

## Case Study

## Vehicle Tracking



### Challenges

- Surface management
- Incursion risk
- Growth of operations
- Safety enhancements
- Low-visibility locations

### Solutions

- Seamless integration with existing A-SMGCS
- Vehicle tracking
- Highly scalable
- Constant vehicle location and identification
- All-weather functionality

## Amsterdam's Schiphol International Airport

During the past several years, Amsterdam's Schiphol International Airport has grown to become one of the largest airports in the world. In 2005, Schiphol ranked fourth in Europe in terms of passenger traffic with over 44 million passengers and third in cargo with 1.5 million tons. Schiphol has 6 operational runways and is the home base for KLM airlines, Martinair, Transavia, and the European hub of Northwest Airlines.

### The Challenge

The growth in operations at Schiphol has placed a premium on surface control and safety. Schiphol's controllers are constantly monitoring aircraft in all movement areas, both visually and on screen. Due to Schiphol's extremely low position (below sea level) and its proximity to the ocean, visibility is often limited for the air traffic controllers, making it extremely difficult to always see aircraft movements. However, not just aircraft roam the airport surface—hundreds of ground-based vehicles are necessary to carry out the myriad of everyday airport operations. Baggage carts, tugs, emergency vehicles, and catering trucks are just some of the vehicles found on Schiphol's surface, notwithstanding temporary surface obstacles that might not be known to all pilots. Avoiding a



**“Squid by Era units allow us to take full advantage of our A-SMGCS, providing air traffic controllers with a complete view of each vehicle’s location, largely increasing safety levels at all areas on the airport’s surface.”**

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collision between these vehicles is difficult enough, but when you add in large planes with a much higher field of vision, the risk of ground incursions increases dramatically. When coupled with Amsterdam’s frequent low visibility conditions, the likelihood of surface incidents increases even further. Thus, Schiphol airport officials decided that in order to achieve safe and efficient surface control, they needed to equip vehicles with a highly reliable tracking unit to give a complete view of the entire airport surface.

## **The Solution**

The Dutch ANSP, LVNL, evaluated a number of market leading vehicle tracking solutions, placing them through a demanding six-month trial period. LVNL focused largely on reliability and capabilities in highly obstructed airport locales. After a successful round of testing, Schiphol Airport selected Squid by Era as their vehicle tracking solution. LVNL placed an order for more than 300 Squid by Era units to equip their fleet of airport vehicles. One of the greatest benefits of the Squid by Era solution was its ability to work seamlessly with the existing A-SMGCS.

Squid by Era units transmit spontaneous Mode S reply and are equipped with a GPS receiver, which tracks the vehicle location. These two capabilities work together to provide a constant, automatic stream of position and vehicle identification information for display in the control tower.

Because Squid by Era is lightweight, compact and easy-to-install, Schiphol was able to equip all vehicles in a short period of time.

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