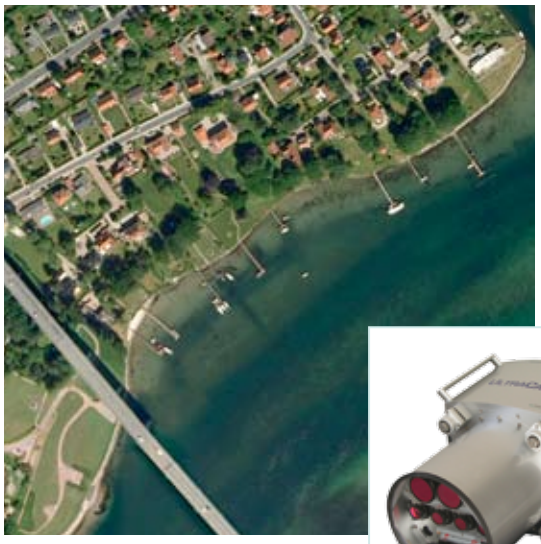
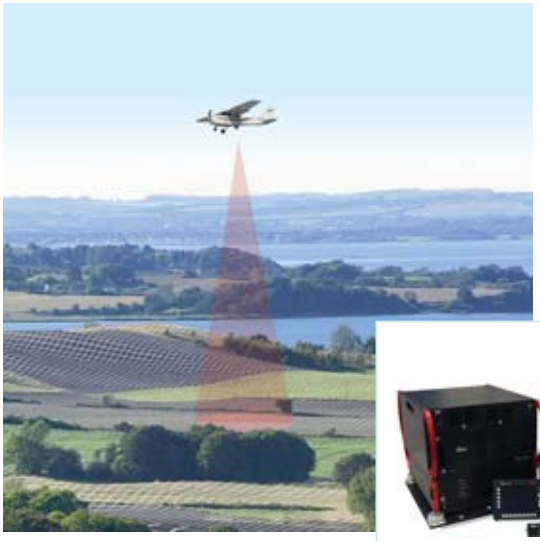
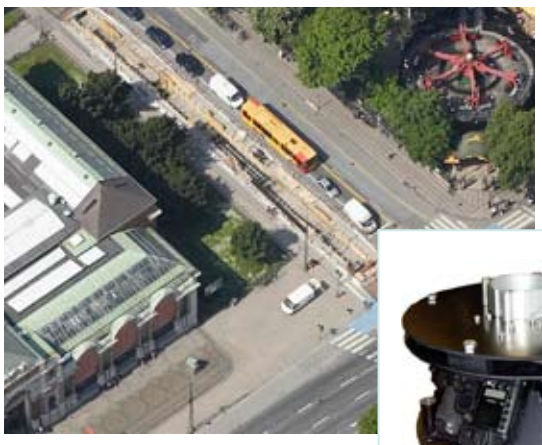
Sensor systems for aerial data capture



High resolution orthophoto



Laser scanning



Oblique photo

With COWI's investment in the latest large format digital cameras and LIDAR systems, we can ensure the delivery of high quality products within photogrammetric mapping, orthophoto production, laser scanning and other aerial data collection assignments.

COWI's aircraft and various camera systems are used in complex mapping tasks all over the world.

Vexcel UltraCam-D (UCD)

Vexcel's UltraCam-D large-format digital aerial camera consists of 8 lenses in total. The 4 centremost lenses generate a panchromatic image and the other 4 lenses generate the four colour images (red, green, blue, and infrared).

Vexcel UltraCam-X (UCX)

The UCX model provides the same obvious advantages as the UltraCam-D, but with superior specifications and extended capabilities. The UCX employs 7.2 micrometer pixels which results in an even larger format at 14,430 x 9,420 pixels (216 megapixels). This advanced camera system is fully compatible with the Vexcel workflow.

ASL50 II laser scanner from Leica

The market demand for height models with high accuracy has resulted in COWI investing in the ALS50 II LIDAR system from Leica. The ALS50 II has a height range of 200 m to 6000 m for both corridor and wide area applications. The ALS50 II operates with a maximum pulse rate up of 150 kHz with multiple returns and intensities, ensuring a high accuracy result. As well, this LIDAR system has an adaptive roll compensation tool for a full data coverage.

Oblique photo system

In 2007, COWI has further invested in two new oblique digital photographic systems. The photographs are captured through a systematic planning procedure which ensures sufficient overlap between the photos. Through improved GPS/INS and the calibrated high-end digital cameras, we are able to make accurate photogrammetric measurements with the oblique (16 megapixels) and nadir photos (31 megapixels). The pixel size in the photos is roughly 7-8 cm on terrain based on a flying altitude of approx. 400 m.

023-1416-cameras

COWI A/S • Parallelvej 2 • DK-2800 Kongens Lyngby
Tel. +45 45 97 22 11 • Fax +45 45 97 22 12
www.cowi.com/mapping

Per Nørgreen
Group Leader
Tel.: +45 45 97 25 60
E-mail: pno@cowi.dk