



DJI Matrice 4E and DJI Terra Map Khumbu Icefall During 2026 Climbing Season on Mount Everest

Descrizione

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New Video Case Study Showcases How Advanced Drone Technology is Making Mountaineering Safer

SHENZHEN, China, July 20, 2026 /PRNewswire/ - DJI, the global leader in civilian drones and creative camera technology, today released new long surveying footage of the Khumbu Icefall on Mount Everest (Mount Qomolangma). Presented as a video case study, Nepalese drone company Airlift Technology showcases their aerial surveying operations at altitudes above 6,000 meters and temperatures below -20°C. The workflow included three components: aerial data collection with a DJI Matrice 4E, 3D model generation with DJI Terra, and day-by-day comparative analysis. With these high-precision 3D models, icefall doctors knew the locations of every crevasse, surface displacement, and serac between Base Camp and Camp 1 - before ever stepping onto the ice.

"With DJI drone technology, we can create a 3D model of the Khumbu Icefall that helps the Sherpas and icefall doctors locate crevasses and plan the route without climbing the icefall first," said Raj Bikram Maharjan, CEO of Airlift Technology. "To our knowledge, this is the first deployment of its kind in Nepal, and potentially one of the first real-world operational uses globally at this scale in a high-altitude expedition environment."

Glacial Challenges of Traditional Surveying

Ahead of each climbing season, a team of Sherpas called "Icefall Doctors" surveys the terrain by foot, sets the ladders, fixes the ropes, and establishes the route that every subsequent climber will follow. To do this, they must cross the Khumbu Icefall Base Camp (5,364 m) and Camp 1 (6,500 m), which is considered the most dangerous section of the Everest climb.

Mapping the Dangerous Khumbu Icefall with DJI Matrice 4E

Flying a pre-planned flight path at altitudes above 6,000 meters, the Matrice 4E surveyed over 3 square kilometers of the Khumbu Icefall in just 3.5 hours. The compact enterprise drone's five-directional imaging system captured high-resolution oblique imagery of the icefall's complex vertical structures in a single flight. No one needed to risk their lives to enter the survey area.

Reconstructing and Monitoring Glacial Movements with DJI Terra

The collected data was processed in DJI Terra to reconstruct the Khumbu Icefall into a high-precision 3D model with centimeter-level accuracy using next-generation reconstruction technologies including 3D Gaussian Splatting. These 3D models were then compared from different periods, informing icefall doctors on how specific sections of ice may have moved between surveys, where instability was increasing, and which corridors had remained stable enough to install ladders and ropes.

Faster Data, Safer Routes, and a Record of a Changing Icefall A workflow that previously required weeks of on-foot surveying under hazardous conditions could now be completed in a single day. Moreover, icefall doctors no longer need to enter the icefall blind. This proved critical during the 2026 climbing season. Overnight, a rare, large-scale serac field formed across the icefall, sealing every route to the summit. Hundreds of climbers were stranded at Base Camp. Fortunately, icefall doctors were able to rebuild the blocked routes and resume operations quickly with DJI's advanced drone technology.

In addition to mountaineering safety, the ability to rapidly and repeatedly model icefalls also provides scientists and environmental researchers with high-accuracy, reproducible data for tracking long-term change. Building this digital archive will prove to be crucial as climate change accelerates glacier thinning.

To watch the full video case study, visit: <https://www.youtube.com/watch?v=vUYTzyZPbhk>

Availability

The DJI Matrice 4E and DJI Terra are available for purchase through authorized DJI Enterprise dealers.

Learn more: <https://enterprise.dji.com/matrice-4-series>
<https://enterprise.dji.com/dji-terra>

About DJI

Since 2006, DJI has led the world with civilian drone innovations that have empowered individuals to take flight for the first time, visionaries to turn their imagination into reality, and professionals to transform their work entirely. Today, DJI serves to build a better world by continuously promoting human advancement. With a solution-oriented mindset and genuine curiosity, DJI has expanded its ambitions into areas such as renewable energy, agriculture, public safety, surveying and mapping, and infrastructure inspection. In every application, DJI products deliver experiences that add value to lives around the world in more profound ways than ever before.

View original content to download multimedia:<https://www.prnewswire.co.uk/news-releases/dji-matrice-4e-and-dji-terra-map-khumbu-icefall-during-2026-climbing-season-on-mount-everest-302829630.html>

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