Seoul Robotics Partners with ALP.Lab To Enhance Safety on European Roadways With 3D Perception Technology

Partnership delivers key insights to strategically advance EU's goal of zero fatalities by 2050

Graz, Austria, November 7, 2023 – Seoul Robotics, the company driving smart 3D infrastructure solutions, today announced a partnership with ALP.Lab, an Austria-based test laboratory for automated driving systems, to provide 3D perception traffic safety systems for the DACH region and Central Europe. The LiDAR systems provide detailed insights into accident-prone intersections and are currently being deployed in Salzburg, Austria.

The European Union (EU) has set a goal of reducing overall road deaths to zero by 2050. Progress has been made across Europe however, the number of bicycle crashes has remained consistently high with it being the only mode of transport that has not declined in fatalities over the past decade. Cyclists have had the greatest increase in serious crash-related injuries at 24%, with a high proportion of cyclist fatalities occurring at intersections. In order to achieve the EU's goal and save lives, Seoul Robotics and ALP.Lab developed a LiDAR-based system, powered by Seoul Robotics' perception software, SENSR™, to better understand interactions between vulnerable road users and vehicles.

Salzburg Research deployed the solution in cooperation with the Mobility Laboratory *zukunftswege.at* after identifying two high-risk intersections with multiple bicycle lanes in the city of Salzburg. The solution was designed to collect and analyze precise and high-frequency data of all road user movements and specific and complex interactions between vehicles and vulnerable road users. "Based on the comprehensive data gained, we can analyse road user behavior and conflict situations and derive valuable insights, which generally contribute to an increase in road safety for all road users and specifically enable improvement measures at the analysed intersection", said Siegfried Reich, Managing Director at Salzburg Research.

> *Access to the infrastructure at the intersections was very easily established via the zukunftswege.at mobility laboratory. "With the help of our real-world laboratory environment, results from the tests can be passed on directly to the city and state of Salzburg as the responsible regional authorities", said Christian Kainz, Project Manager of the mobility laboratory zukunftswege.at.*

> *"Road design plays an enormous role in user safety and until recently, there's been very limited quality data that can decipher the chaos and show us where we need to improve," said Christoph Knauder, Manager Operations at ALP.Lab. "This is especially true for cyclists which are a major pain point in Europe's mission towards zero road deaths by 2050. We're excited to grow our partnership with Seoul Robotics so that more cities across Europe can get the insights they need to build smarter, safer roads."*

Each Salzburg intersection has been equipped with four respectively six sensors and a LiDAR-Processing Unit running Seoul Robotics' perception software. SENSR collects data from strategically positioned sensors for insights into the position and speed of objects within the intersection and is uniquely able to differentiate between cyclists, pedestrians, and vehicles in order to simultaneously and anonymously analyze their movements.

"Improving safety for cyclists and pedestrians not only reduces road fatalities, but also encourages active mobility which reduces congestion, emissions, and generally leads to a healthier population," said William Muller, Vice President of Business Development at Seoul Robotics. *"Together with ALP.Lab, we're helping Salzburg create a blueprint for mobility solutions and generating huge amounts of quality data for further custom processing and smart city applications."*

SENSR's industry-leading deep learning AI uses non-biometric data to accurately detect, track, and classify hundreds of street-level objects, even in harsh weather conditions. The 3D perception software is sensor agnostic and able to seamlessly fuse multiple LiDAR makes and models to get a full picture of the intersection and the connecting roads in one field of view. When deployed, the technology records high-quality data that will be utilized for unprecedented analytics.

Through this partnership with ALP.Lab, Seoul Robotics-powered solutions will soon expand across Austria, and into Germany, Switzerland, and the broader Central Europe region.

To learn more about ALP.Lab, please visit www.alp-lab.at. For more on Seoul Robotics, please visit www.seoulrobotics.org.Information on Salzburg Research can be found under www.salzburgresearch.at. The Urban Mobility Laboratory Salzburg *zukunftswege.at* can be visited under www.zukunftswege.at.

About Seoul Robotics
Seoul Robotics was founded in 2017 with a mission to unlock unparalleled insights and capabilities by capturing the world in 3D. The company's core technology, SENSR™, is a patented 3D perception software that uses AI deep learning and weather-filtering capabilities to provide the most advanced, accurate environmental insights. Today, this industry-leading software delivers transformative intelligence and capabilities across a wide range of industries, including, Intelligent Transport Systems, security, smart cities, and autonomous mobility. Powered by SENSR, Seoul Robotics is pioneering a new approach to automating vehicles called 'Autonomy Through Infrastructure,' providing infrastructure-based autonomous driving systems that do not require any hardware changes to vehicles themselves. Seoul Robotics has offices in Seoul, Munich, and Atlanta, and is backed by leading global financial institutions. For more information, visit www.seoulrobotics.org.

About ALP.Lab
ALP.Lab is the Innovation Hub for automated climate-neutral mobility and provides comprehensive services for safe and secure testing of automated driving technologies. Founded was founded in 2017 with the support of the Federal Ministry for Climate Protection and the Austrian Research Promotion Agency FFG. ALP.Lab provides an integrated test chain for automated driving functions and technologies, offering testing activities on test tracks and public roads. ALP.Lab offers a holistic traffic monitoring solution to create testing scenarios out of real-life driving behavior in primary, secondary, and urban road networks. Further, ALP.Lab is an accredited Euro-NCAP laboratory for active safety testing and is highly experienced with different testing equipment and proving grounds. A strong network of industrial and scientific partners support the capabilities of ALP.Lab for safe and secure testing of any autonomous mobility solutions. For more information, visit www.alp-lab.at and follow ALP.Lab on LinkedIn or YouTube.

About Salzburg Research
Salzburg Research is an innovation-driven, non-profit research and technology institute owned by the federal state of Salzburg that conducts applied research in the area of information and communication technologies, with a focus on motion data intelligence. Four research departments cover a vast area of scientific, technological and socio-economic expertise including human motion, mobility and transport analytics, intelligent connectivity, processing platforms, and innovation and value creation with a focus on data-based behavioural incentivisation mechanisms. The strength of Salzburg Research lies in the interdisciplinary combination of different fields, ranging from technological research and development, to the creation of software prototypes, the conduction of field studies and the evaluation of new technologies. www.salzburgresearch.at

About zukunftswege.at

The mobility laboratory *zukunftswege.at* assists research and innovation drivers in the development of their potential and aims to initiate and help new projects. The aim is to develop sustainable mobility solutions, to reduce and at the same time better organise traffic in the city and surrounding communities. To this end, the mobility laboratory provides real-world laboratory environments in order to test new technologies and applications directly on the road. New projects will be created by networking industry, business and research. This should therefore contribute to the transport revolution, including in respect of climate neutrality, within the strategies and master plans of the city and state of Salzburg. Through close cooperation with the city and state of Salzburg, the findings of the projects flow directly into the practical planning and implementation of transport measures, mobility projects and awareness-raising actions. On the other side, innovation projects benefit from the support and know-how of Salzburger Verkehrsverbund GmbH and the partners involved. www.zukunftswege.at