

A spotlight on promising visual repellent systems by AIRBUS & CNRS

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AIRBUS
GROUP

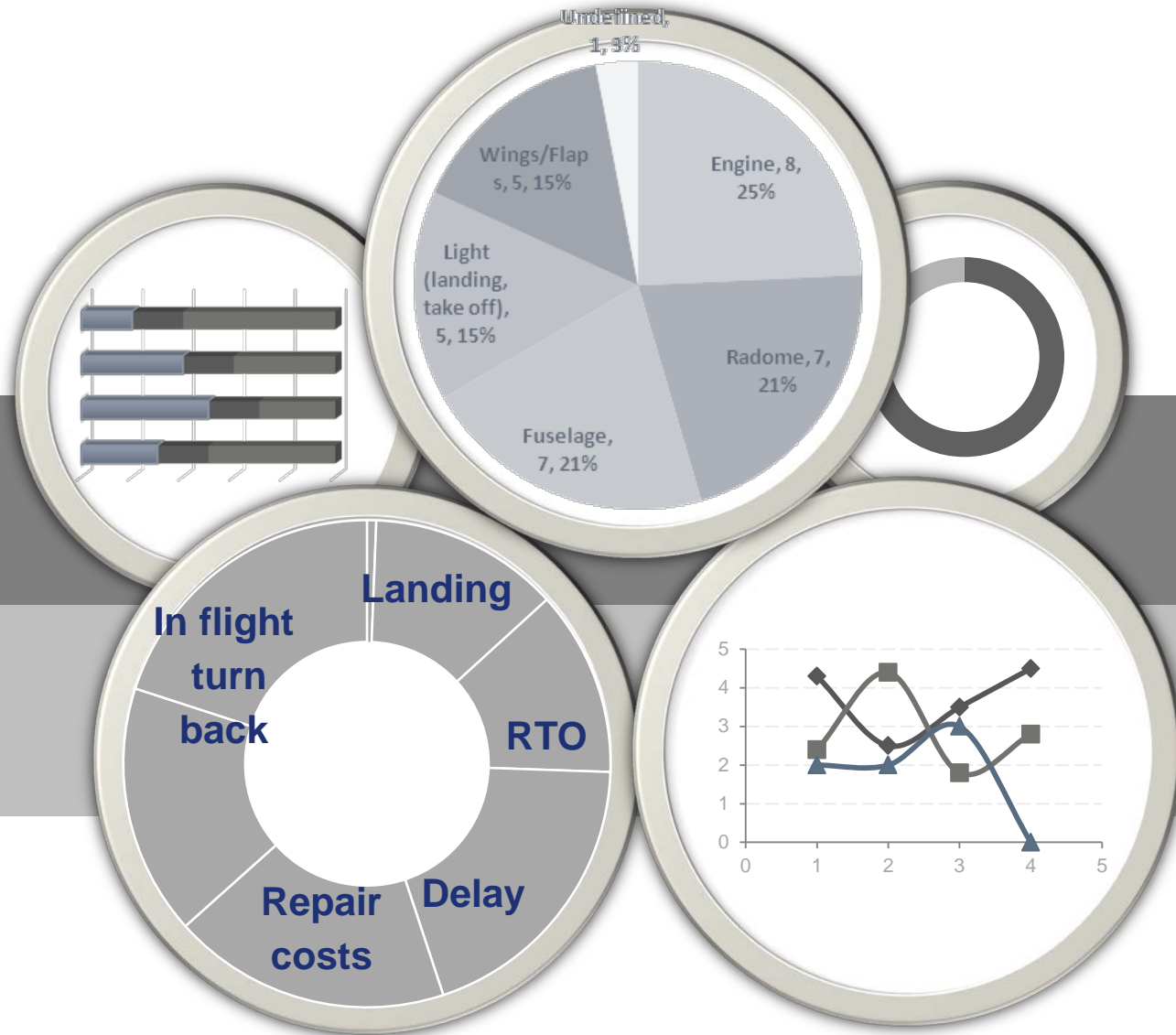


Viewpoint: a growing up issue but not enough analyzed

Climate change,
Traffic increase
Protection of birds,
...

→ many statistics, but

Still so difficult to
size the reality
of the costs
!



4 k\$ → 30 k\$ → 200 k€
Per Aircraft / year ?

Many responses **but** not up to the job



Current systems **don't** match the scale of the problem

In term of effectiveness...

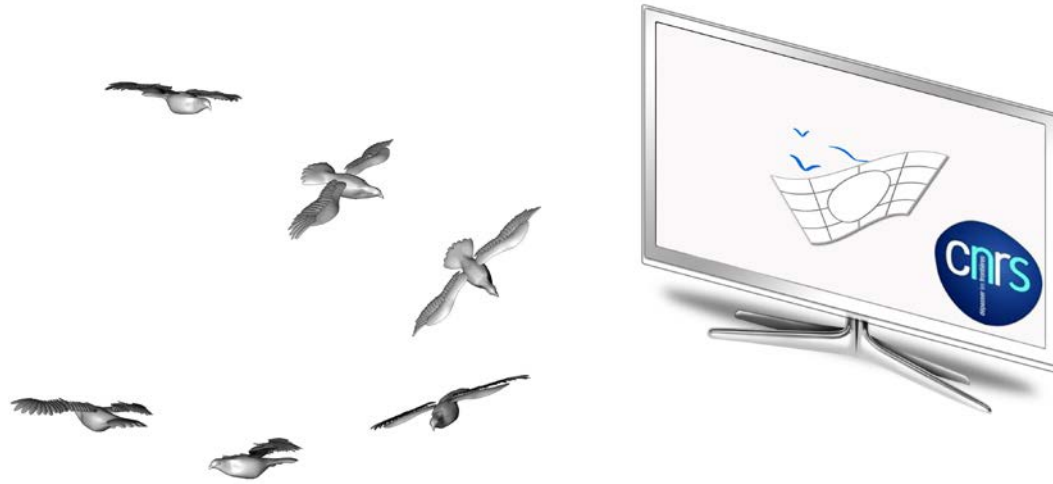


- « *Effectiveness unproven* »
- « *Short term efficiency* »
- « *Birds get used to...* »

A definitive solution ?

Even not efficient !

An innovative approach



A Visual stimuli

Quick effect (1 – 2 sec)

Durable effect - no acclimatization

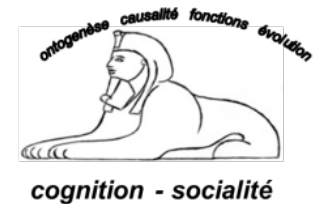
Ethologist approach:

« all systems are based on what we imagine that scares the birds »

→ must be seen in another way !

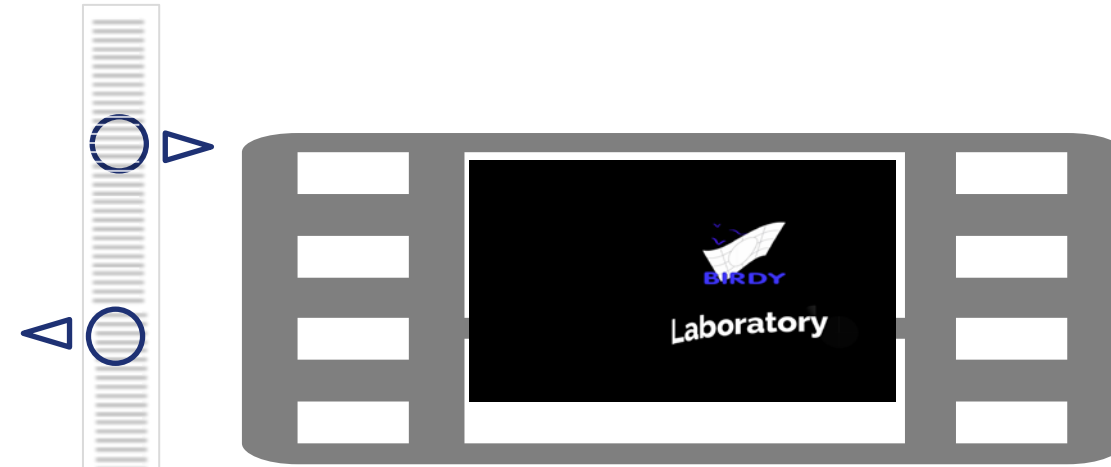
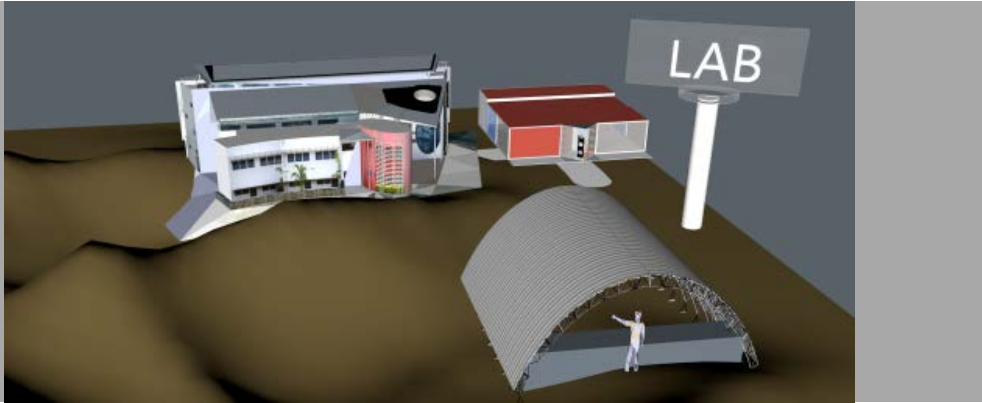
A research project on visual repellent systems

Laurence Henry
Martine Hausberger
Laurine Belin



TESTS: in laboratory (1)

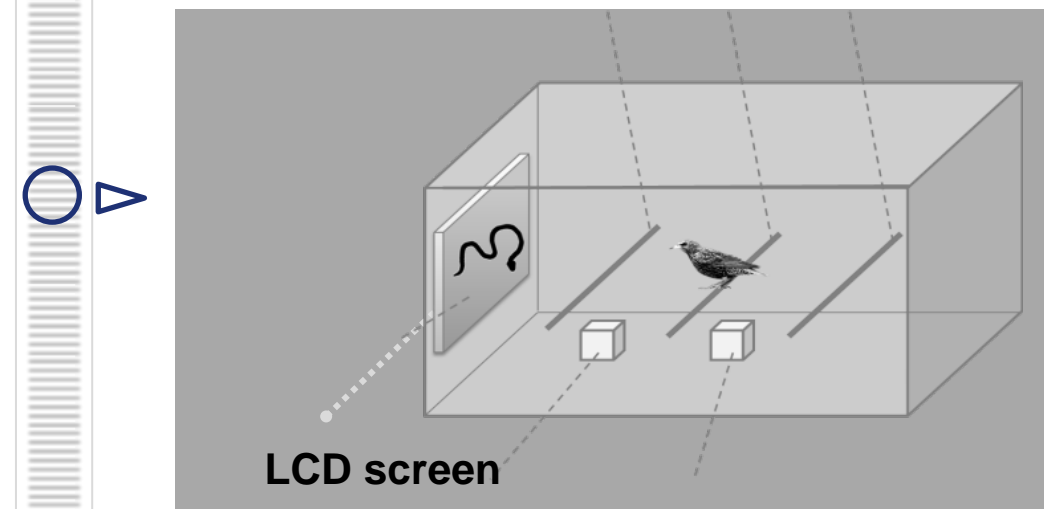
2012

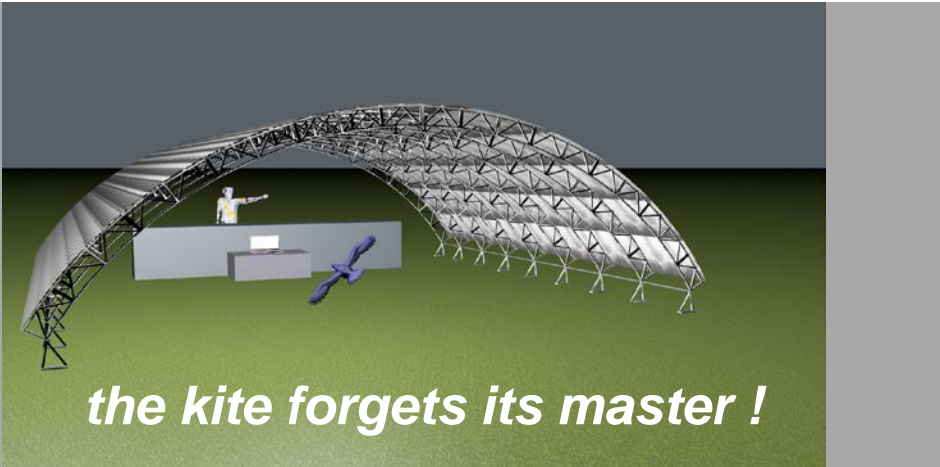


3000 trials

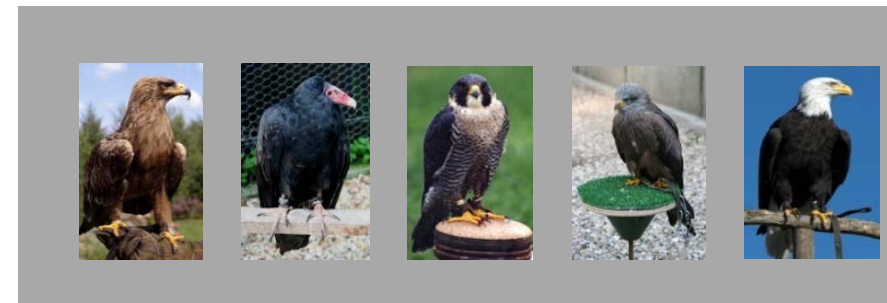
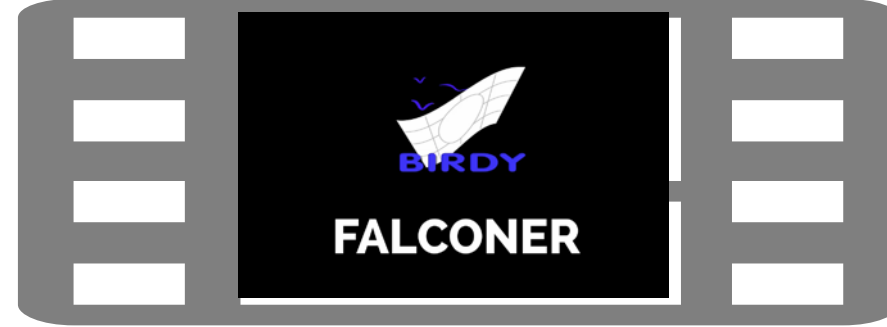
Various stimuli tested

3 effective





Even raptors well react



TESTS : Wildland



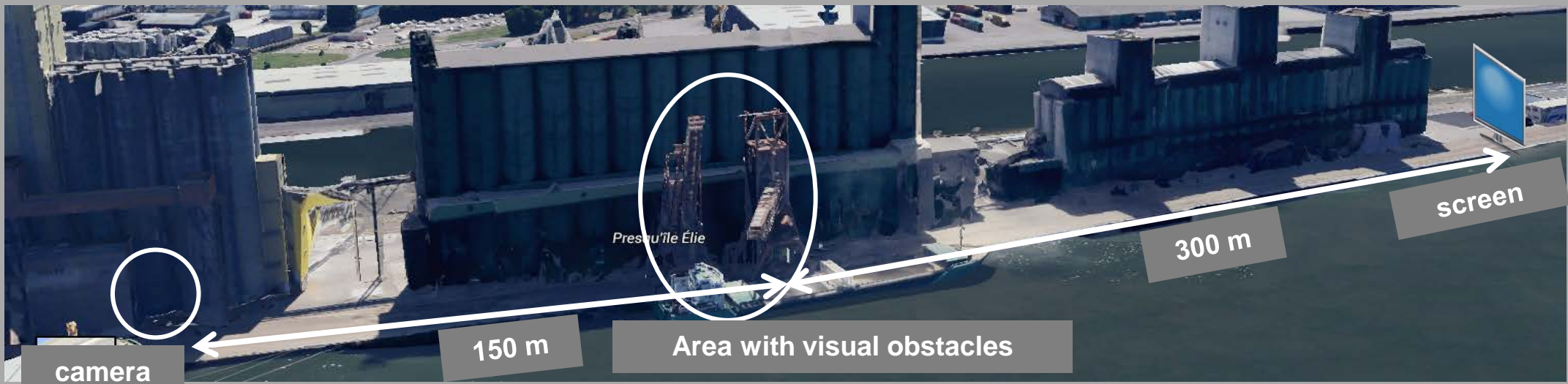
8600 birds tested, 29 species of 4 groups:

Shorebirds,
Anatidae,
Laridae,
Passerines

Visual stimuli do repel most species until 400m

2013





More than 2000 pigeons per day well fed
in a huge “pantry”

Metallic structures, big walls, roofs...
in which
Birds feel totally secure and comfortable

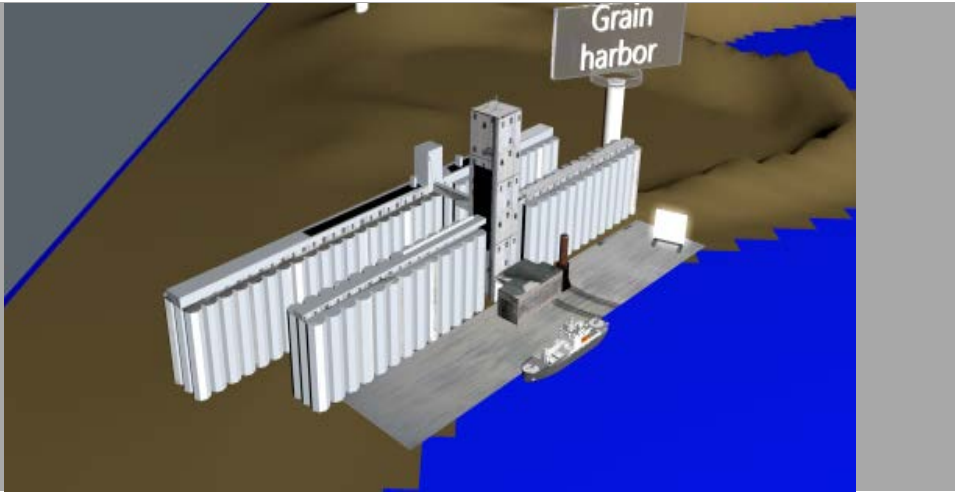


Surely
a worse
Case
Scenario!



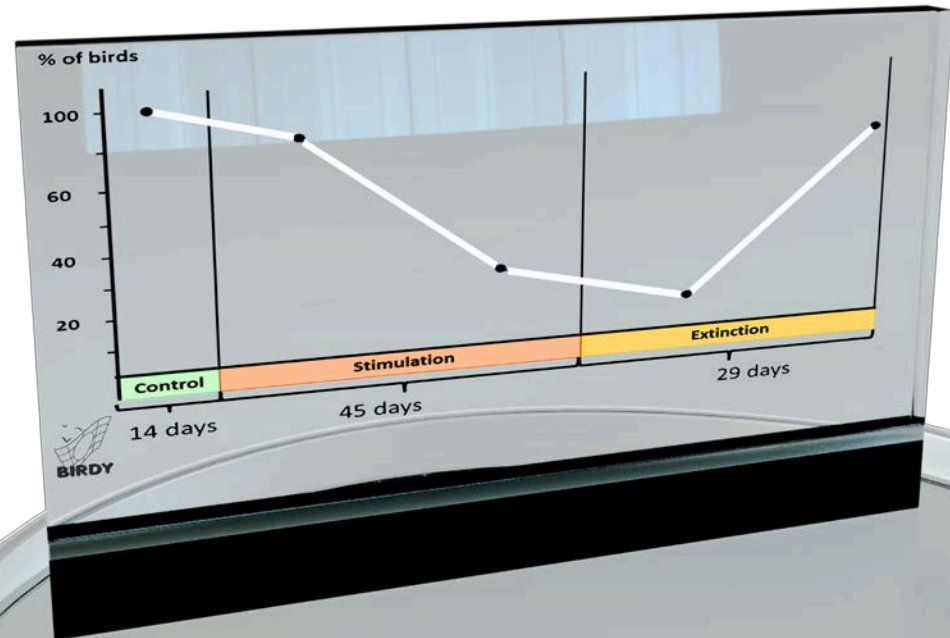
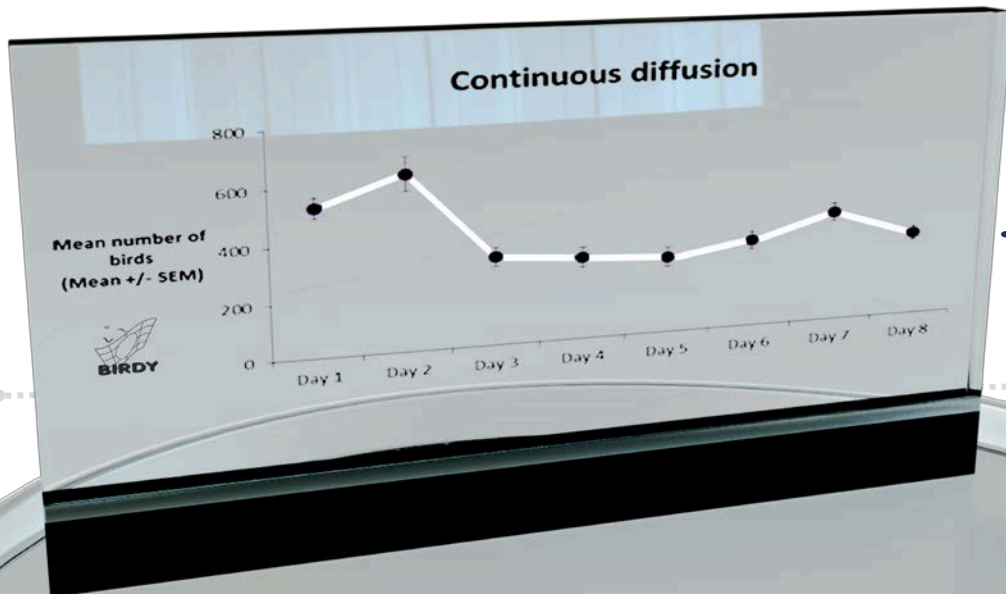
TESTS: Grain harbor (1)

2014



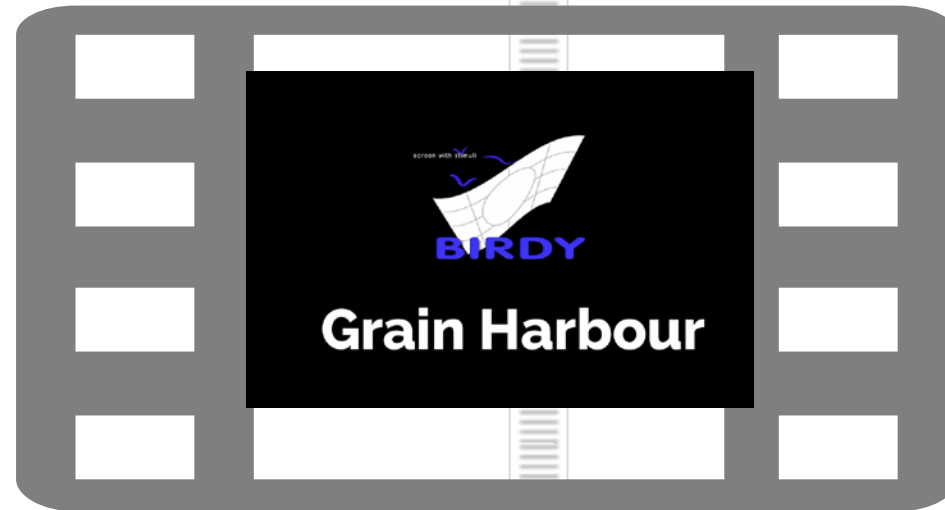
- ✓ A progressive decrease in the number of birds
- ✓ Progressive reduction due to the important turn over of the pigeons' population
- ✓ Pigeons came back only two weeks after the screen was switched off
- ✓ More pigeons in other areas of the harbor.

High efficiency: twice less pigeons after 3 days



TESTS: Grain harbor (3)

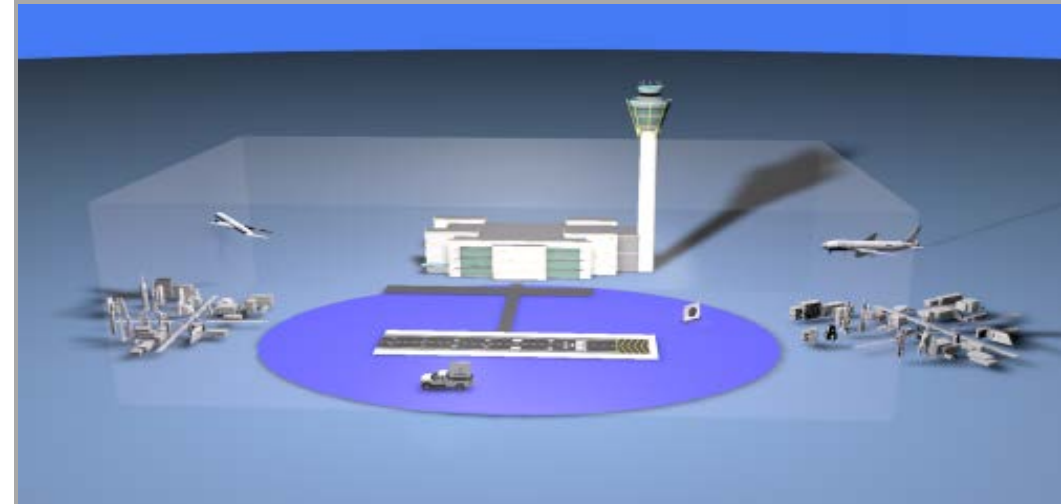
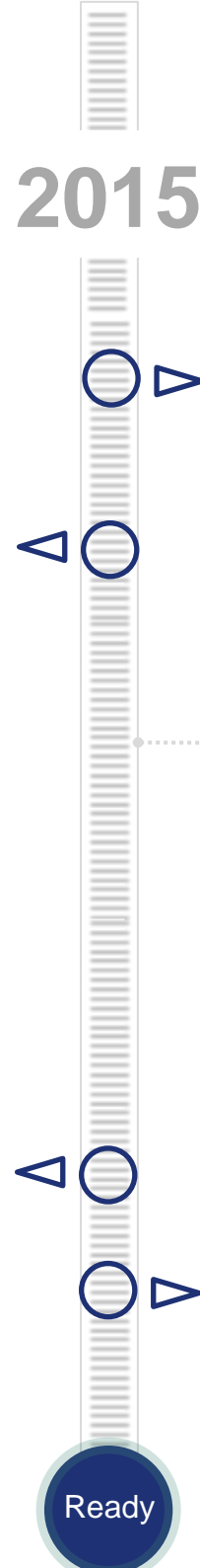
2014



WANTED! Playgrounds

Migrations (on process)
Long term tests
Airports
Offshore
Others...

Have you got one ?

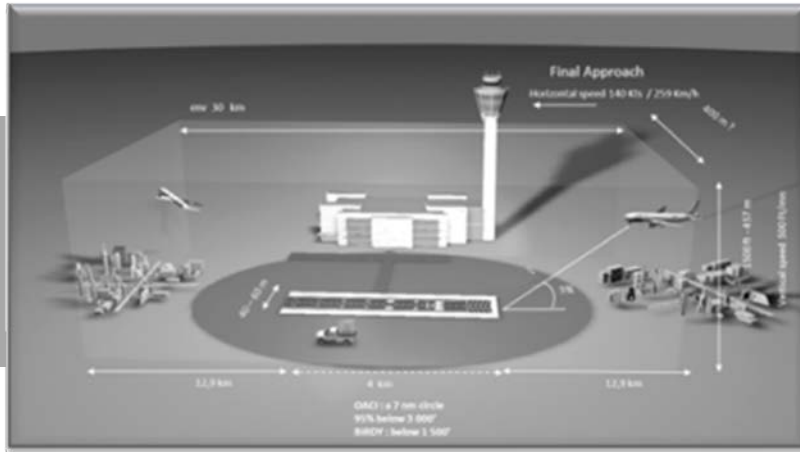


Ready



A product range

Ground system



2015

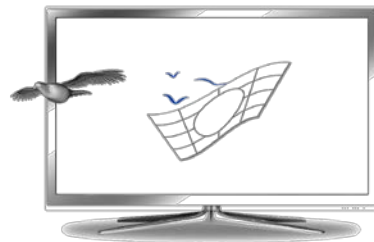
Embedded system



20..



Mobile



Stand alone configuration

● ● ● ● ● Still under evaluation

Together to tackle the Bird strikes issue.

AIRLINES

AIRPORTS

Report
Benefits

Tests
Invest

Development
Supplier



A two levels of cooperation is requested



Impatient to see what the stimuli looks like?



Contact us for a collaboration!



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