-ion batteries for pedelecs are complex, finely tuned systems with a high energy content. For safety reasons, faulty, old or 'worn out' batteries should not be repaired or refreshed. For example, the correct functioning and optimum interaction with the battery management system can no longer be guaranteed if the battery is repaired.

ICM: What is Bosch eBike Systems' vision for the future?

Gunter Flinspach: For Bosch eBike Systems, sustainability is not an additional task, but the core of our business. From the moment we start to develop a product, we pay close attention to its resource requirements and environmental impact. In this 'Design for Environment' process, we consider how a new product can be designed to be as sustainable as possible. For example, with our partners we aim to further increase the capacity of battery cells while at the same time minimising the proportion of valuable raw materials they contain.

As regards recycling, Bosch eBike Systems supports new and sustainable recycling methods, and in all countries where it is legally possible, voluntarily assumes responsibility

for recycling obligations through local service partners, whilst also absorbing the costs. In countries where recycling solutions are not yet available or existing recycling solutions are inadequate, Bosch remains in close contact with its partners, and provides support for pilot projects or the development of industry solutions. We aim to work with manufacturers to allow as many Bosch eBike System users as possible to find a recycling solution in their country.

In the long term, our vision is to achieve a circular economy for eBike batteries. We believe that continuous optimisation processes can result in a narrow closed-loop system for batteries with a minimal CO₂ footprint throughout the entire cycle – with as few stations as possible through short direct routes, locally organised collection & sorting, and highly efficient recycling technologies.

ICM: You are speaking at ICBR22, what are your expectations?

Gunter Flinspach: I am looking forward to the ICBR22 to share experiences with people from other industries as well as to further promote efficient collection and recycling schemes for eBike batteries. Exchange between all stakeholders is important to realise the vision I have outlined above: to achieve a closed-loop recycling system for EPAC (Electric Power Assisted Cycle) batteries with a minimal carbon footprint.

For further information and pictures please contact:

Jill Ledger | Marketing and Communications Director

ICM AG | Schwaderhof 7 | 5708 Birwil | Switzerland
+33 680 11 22 49 | info@icm.ch | www.icm.ch



About ICM

ICM AG is the international leader in circular economy congress organisation, specialising in automotive, electronics and battery recycling as well as e-mobility; some of the fastest-growing markets and waste streams in the world. Headquartered in Switzerland, ICM has been bringing together the entire value chain of the recycling industries in Europe, North America, and Asia for the last 27 years. The experienced ICM team speaks English, Chinese, French, German, Spanish, Italian, Serbian and Bulgarian.