Learning about unstabilized approaches through animations

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- Full member of Air France-KLM group
- ~1.400 employees
- 35 aircraft
- 6.2 million passengers carried
- Flights to approximately 90 destinations
- Operates mostly within the EU, with the focus on Mediterranean region

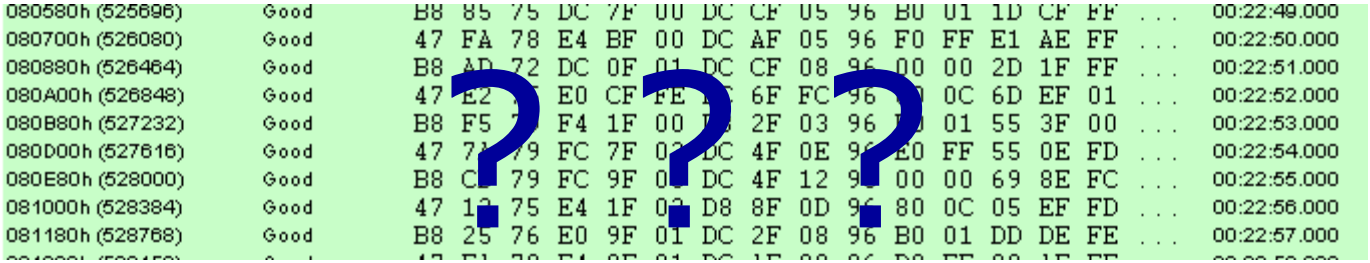
FDM at transavia

- Start of FDM in Apr 2005
- Agreement with pilot union in 2007
- 1st Flight Animation in September 2007

- Currently 50-60 Flight Animations/year
- 550 crew members performing 40.000 flights/year

Flight Data

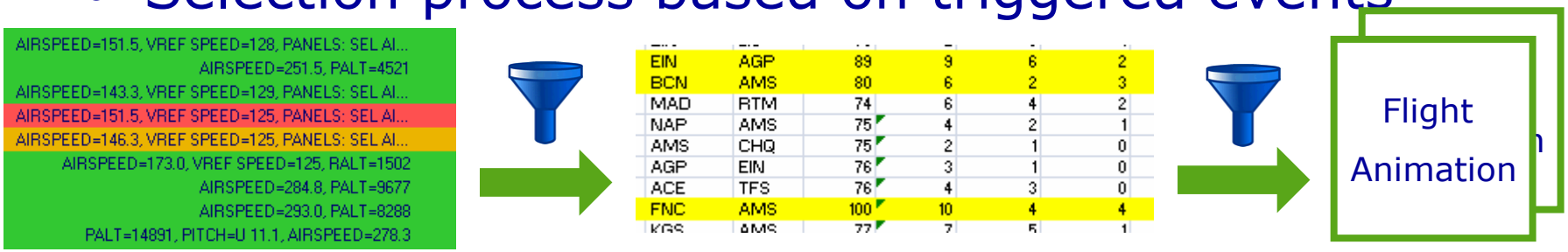
- Greatest strength is also greatest weakness
- Data is just data, no context



- Flight animation is unique opportunity to hear "story behind the flight"

Flight Animation

- Selection process based on triggered events



- Investigator pilot assesses flight and has final decision
- Most important question: is it useful?

Unstable Approaches

Why does a professional crew continue an unstable approach, against company procedures?

Arguments

"Safety was not compromised, landing uneventful"

- The aircraft touched down, so the approach was safe

- Safety Margins are reduced
- Human ability for multitasking limited

Arguments

"The weather was nice,
we could see the runway"

- Goal (runway) clearly visible and appears achievable
- How to recognize situation that will end in an accident if you have never been in such a situation?

Arguments

"We can always go around later"

- After passing 1000ft, grey area
- What is the new stable approach altitude?
- When do we initiate the go-around?

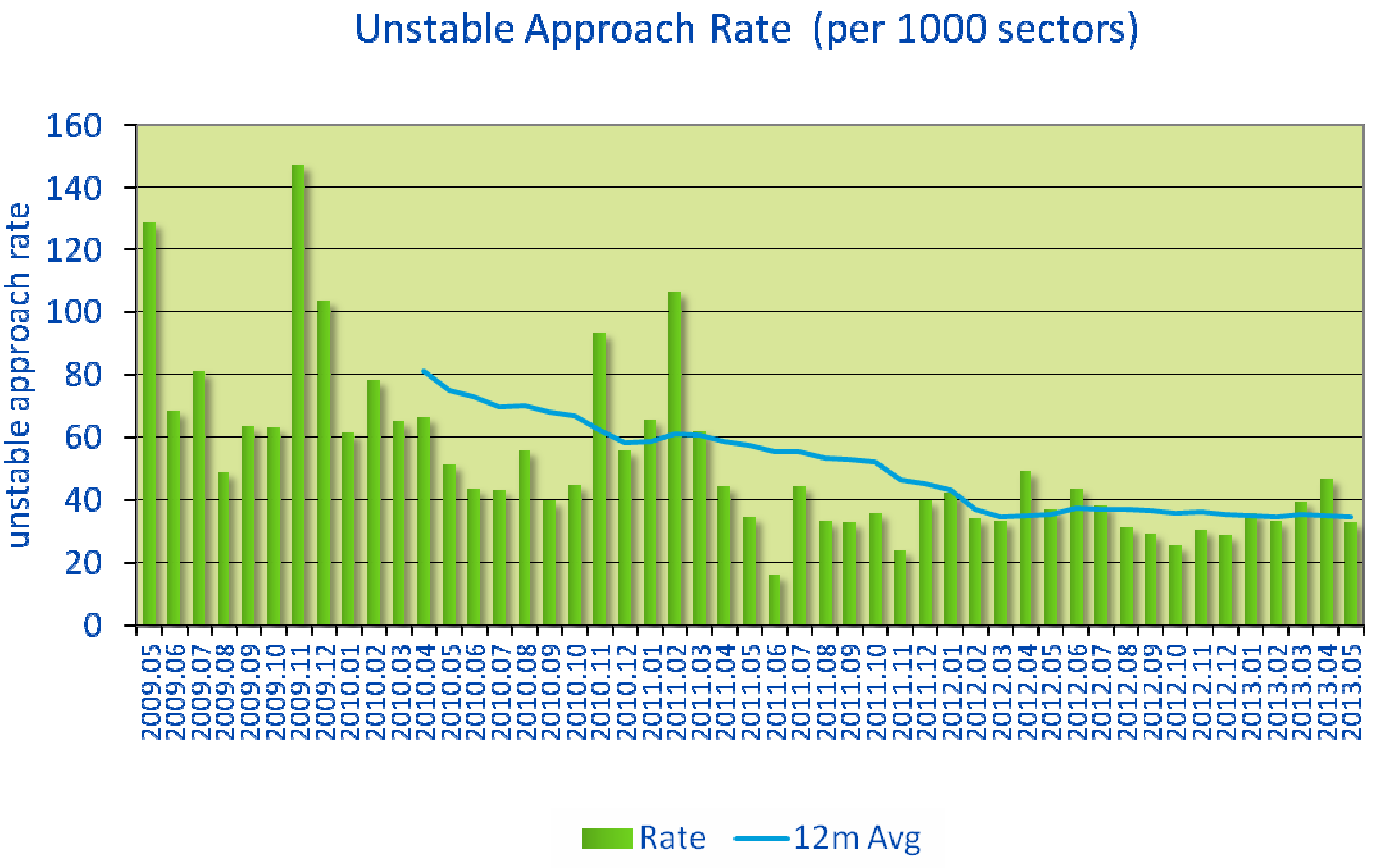
- Sometimes go-around not possible

How to prevent?

- Discuss option of go-around early in approach
- Ensure pilot monitoring actually monitors

- Stable approaches are about maintaining safety margins you hopefully won't ever need, but may save you in the event you do!

Results


Unstable Approach Rate (per 1000 sectors)
unstable approach rate
160
140
120
100
80
60
40
20
0
2009.05
2009.06
2009.07
2009.08
2009.09
2009.10
2009.11
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Rate
12m Avg