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## Press release

Date: 31/7/1

### Maiden flight pushes boundaries in surveying

The Routescene® proposition to transform the approach to surveys across the world is taking hold. Collaborating with Hanseatic Aviation Solutions we have jointly developed an integrated fixed-wing Unmanned Aerial Vehicle (UAV) and LidarPod® solution, which we believe is the first commercially available product in the world.

Following in-depth customer research, we identified a gap in the market for an unmanned aerial 3D mapping solution capable of flying long-distances, particularly for use in large countries with great expanses of remote land such as Australia, USA, Canada and Eastern Europe. The applications of this integrated solution are diverse from long distance surveys such as powerline inspections in the utilities sector, biomass mapping of forests to geophysical surveys.

Our successful maiden flight of the integrated Hanseatic S360 and Routescene LidarPod took place July 2015 in Bremen, Germany, to demonstrate the capability of this new ground-breaking solution and to collect sample data (image of 3D point cloud showing the runway at Bremerhaven airport supplied). Indeed, the German aviation authorities are so confident in the product they gave permission for us to fly in the same circuit as manned aircraft.

The benefits of this fully integrated solution are impressive. The LidarPod is integrated internally within the S360 itself, rather than being wing-mounted, as may be seen with equipment elsewhere. This reduces drag which enables longer flight and survey times. Integration of the LidarPod into the nose cone of the S360 minimises the level of noise and vibration travelling from the rear mounted engine, ensuring the GNSS/INS is not adversely affected, enabling positioning to be as accurate as possible.

As opposed to rotor UAVs, the S360 is fixed-wing and built for endurance long-distance flights. In addition, it works in up to Force 7 winds extending the operational window in which surveys can be performed. The S360 has significant payload capacity enabling the integration of additional survey and geophysical sensors as well as the LidarPod. In summary, because this is an internally integrated solution it enables rapid set up and is easy to deploy in the field.

Michael Schmidt, Managing Director of Hanseatic Aviation Solutions, and Gert Riemersma, CEO of Routescene, met for the first time at Intergeo 2014 and immediately understood the potential power of a collaboration. Routescene launched the highly acclaimed LidarPod at Intergeo 2014, which quickly attracted wide interest and is now generating business across four continents. Hanseatic Aviation Solutions launched in September 2013 with the purpose of producing well-designed, robust and quality engineered unmanned aircraft which are easy to handle and maintain.

Gert Riemersma said, "The affinity between our companies and the potential was obvious. Exploratory discussions with clients confirmed a real demand and we started development in earnest at the start of 2015. We have already seen significant interest from the forestry and geophysical exploration community."

Michael Schmidt stated, "Our combined expertise and experience is unique, Gert is a seasoned surveyor and has worked with LiDAR since 2008. He has used his wealth of practical experience with survey sensors, in particular GPS/INS, to develop the LidarPod into a market-changing survey and mapping solution. I have over 15 years experience in the aerospace and aviation industry, enabling us to jointly design and manufacture a practical and rigorous integrated product which will withstand the harsh environments we expect it will be operated in."

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

[www.hanseatic-avs.de](http://www.hanseatic-avs.de)

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### **Editors Notes**

#### **About Routescene**

Routescene® is a global operation. We have a strong cutting edge culture, offering agility and innovation

Survey industry expertise is behind the Routescene LidarPod and LidarViewer. We offer authoritative insight across all aspects of data management and have industry recognition as data visualisation experts. We understand the problems the survey industry needs to solve and have combined intelligent thinking with experience to design a reliable and practical solution.

With this knowledge we have invented the Routescene LidarPod and LidarViewer. These products will deliver fast geospatial data capture, analysis and visualisation to improve commercial decisions and performance.

#### **About the LidarPod**

The Routescene LidarPod® is market-leading 3D mapping technology designed specifically for use on Unmanned Aerial Vehicles (UAVs). The LidarPod is a turnkey system developed to save time, improve efficiencies and productivity. The LidarPod enables faster surveys, decreasing time in the field and reducing data download time, ensuring users are working with resulting datasets within hours. This integrated product is lightweight, compact and exceptionally accurate enabling safe and cost effective surveys that previously could not have taken place.

#### **About Hanseatic Aviation Solutions**

Based in Bremen, Germany, Hanseatic Aviation Solutions GmbH offers innovative products and services based on their extensive experience in the aviation industry. The Unmanned Aerial Systems S360 and S180 Mk.2 offer proven concepts, following hundreds of successful flight hours and many missions. The development and manufacturing company provides bespoke tailored systems unique to the customer's application, as well as small series production.

#### **About S360**

The Hanseatic S360, designed for special missions, has a wing span 3.6m and is capable of up to 6kg payload. Combined with 4 hour endurance in the standard configuration, long range telemetry, an autopilot system and mission planning tool, the S360 is built for long-distance flights.

#### **Images supplied**

Routescene® LidarPod  
S360 with integrated LidarPod at Bremerhaven airport  
S360 with integrated LidarPod in flight  
S360 with integrated LidarPod magnetometer and nose pole  
3D point cloud data of Bremerhaven airport runway



S360 with integrated LidarPod at  
Bremerhaven airport



S360 with integrated LidarPod in flight



S360 with integrated LidarPod  
magnetometer and nose pole



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