



# Systemes Prospectifs Horizon 2050

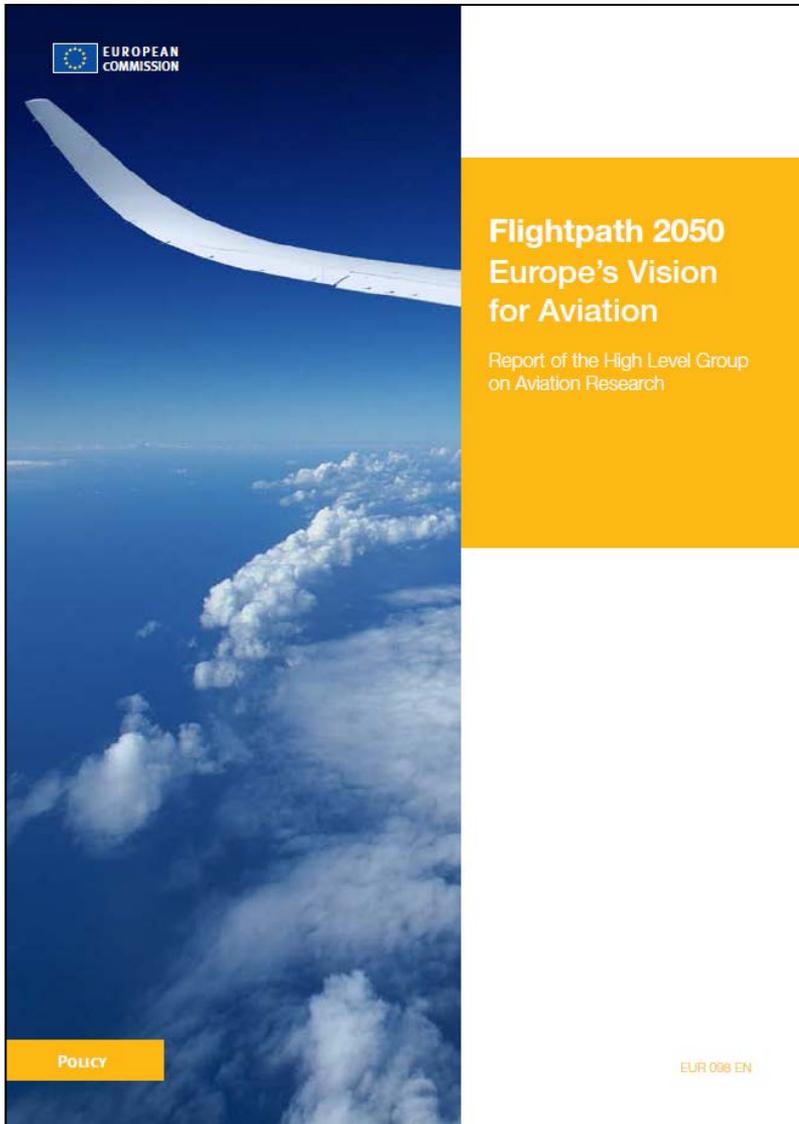
Claude Le Tallec

Chargé de mission “Systemes de drones”



retour sur innovation

# Qu'a écrit le "High-Level Group on Aviation Research" ?



Published in 2011 by the European Commission  
Directorate-General for Research and Innovation  
Directorate General for Mobility and Transport

“Automation has changed the roles of both the pilot and the air traffic controller. Their roles are now as strategic managers and hands-off supervisors, only intervening when necessary”

# What will ATS look like in 2050?

## Four possible scenarios\*:

- Unlimited Skies
- Regulatory Push & Pull
- Down-to-Earth
- Fractured world



\*based on the Consave study



# Regulatory Push & Pull



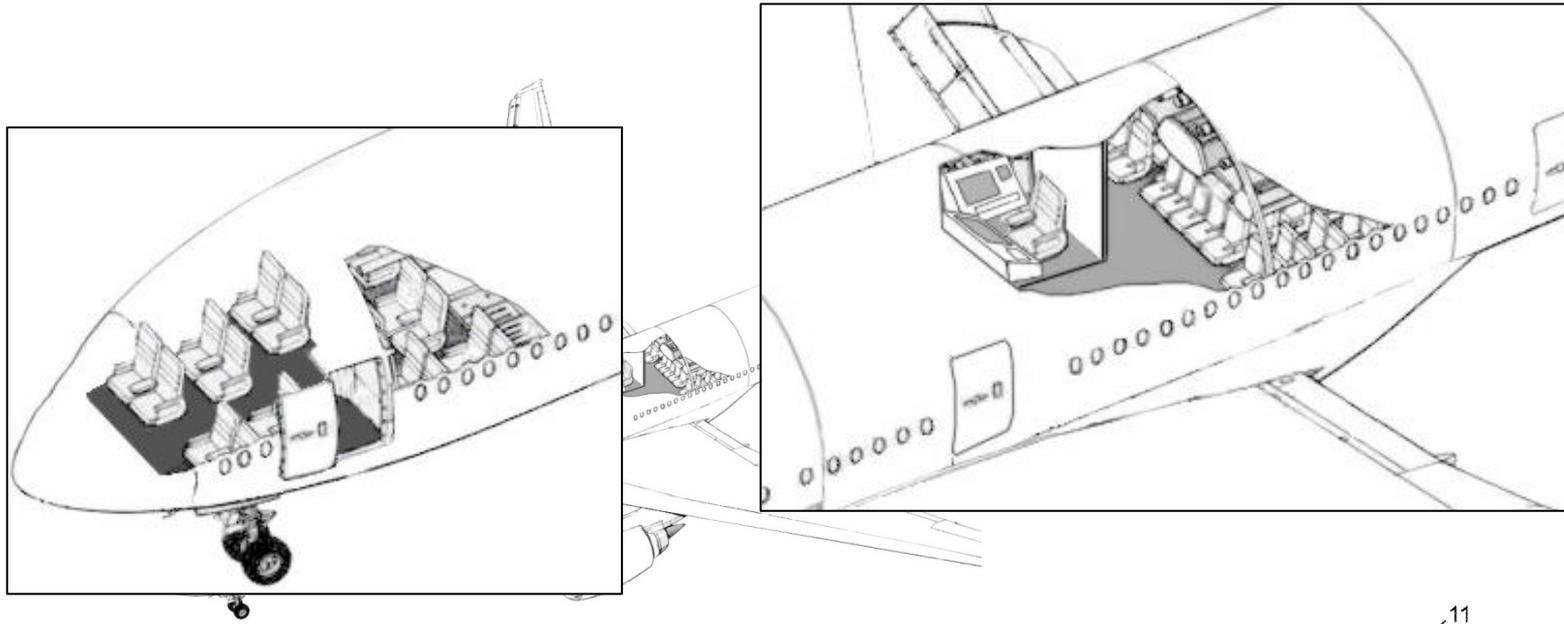
# A remotely piloted transport aircraft, a crazy idea?



FP6 project  
2003-2007



# A remotely piloted transport aircraft, a crazy idea?

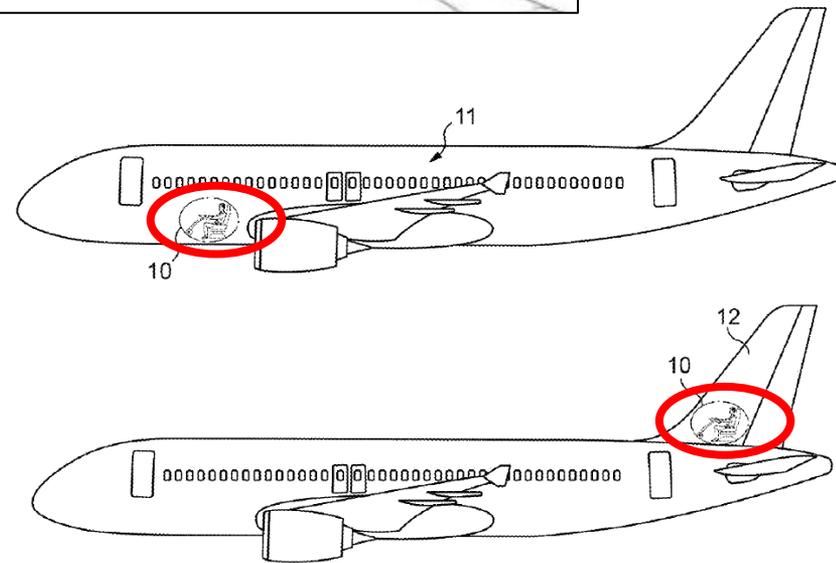


United States Patent Application by Airbus SAS

No.: US 2014/0180508

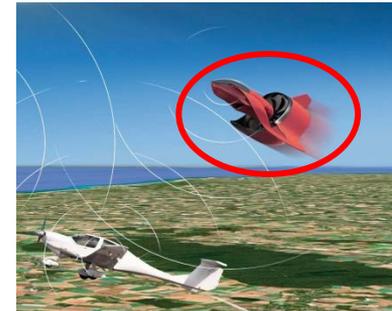
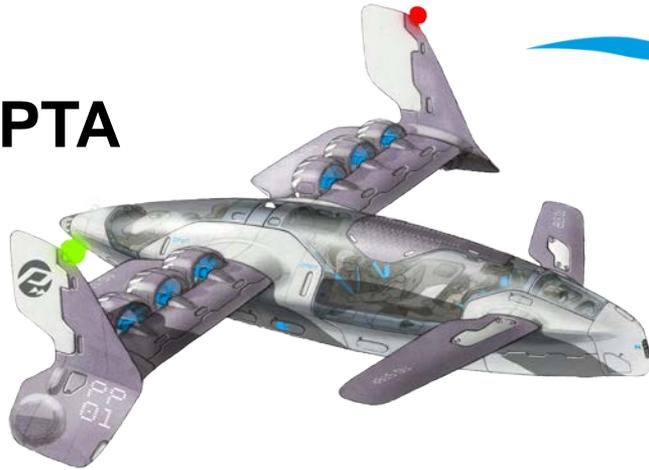
Jun. 26, 2014

“Aircraft with a cockpit including viewing surface for piloting which is at least partially virtual”

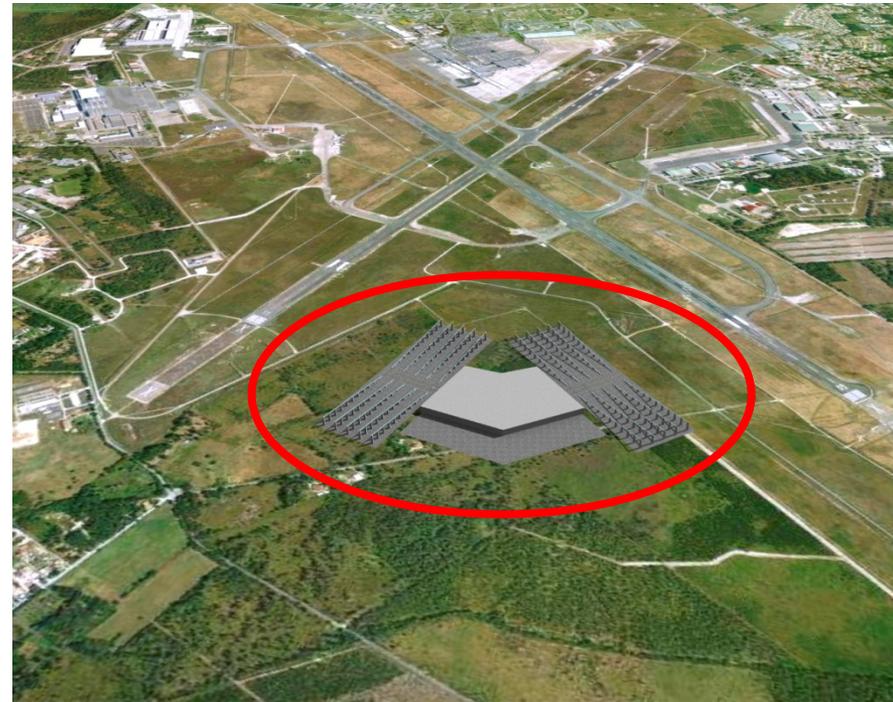


# A RPTAS, a real need for personal transportation!

RPTA

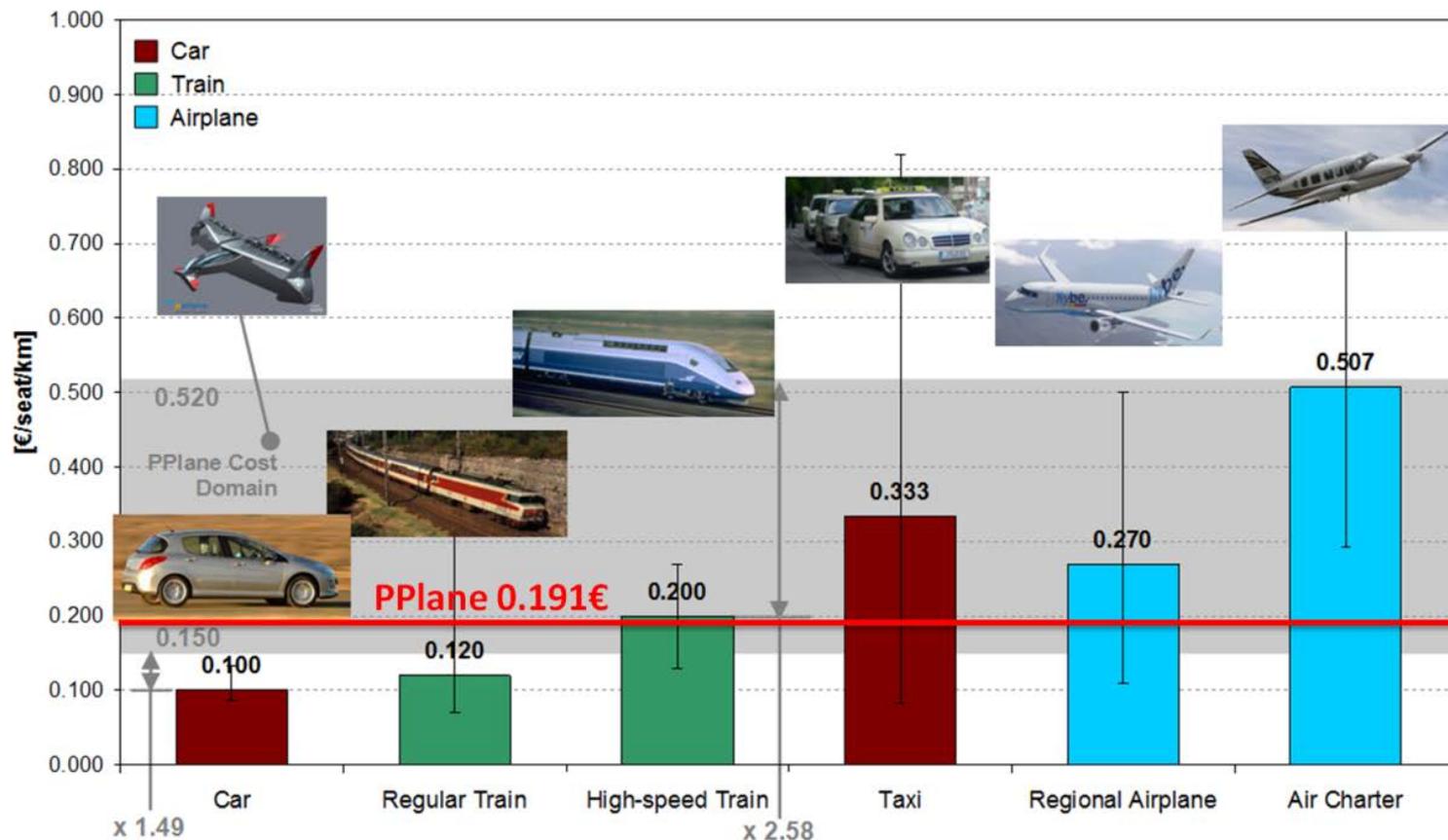


RPS populated by RPs



# Safety, security and costs...

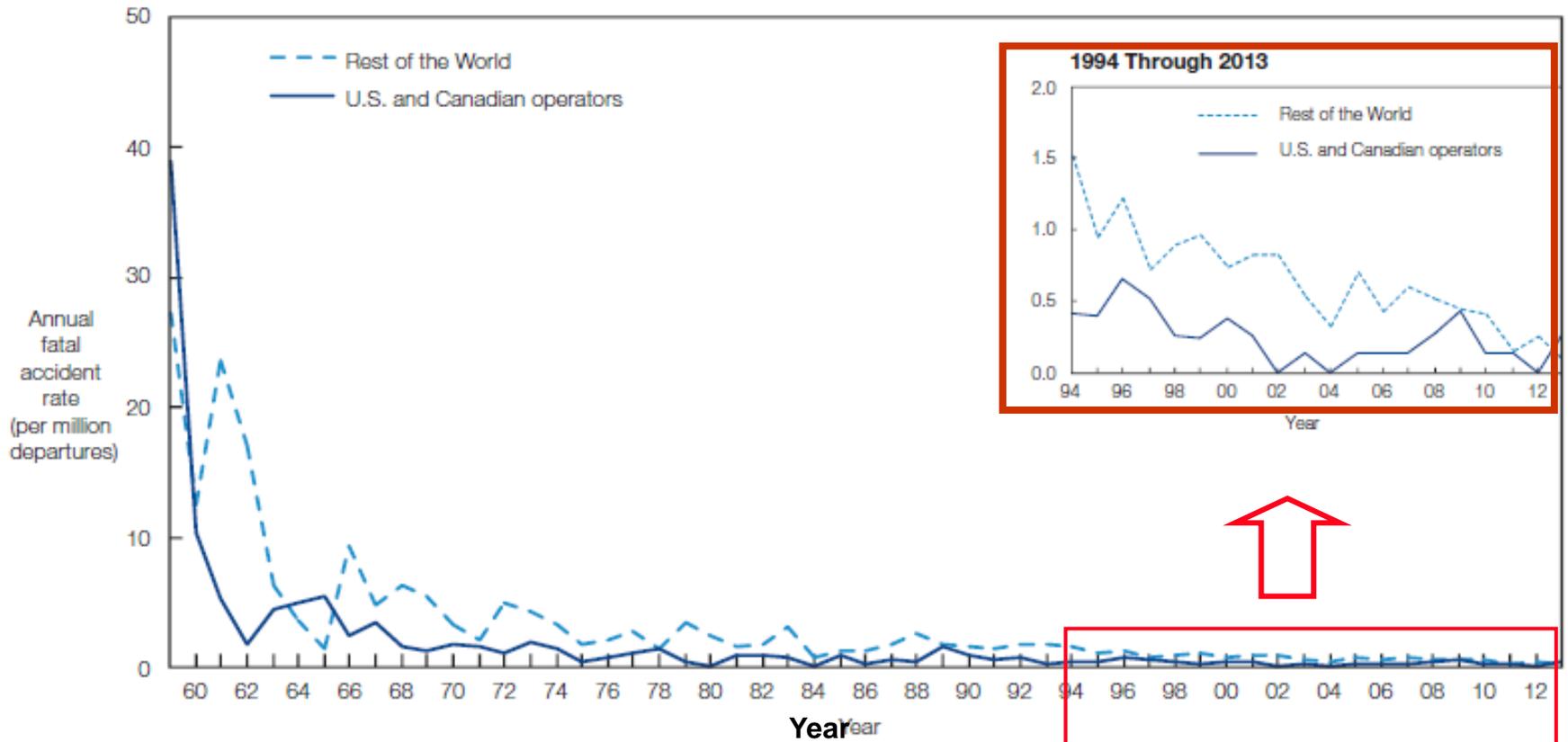
In PPlane, an acceptable cost has been reached thanks to the high automation level of the overall system



# Safety, security and costs...

## U.S. and Canadian Operators Accident Rates by Year

Fatal Accidents | Worldwide Commercial Jet Fleet | 1959 through 2013

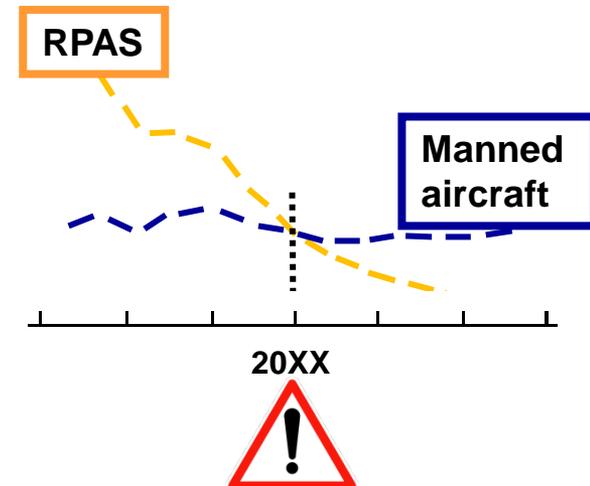
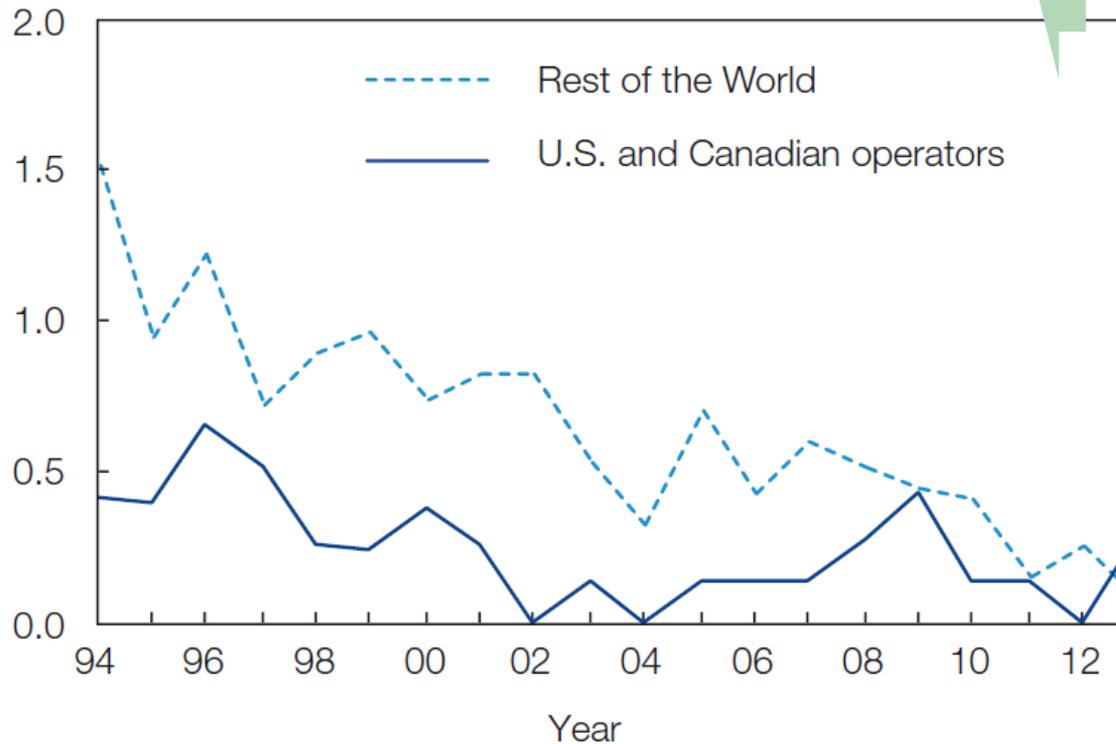


# Safety, security and costs...

Boeing  
Statistics

Expectations

1994 Through **20XX**



# And then, what will be the situation in 2050?

- Regarding the overall system, we are back to the 4 initial scenarios
- Regarding the level of automation, humanists and economists do not have similar views
- Safety issues will likely be the ultimate reference to consider
- All RPAS developers are convinced they will reach the right safety level to integrate their systems in the overall ATS
- Researchers are working hard to help them!

# And then, what will be the situation in 2050?

- No doubt about a wider use of automation for transporting goods and people by car, rail and air...

**See a short video of  
the Pplane project  
on dailymotion**

<http://dai.ly/xw1jz3>