



# BEA

Bureau d'Enquêtes et d'Analyses  
pour la sécurité de l'aviation civile

## General Aviation

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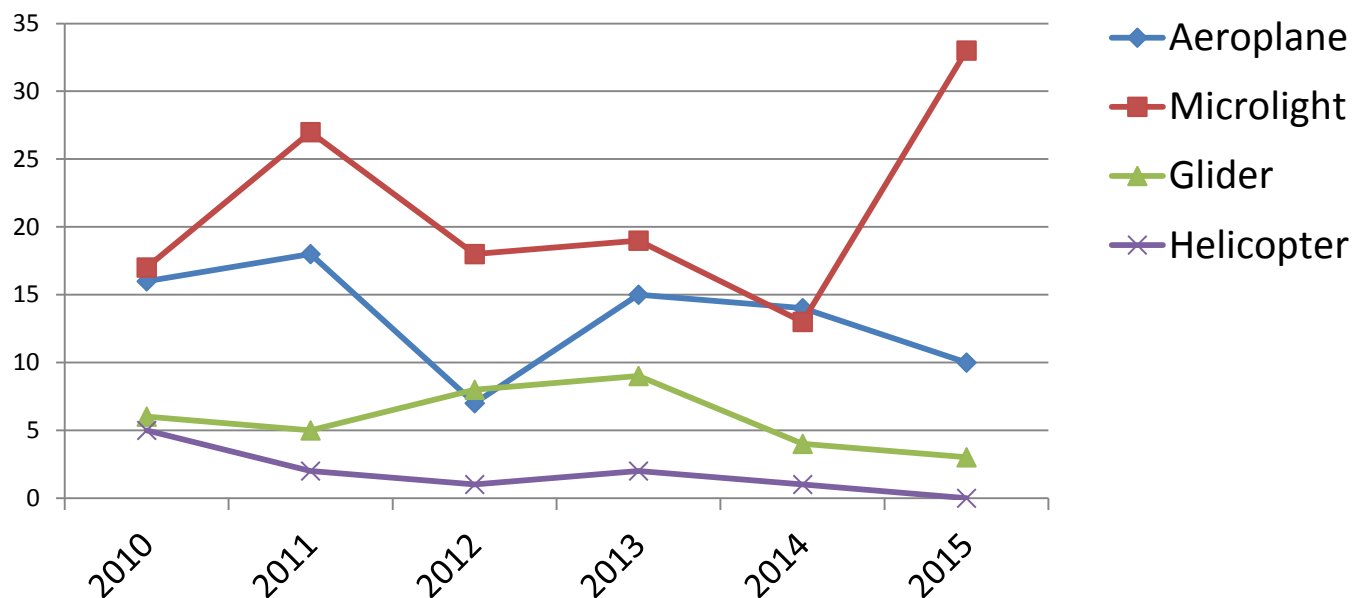
## What are safety issues according to the BEA?

**David NOUVEL**  
Safety analyst  
Investigation Department

## Accidents/investigations - 2015

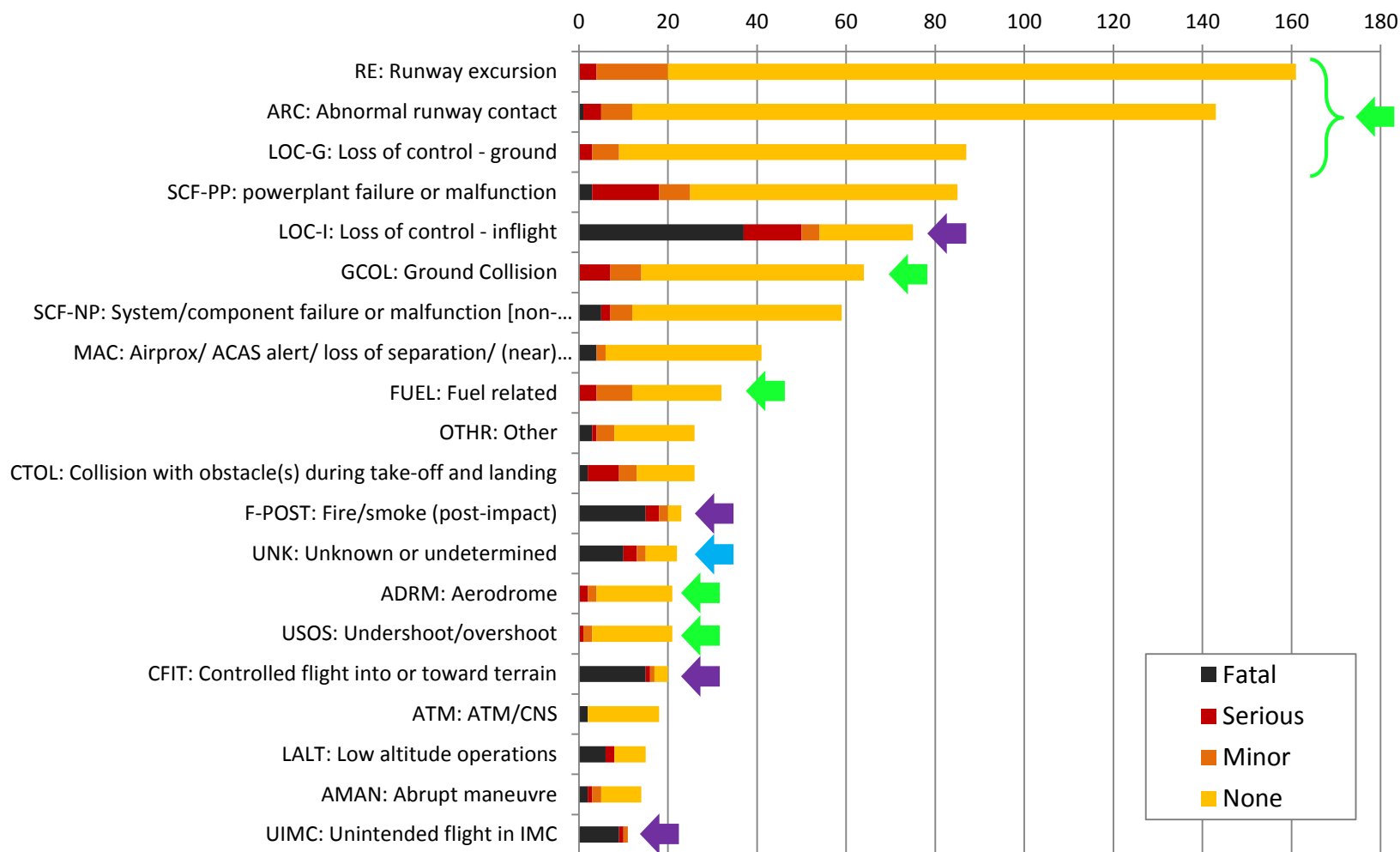
- ➔ 259 reported accidents (46 fatal accidents / 62 fatal injuries)
- ➔ 135 investigations launched

## Fatal accidents - 2010-2015



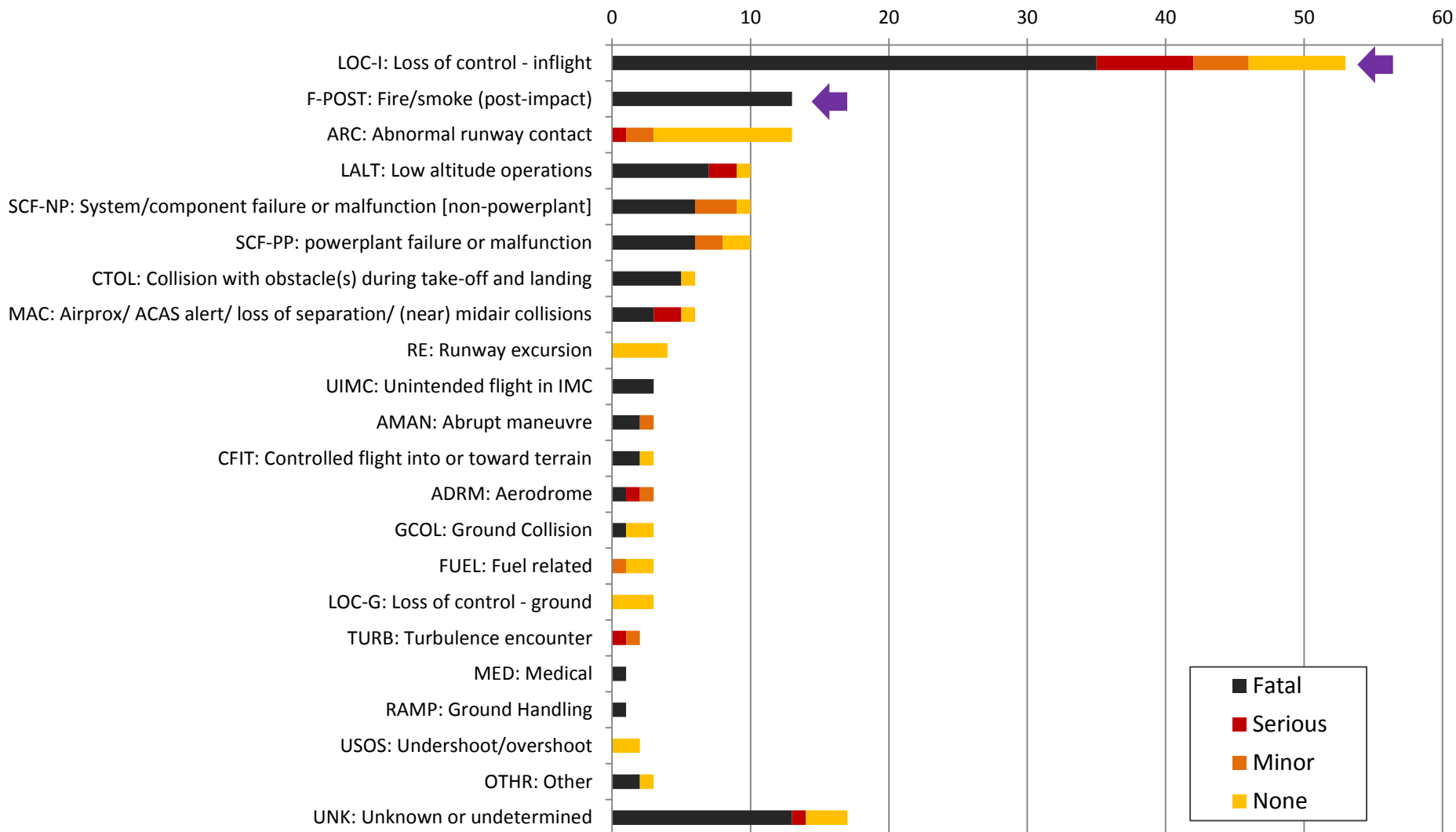
# Investigations on aeroplanes (2010-2016)

## occurrence categories / injury level



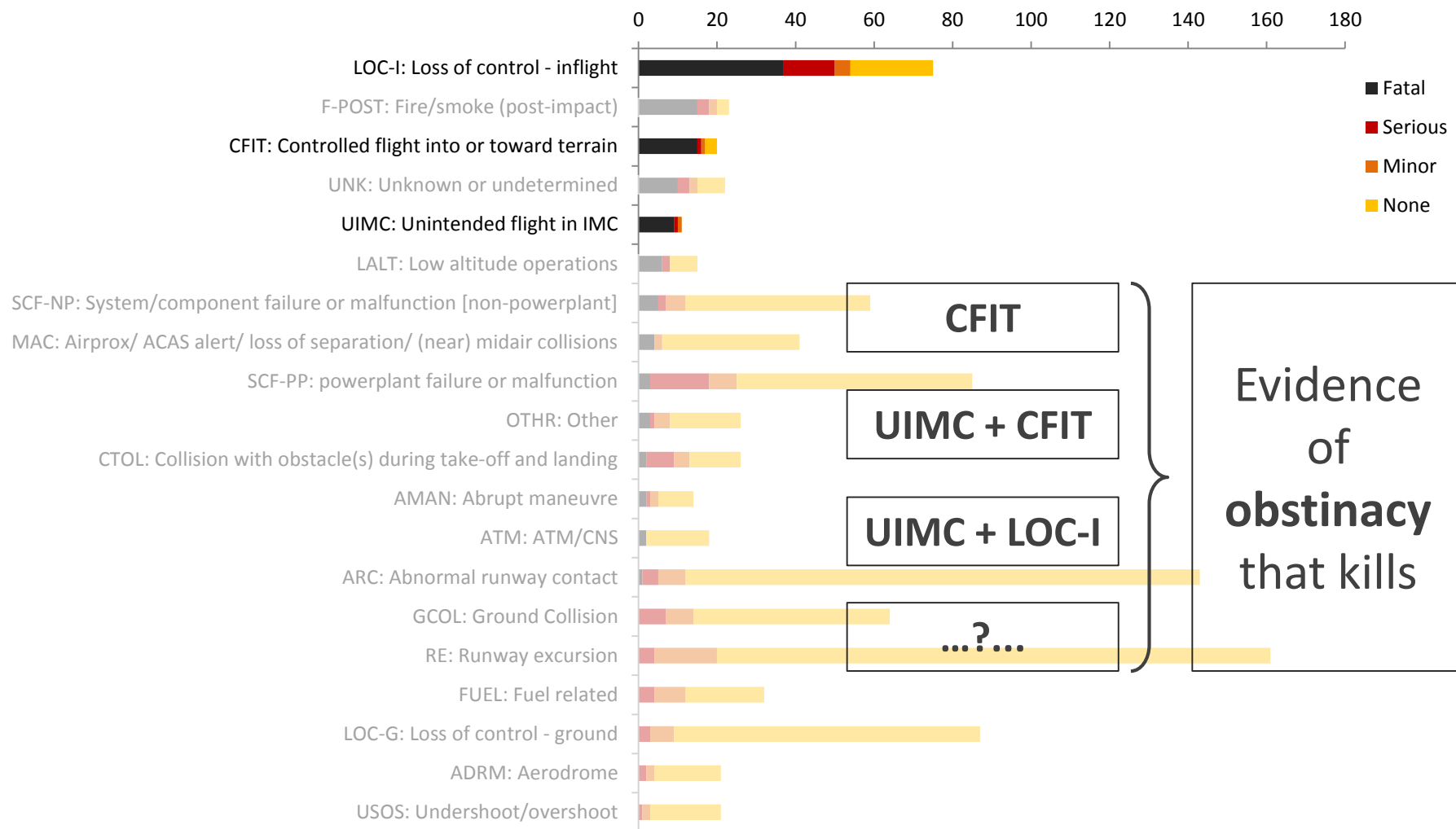
# Investigations on microlight aircrafts (2010-16)

## occurrence categories / injury level

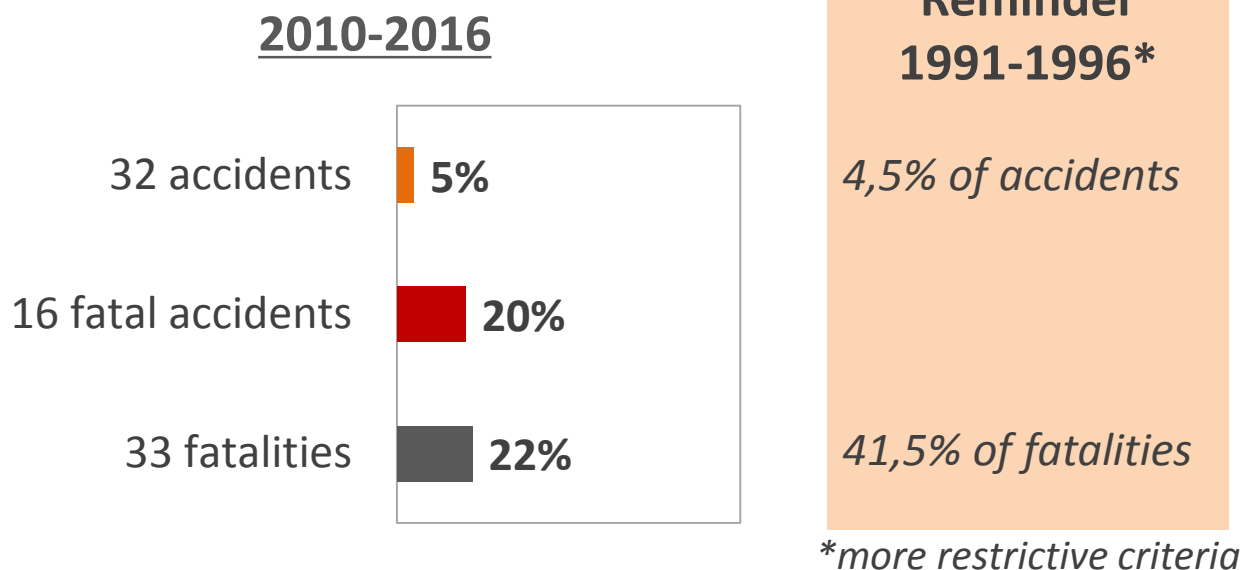


**« Get-home-itis » factor**  
***Aeroplanes accidents (2010-2015)***

# Global approach : GA/aeroplanes accidents 2010-2015 occurrence categories / injury levels



# « Get-home-itis »: contribution to accidents



## ■ Criteria

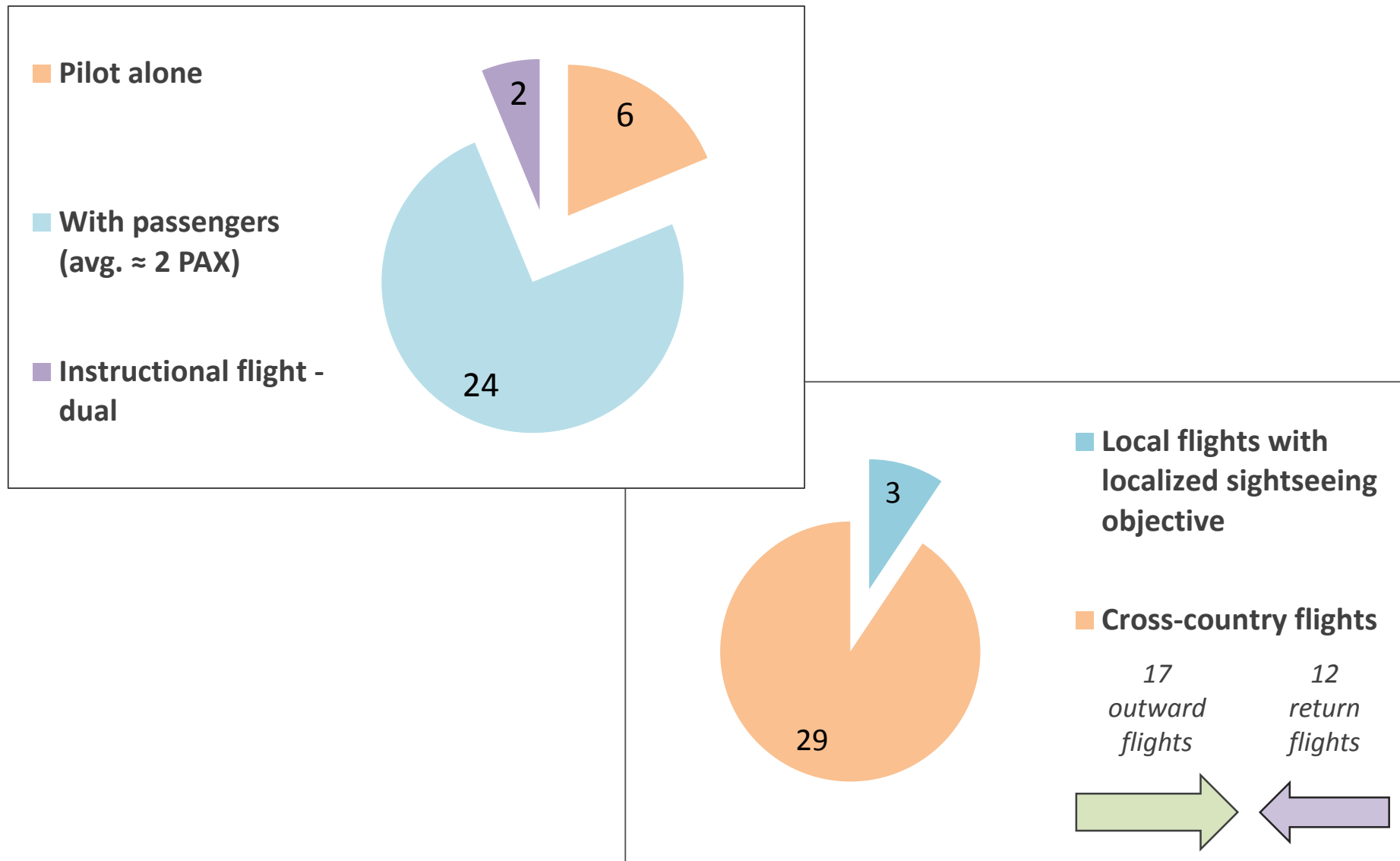
- A cross country flight or a local flight with a localized sightseeing objective
- A threat that a PPL owner would normally be able to manage by renouncing to the objective
- Possible/identified motivation/stress factors

# « Get-home-itis »: types of events

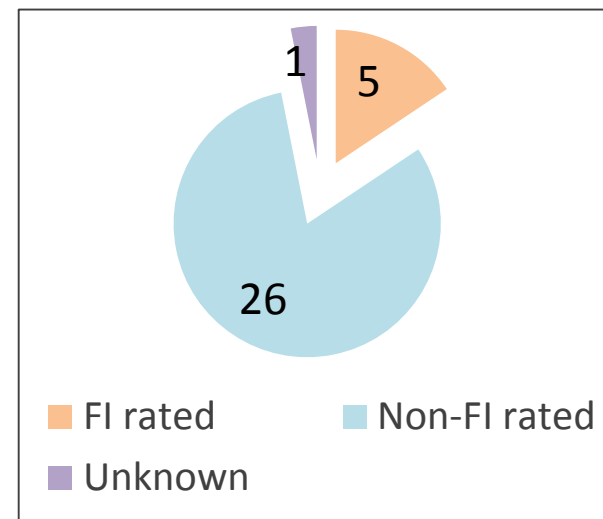
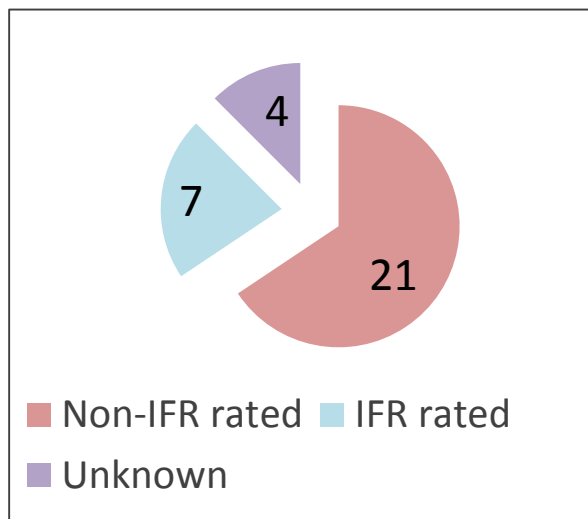
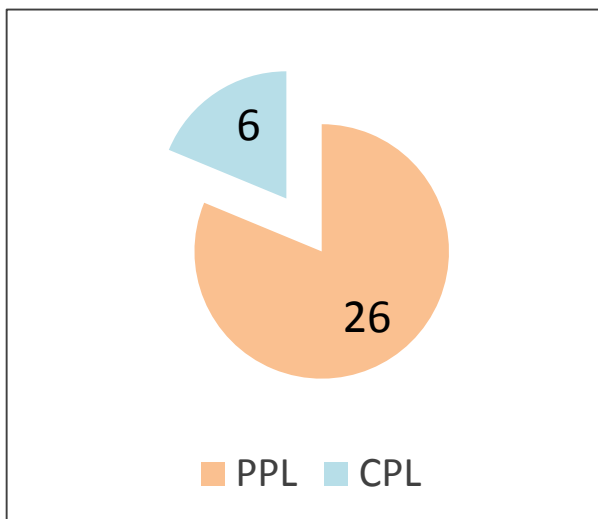
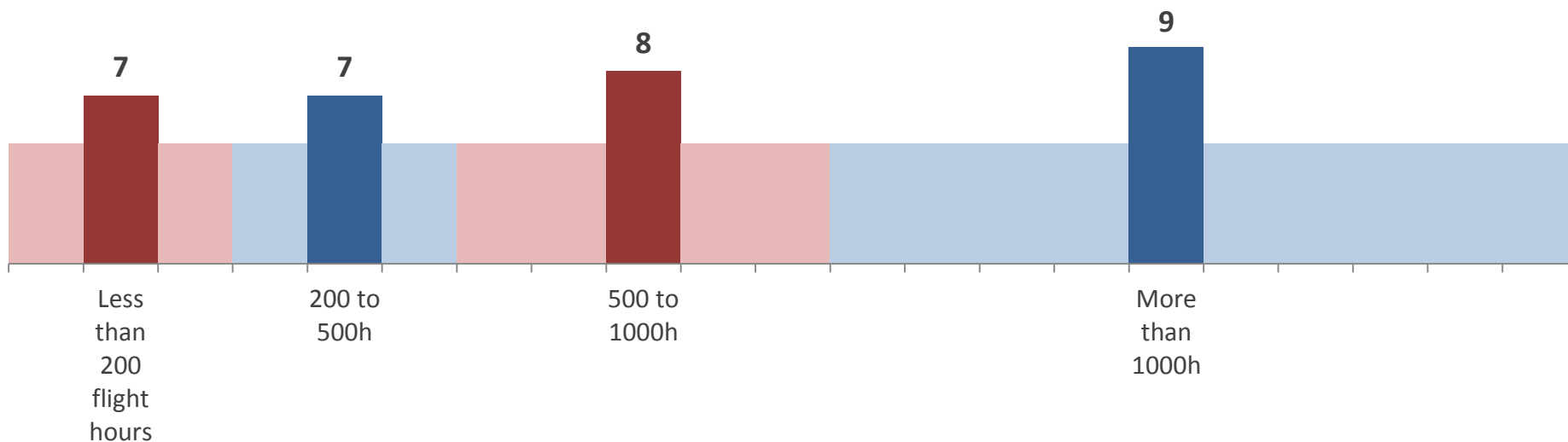
32 « Get-home-itis factors »	22 Flights within unfavorable meteorological environment  <i>Including 2 flights with poor lighting conditions due to nightfall</i>	16 losses of visual references	11 Controlled flight into terrain (CFIT)
			3 Losses of control - inflight (LOC-I)
			2 CFIT or LOC-I (undetermined)
		3 aerological phenomena encountered	2 LOC-I
			1 collision with obstacle during takeoff (CTOL)
		2 flights continued at low height to maintain visual references	1 CFIT (antenna)
	6 Flights undertaken despite an uncertain technical reliability of the airplane	1 flight into or close to thunderstorm	1 (LOC-I)
		2 inflight engine shutdowns	1 inflight structural failure
			1 ditching
		1 erroneous flaps configuration for takeoff	1 forced landing
		1 CO poisoning	1 runway excursion (RE)
		2 flights back undertaken after an accident for which the structural damages have not been assessed	1 offside touchdown (USOS)
	3 Flights undertaken or continued despite insufficient fuel autonomy	3 inflight engine shutdowns	No consequences on the undertaken flights back despite substantial damages that have been observed afterwards
			3 forced landings
	1 contaminated RWY	1 takeoff with inadequate configuration (wheels iso skis)	1 LOC-I



# « Get-home-itis »: flights features



## « Get-home-itis »: pilots features



## 2nd safety issue

# Loss of control

# BEA Loss of control inflight: accidents since 2010

	Aeroplanes	Microlight a/c	Total
<b>Accidents</b>	<b>92</b>	<b>216</b>	<b>308</b>
<i>Fatal accidents</i>	<i>44</i>	<i>72</i>	<i>116</i>

*50% of fatal accidents*

*52% of fatal accidents*

## ■ Loss of control → a polymorphic category

- Loss of visual references (Wx conditions, nightfall, mountainous area, ...)
- Improvised acrobatic maneuvers
- Unusual attitudes within the AD circling
- Improper flap setting, mass and balance
- Icing, flight control obstruction
- (Simulated) « N-1 » situation...
- ... during different flight phases (takeoff, maneuvers, cruise, aborted landing, ...)
- ... on different a/c types (single/multiple engines, historic a/c, ...)

# Losses of control with high performance aeroplanes\*

- **\*Not limited to the regulatory definition**

- e.g. including Cirrus SR22
- Excluding historic/aerobatic aeroplanes

	Aeroplanes	Microlight a/c	Total
<b>Accidents</b>	9	-	9
<i>Fatal accidents</i>	8	-	8

*18% of LOC-I  
fatal accidents*

- **Management of the approach**

- 3 accidents

- **Management of the go-around**

- 2 accidents

# Loss of control resulting from power loss during takeoff / initial climb

- Engine failure / power loss during takeoff / initial climb...

	Aeroplanes	Microlight a/c	Total
Accidents	35	64	99
<i>Fatal accidents</i>	1	10	11

- ... resulting in a loss of control

	Aeroplanes	Microlight a/c	Total
Accidents	6	17	23
<i>Fatal accidents</i>	1	9	10

*12% of LOC-I  
fatal accidents*



Thank you for your attention

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