



Avian radar

Effective use of avian radar

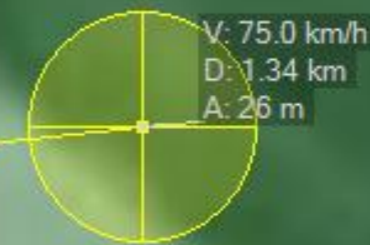
Mexico city, October 21st - 2014

By Ronald Tukker

Int. Sales manager Robin Radar Systems BV

Radar capabilities

- Thousands of bird movements simultaneously
- Up to 10 km
- All around
- During day, night and low visibility conditions.
- Including their exact location, height, direction, speed and flight path

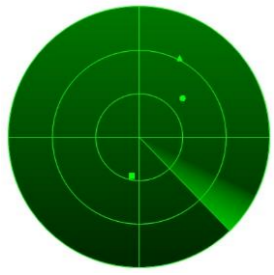


1 km



General Challenge

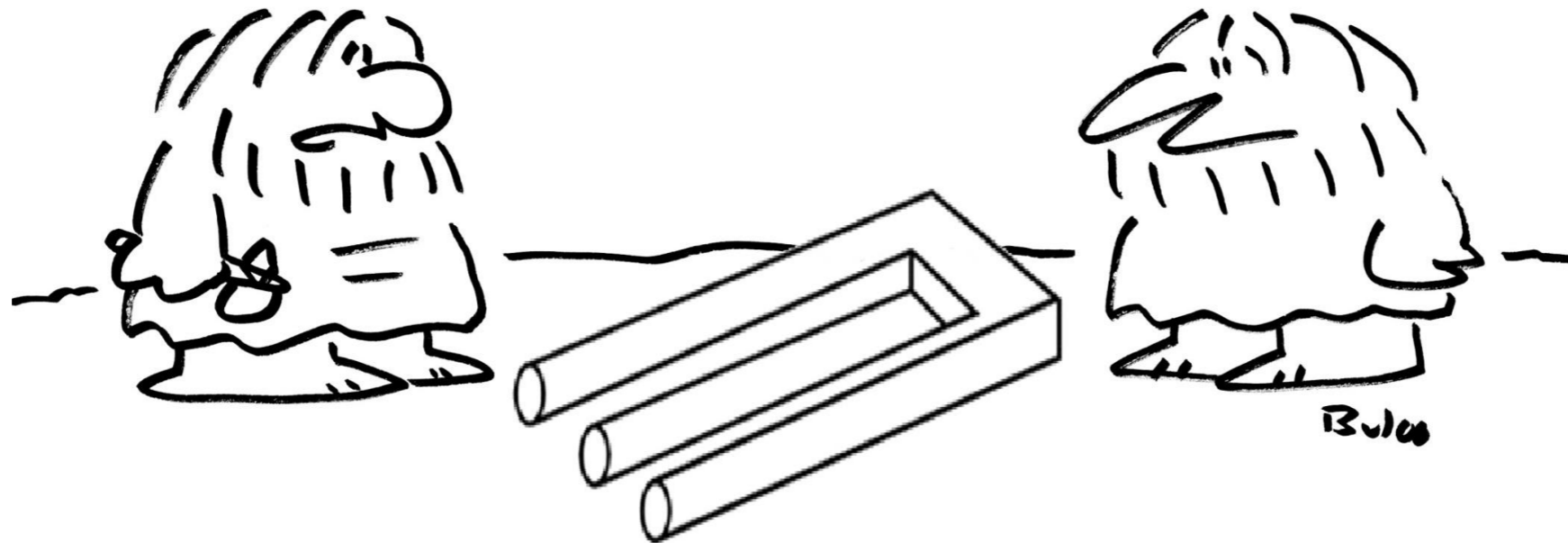




General Challenge



“Great technology, but what does that mean for an airport operator?”



***“Yeah, it's a neat invention,
but I haven't found a practical
use for it yet.”***

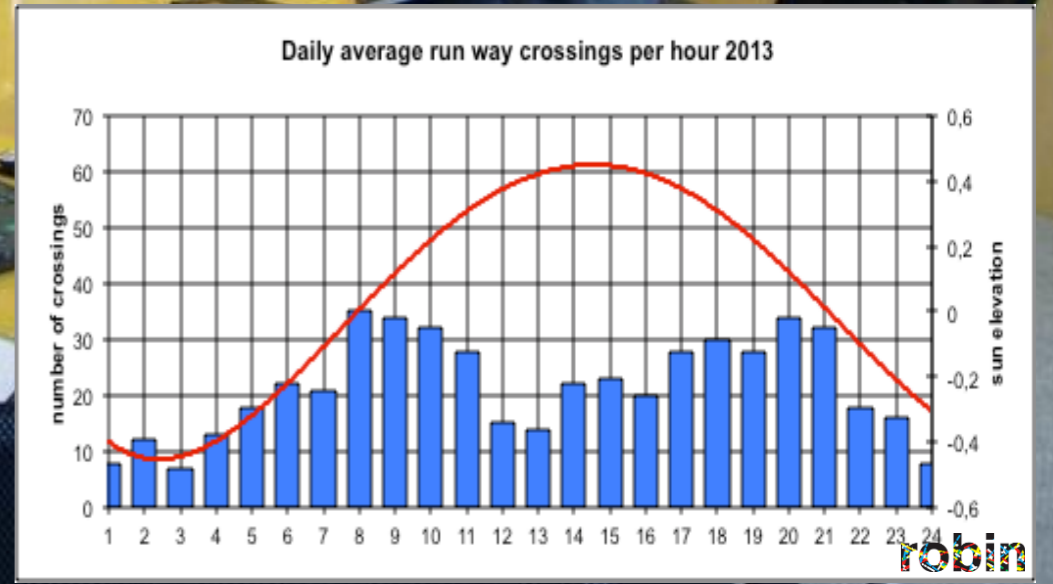
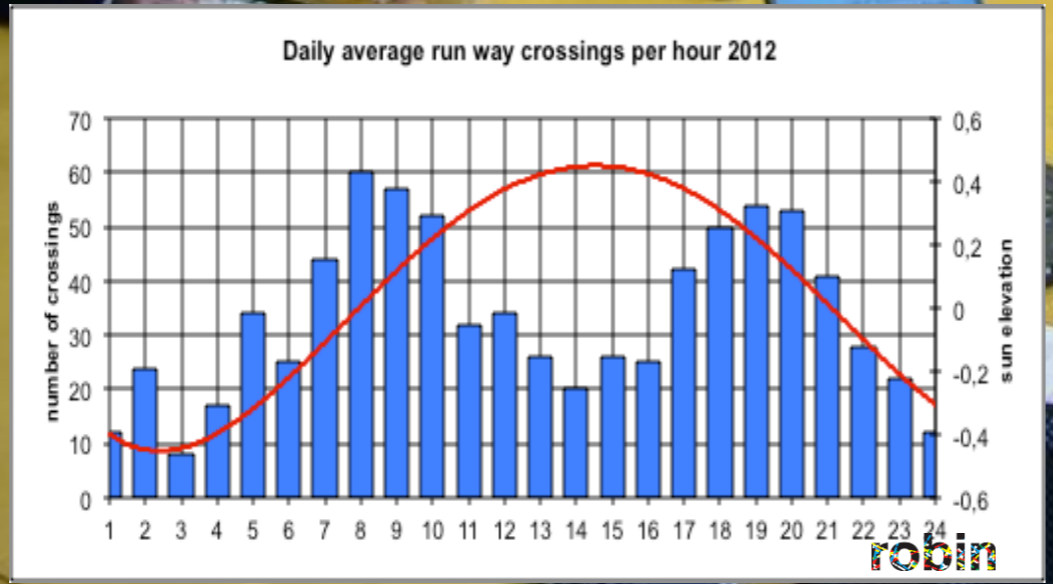


Strategic applications

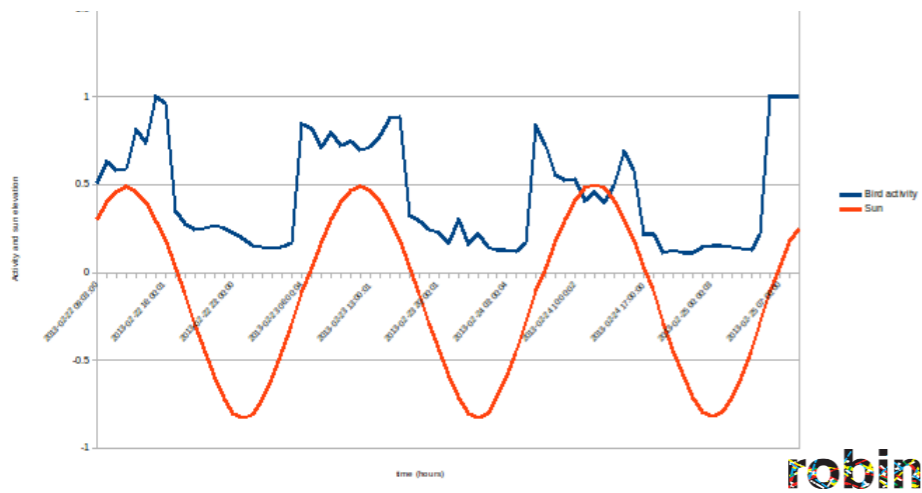
Using bird information for
backoffice analysis

Determine the effectiveness of mitigation policies

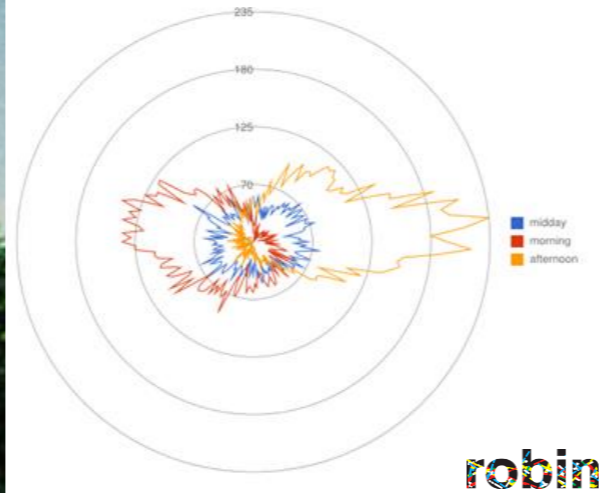
“We invest in numerous bird strike mitigation measures, ranging from grass policies to politically sensitive population reduction. We want to quantify how effective these investments are.”



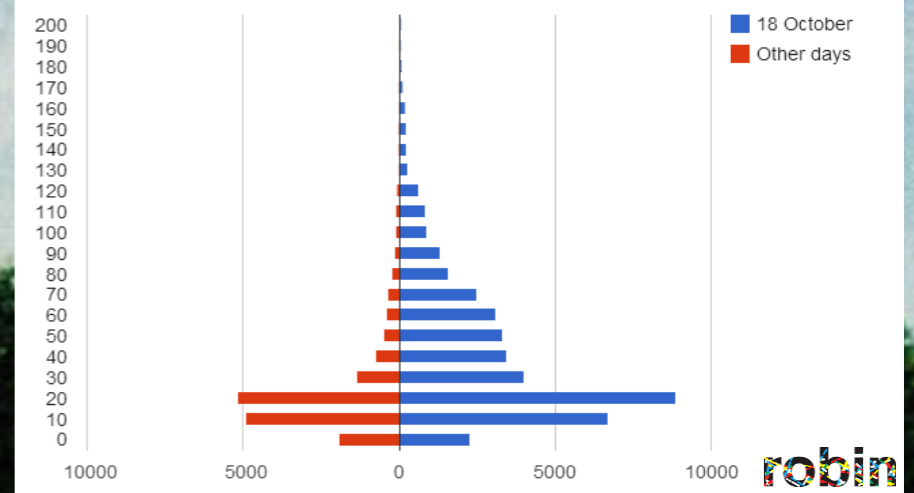
Bird activity versus sun elevation



Flight directions



Height distribution



“We aim to make the airport vicinity as unattractive as possible for birds . We needed to understand their behaviour before we could start influencing it”

Unique quantified information as input for Habitat Management

Convert bird behaviour patterns
into risk profiles



Bird activity
Runway 1

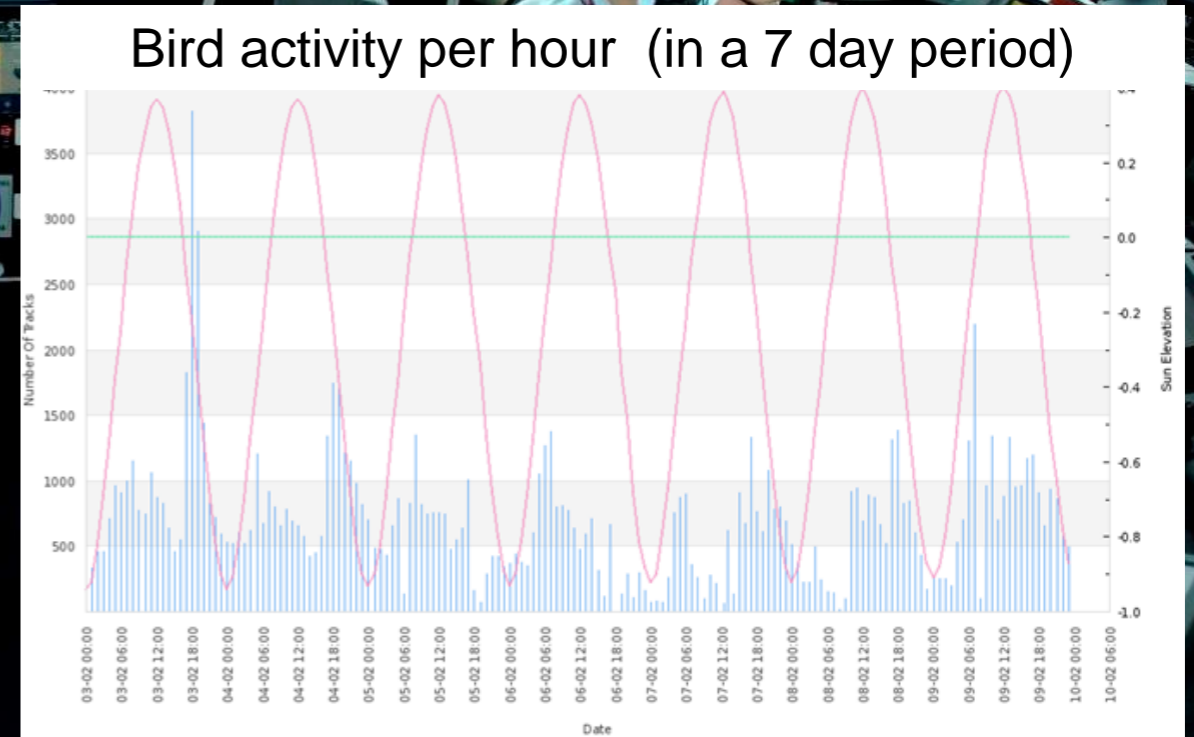


Bird activity
Runway 2



Bird activity
Runway 3

*"In June we start using runway 3
from 7 am because we've
learned hundreds of gulls
typically cross it between 6:00
and 6:30"*





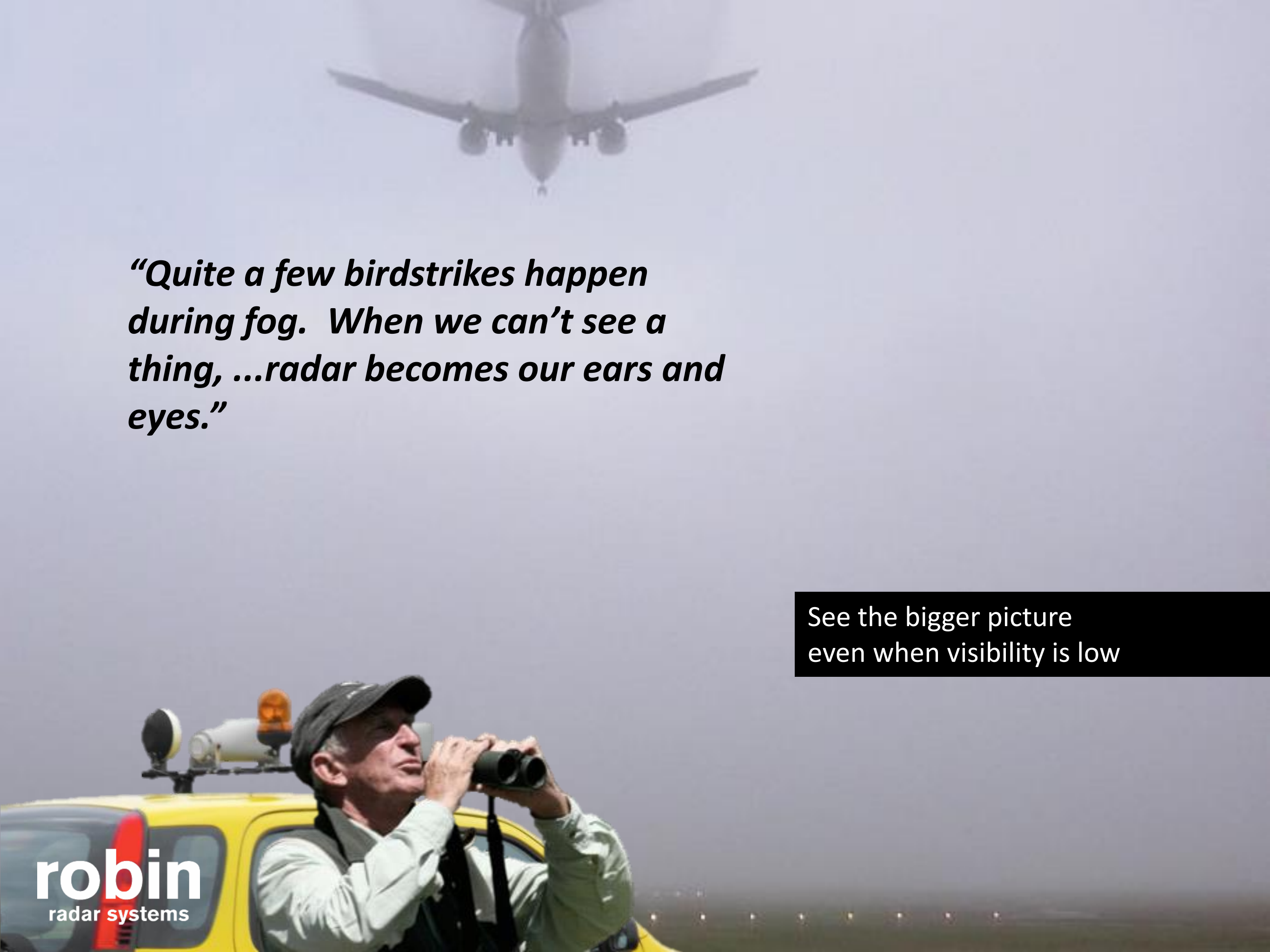
“Once a landing is set in motion I will not evade birds but I do appreciate a warning to be prepared.”

Increase the ‘Situational Awareness’ of pilots

A close-up photograph of a person's hands holding a pair of binoculars. The binoculars are silver and black, with large objective lenses. The person is holding them in a field of tall green grass. The background is slightly blurred, showing more grass and a hint of a blue sky.

Tactical applications

Using bird information in real time by Bird Control
Extending their visibility



“Quite a few birdstrikes happen during fog. When we can’t see a thing, ...radar becomes our ears and eyes.”

See the bigger picture
even when visibility is low

robin
radar systems



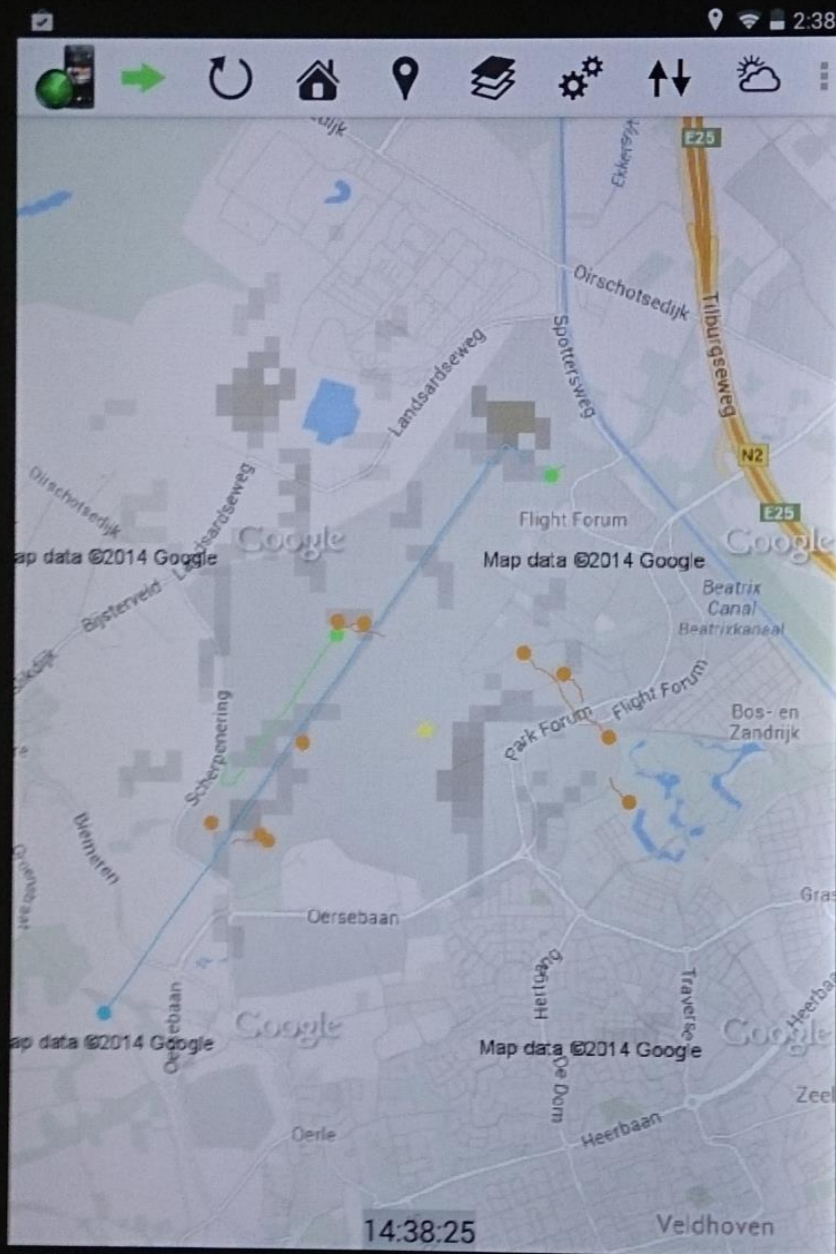
See the bigger picture
even when visibility is low

*“Before Avian Radar,
we were blind at night.”*

robin
radar systems

Extending the eyes
of Bird Control Units

*“For me, the Robin
Radar is like a high tech
‘Ultimate Binocular’”*



Help
set priorities



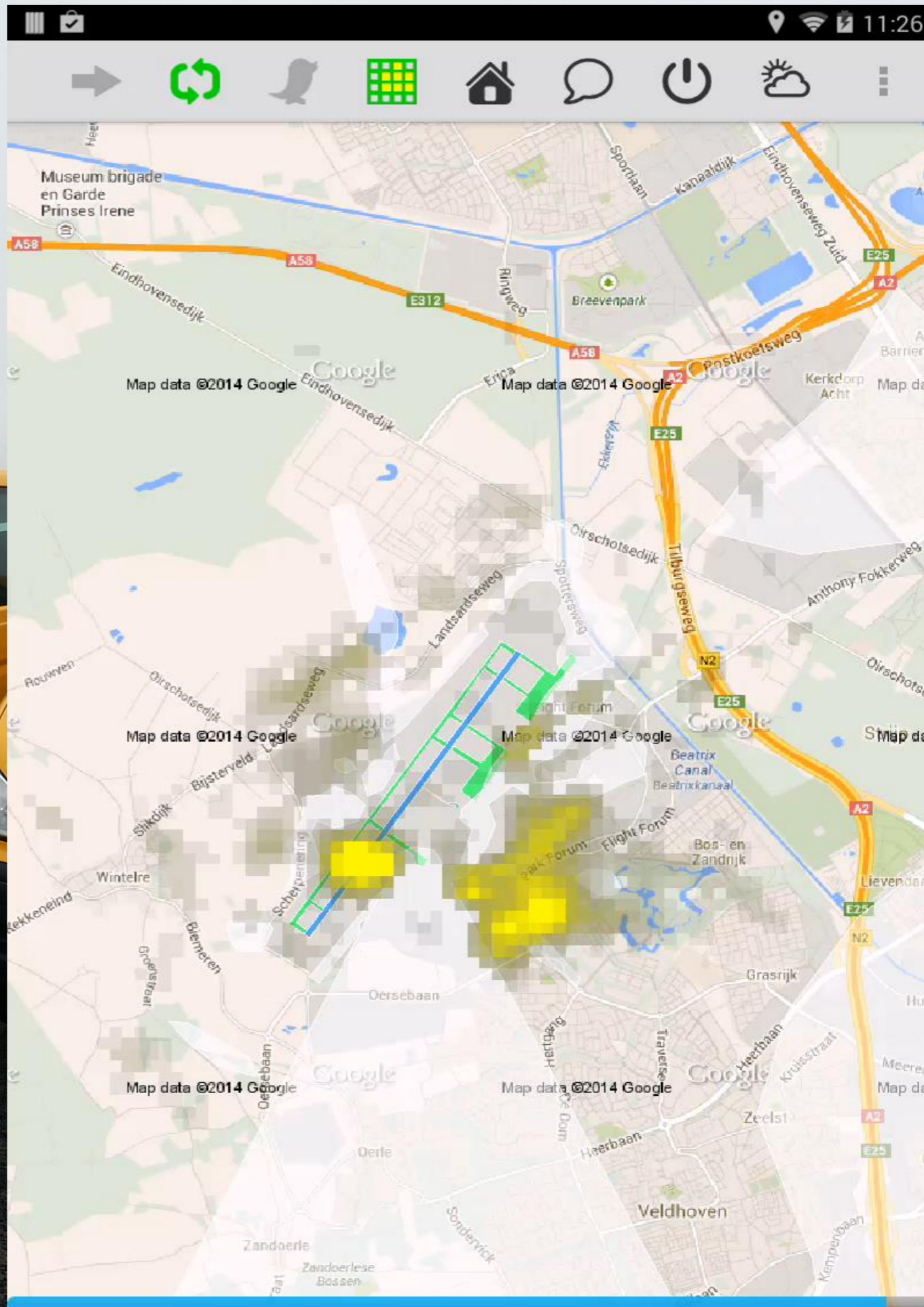
*“I was deterring a falcon at
runway 1 when the system
notified me that a large flock
of geese was approaching
runway 4.”*

robin
radar systems

Real time data analysis

“When I start my shift, the Robin Radar tells me where the birds are most active at the time”

robin
radar systems



Communication
tool



“We both look at the same live image. I see my own exact location on the map and that of my colleague. That really helps in communication and divide tasks.”

'Light version' Ground
movement radar

*“By detecting planes and
vehicles and integrating (ADS-B)
transponder information, the
system supports avoiding
runway incursions”*

Questions ?

