

## Autoliv and POC join forces to reduce cyclist head injuries – a helmet with an integrated airbag

***(Stockholm, Sweden, July 11, 2022) – Autoliv, Inc. (NYSE: ALV and SSE: ALIVsdb), the worldwide leader in automotive safety systems, and POC, a global leader in snow sports and cycling protection, have joined forces to study and develop bicycle and e-bike helmets equipped with airbag technology to improve head protection and reduce the consequences of an impact.***

Head injuries alone account for half of the deadly bicyclist injuries. Although it is established that helmets are beneficial to head safety, the latest Bicycle Safety report by Swedish insurance company Folksam makes the case that helmet absorption efficiency could still be greatly improved, especially when collisions occur with a car at speeds above 20 km/h (12 mph).

POC and Autoliv have been working together to assess the potential of using airbag technology in helmets. The airbag would act as the initial energy absorber while the underlying helmet would be the following energy absorber.

After conducting a pre-study, conclusion from the Autoliv research team is that a cycle helmet with an integrated airbag can significantly improve protection and reduce the consequences of impacts to cyclists. The combination of both absorbing technologies enables a reduction of the peak linear head acceleration and significantly reduced head injury risk in impact tests. The pre-study also showed that the protection improvements could be reached without critically compromising the design, weight, or comfort of a helmet designed with integrated airbag technology.

“Autoliv is committed to the vision of Saving More Lives and to providing world class life-saving solutions for mobility and society. The safety of vulnerable road users, such as bicyclists and e-bike riders, is high on our agenda. Therefore, it was natural to collaborate on this initiative with POC, a leader in bicyclist safety, to explore how to improve helmet protection in current standard testing and more challenging scenarios, such as higher impact speeds.” says Dr. Cecilia Sunnevång, Vice President Research, Autoliv.

The pre-study showed that the addition of airbag technology on top of the helmet can significantly contribute to enhanced safety performance, especially in linear impacts. It is estimated that the risk for a bicyclist to sustain moderate to fatal head injuries is reduced from 80% to 30% in a 20 km/h (12 mph) impact.

“Our safety mission drives everything we do, and we always challenge conventional thinking in order to improve protection. Helmets are tested and certified in a laboratory setting and can never fully address all the real-world variables of bike crashes. Together with Autoliv, who are world-renowned and have some of the most advanced testing and research facilities in the field, we have embarked on a development journey with airbag technology, asking ourselves what could be done to excel in current test scenarios and push the envelope towards even more shock absorbing capacity” says Oscar Huss, Chief Product Officer, POC.

### Finding new ways to save lives

Boosted by the increased environmental consciousness and the emergence of e-bike commuting, the number of bicycle riders worldwide is increasing rapidly. This growth needs to be supported by an improved helmet protection, especially at higher speeds enabled by e-biking. During the pre-study, Autoliv and POC developed the initial concepts by advanced simulation tools and conducted correlated physical crash tests. The successful outcome of the pre-study will now lead to further

testing and refinement with the objective of developing the concept further and potentially bringing a product to the market.

Autoliv has formed Mobility Safety Solutions (MSS) to extend its business into new market areas beyond light vehicles and occupant safety. By combining our core competence and industry experience, MSS develops and manufactures mobility safety solutions such as pedestrian protection, battery cut-off switches, connected safety services, and safety solutions for riders of powered two-wheelers.

Read more about our findings – <https://campaign.autoliv.com/helmet-with-airbag>.

#### **Inquiries Autoliv:**

Media: Gabriella Ekelund, Tel +46 706 12 64 24

Investors & Analysts: Anders Trapp, Tel +46 858 72 06 71

Investors & Analysts: Henrik Kaar, Tel +46 858 72 06 14

#### **Inquiries POC:**

Media: Damian Phillips, POC, Head of Global PR and communication, [damian.phillips@pocsports.com](mailto:damian.phillips@pocsports.com)  
mobile: +46 702 77 69 44

#### About Autoliv

*Autoliv, Inc. (NYSE: ALV; Nasdaq Stockholm: ALIV.sdb) is the worldwide leader in automotive safety systems. Through our group companies, we develop, manufacture and market protective systems, such as airbags, seatbelts, and steering wheels for all major automotive manufacturers in the world as well as mobility safety solutions, such as pedestrian protection, connected safety services and safety solutions for riders of powered two wheelers. At Autoliv, we challenge and re-define the standards of mobility safety to sustainably deliver leading solutions. In 2021, our products saved close to 35,000 lives. Every year our products prevent more than 300,000 severe injuries.*

*Our more than 60,000 associates in 28 countries are passionate about our vision of Saving More Lives and quality is at the heart of everything we do. We drive innovation, research, and development at our 14 technical centers, with their 20 test tracks. Sales in 2021 amounted to US \$ 8.2 billion. For more information go to [www.autoliv.com](http://www.autoliv.com).*

#### About POC

*POC, a leading manufacturer of helmets, eyewear, body armor and apparel, has been awarded more than 70 international safety, design, and innovation awards. Founded in 2005 in Sweden, POC's mission is to "protect lives and reduce the consequences of accidents for athletes and anyone inspired to be one". [www.pocsports.com](http://www.pocsports.com)*

#### **POC's Whole helmet concept™**

*Advances in science and research consistently reveal the brain's awe-inspiring complexity and role in shaping who we are. It is central to our wellbeing, it makes us unique, it drives us, but it is also delicate, fragile and needs protecting. It hurts when you break a bone, but in most cases it will heal.*

*Damage the brain and the outcome is altogether less certain. That is why we created our unique **whole helmet concept™ to development and testing, where each feature, component, shape and material is designed specifically to work together.***