

# USE CASE

## PUBLIC EVENT SURVEILLANCE

### Vienna New Year's Eve Trail – Silvesterpfad 2018 -19



## Context

Since 1990, the Vienna New Year's Eve Trail, or Silvesterpfad as it is known locally, draws hundreds of thousands of people from the country and overseas to celebrate the dawn of a new year. On the 31st of December, approximately 800,000 people will visit downtown Vienna for 12 hours of entertainment.

With recent terrorist related attacks in Europe, security of public events is a priority. The Vienna city authorities tasked Gecko4K to provide persistent aerial surveillance of the event to help prevent incidents and anticipate interventions if needed.

Equipped with a DJI M200 drone and an Elistair Safe-T tether station, the team successfully provided an uninterrupted thermal and electro optic, live video feed for the local police.

In order to have an uninterrupted thermal video feed during the entire event, we needed extended flight time. [...] Safe-T was the best choice for us.

Bernhard Koderle, Gecko4K pilot

### 1 Safe-T

Connected to a DJI M200 drone, the Elistair Safe-T Tether was essential to obtain UAV flight authorisation to ensure public safety.



### 800k Attendees

A tradition since 1990, the Silvesterpfad attracts both locals and tourists to celebrate New Year's Eve together.



### Live Video Feed

The UAV supplied the only live airborne feed at height up to 60m. Both normal and infrared images were transmitted to the Security services' HQ 2km away.



### Mobility

A tethered drone has a smaller, and more mobile, logistical footprint compared to other temporary surveillance methods.



### 6 Hours of flight

From 6 p.m. to 11p.m., mandated entities were able to monitor the crowd's movements and identify areas of risk and safety for the public.



### 14000m<sup>2</sup> Covered

Gecko4k and police forces were able to monitor a large area of the city center including control of entry points and public areas.



# ISSUES & NEEDS

## Extended flight time & thermal video feed

The city authorities needed a solution which would provide monitoring of large crowds, in up to 14 different locations and over a 12-hour period.

**Extended flight time:** The main event of the Trail, took place from 6 p.m. to 11 p.m., where thousands of people congregated around the main stage. Uninterrupted flight was a requirement to ensure no threat was missed.

**Live video feed:** The security forces requested an aerial vantage point in the city center where a crane, or other semi permanent installation, was not practical. The use of helicopters was dismissed due to cost, noise and also limited endurance.

**Airspace restrictions:** Vienna, like most major cities, has strict flight restrictions. In order to be granted permission to fly in this area, Gecko4K had to provide proof of safety measure and redundancies of the equipment. By using a tether station, the operators could guarantee that there would be a safe area with a radius the length of the tether.



Airspace restrictions, geographical constraints and power supply were the main challenges to overcome.



The tethered solution enables new possibilities for security and surveillance.  
Bernhard Koderle, Gecko4K pilot



## SOLUTION

Connected to an Elistair Safe-T tether station, Gecko4K's DJI M200 hovered up to 60m above ground allowing security agents to have increased situational awareness of the crowds.

**Uninterrupted power supply:** Powered from the tether, there was no break in the surveillance footage to change batteries.

**Multipurpose:** On top of providing uninterrupted power supply, the tether station provides a physical connection to the drone preventing possible flyaway.

**Minimum logistics:** No changes to the existing infrastructure was required to operate the equipment. The tether station is easily transportable and has a small footprint when in use.

## MISSION PROCESS

The tethered drone solution was a first for Vienna and Gecko4K. The successful deployment convinced authorities of its safety and efficiency.

**Persistent surveillance:** Continuous observation was provided during the main event. Footpaths, public areas and entry/exit points around the main stage were covered. The illegal use of fireworks were also detected from the infrared feed.

**Constant video feed:** The command post for the event was based 2km from the city center. Live and constant video feed from the drone was streamed to large screens there to ensure commanders had the latest intelligence.

**Results:** Crowds were efficiently controlled, and any areas of risk to public safety were easily identified.