APPLICATION BREAKDOWN:

3D Riverbed Imaging

A large university was trying to conduct riverbed research. The objective of their application was to be able to measure the topography of the silt on the bottom of a river, and study how it changed over time. Ultimately, the university would like to have a clean 3D image of the riverbed floor. The challenge the university faced was finding a device that would be able to give them accurate measurements of the river bed in 3D, quickly, with a high number of data points. Needing to consult with experienced vision experts to find the right product, they brought their application to Sensors Incorporated.

Given the 3D requirements by the University, Sensors Incorporated immediately considered using the SICK Ranger 3D camera with a laser. If the laser could penetrate the water well enough, the camera could identify the difference in contour by the laser and would then be able to produce an image. Sensors Incorporated did testing to identify green as the proper color for the laser in the underwater environment and followed that up with further testing to ensure the camera and laser would work well together.

The university designed the waterproof housing around the camera and laser, enabling it to be fully submersible to allow them to capture images above and below water. After replacing their old system with the components from Sensors Incorporated, the university was able to acquire more than 140,000 data points/sec, an incredible improvement over their previous rate of 750 points/sec. The data acquisition rate improvement allowed the university to cut its scan time down from 1.2 hours to 20 seconds.

This application is an excellent demonstration of how Sensors Incorporated can utilize their years of experience and engineering knowledge to not only solve your application, but also add value to an organization and improve efficiency. If you have a complex application that might require extreme application experience, talk to the experts at Sensors Incorporated.