

Bluesky and Skyline Create Dynamic 3D Building and City Models



Aerial mapping company Bluesky is working with SkylineGlobe UK on a project to provide high-accuracy, photorealistic 3D city models that will be available as off-the-shelf datasets and via an internet streaming service. The new, dynamic 3D models will provide a visualization and analytical platform for smart city projects, transport and infrastructure planning, risk assessment and mitigation, development planning and environmental work.

To create these unique 3D digital twins, Bluesky and Skyline will integrate leading-edge technologies. To capture the city imagery, [Bluesky](#) has deployed its hybrid oblique imaging and Lidar airborne sensor. Skyline is then processing and publishing the data into 3D digital twins using its 3D Earth visualisation software and services.

Combining aerial photography, Lidar and colour infrared

The Lidar data is captured using Bluesky's Leica CityMapper sensor. This is the first sensor that can simultaneously capture vertical and oblique aerial photography as well as Lidar and Colour Infrared and is specifically designed for highly detailed building and city modelling projects.

"We know the [CityMapper](#), with its ability to simultaneously capture survey-grade imagery and high-accuracy height data, has the potential to revolutionize the production of 3D city models," commented Rachel Tidmarsh, managing director of Bluesky. "By working with Skyline on this project we can create and deliver cost-effective, viable 3D models for a range of applications."

The Bluesky CityMapper imagery will be processed using Skyline's PhotoMesh software to produce 3D city models that contain attribution and can be queried and analysed like any other geospatial dataset. The geometrically precise, phototextured 3D models will be available in a variety of formats for use in desktop modelling, mapping, CAD, web and visualization software as well as virtual reality and artificial intelligence applications.

Scalability and precision

"Bluesky is leading the way in data capture by investing in state-of-the-art equipment and innovative workflows," added Dave Loescher, managing director at [Skyline Globe UK](#). "Utilizing our comprehensive platform of applications, tools and services, we can transform that data with unlimited scalability and superior precision to produce consistent, accurate and realistic 3D models."

Starting with London and Birmingham as well as Brighton, Bristol, Cambridge, Norwich, Nottingham and Oxford, the new 3D model datasets and streaming service will be available from spring 2019. Bluesky has also announced an ambitious data capture programme, deploying the new sensor, for the 2019 flying season which will see new 3D city models come online in due course.