



**IHST**

**International Helicopter Safety Team**  
Our Vision: An International Civil Helicopter Community With Zero Accidents

## HeliExpo 2016 – Louisville



### Two Questions Need Answers:

Q: 10 years on, have we failed?

- Yes...
- and No
- All the tools required didn't exist...
- and still don't or at least in great enough numbers

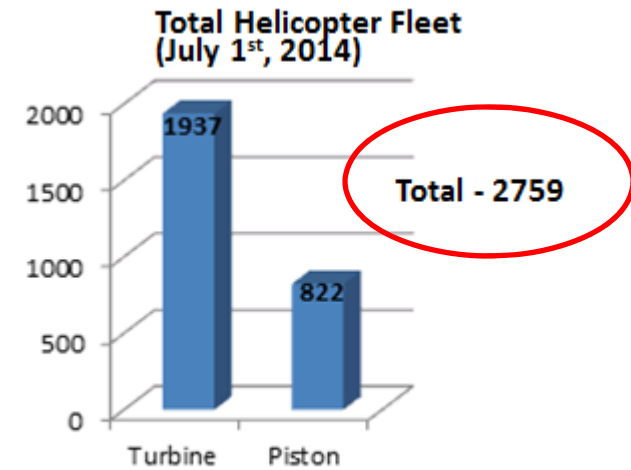
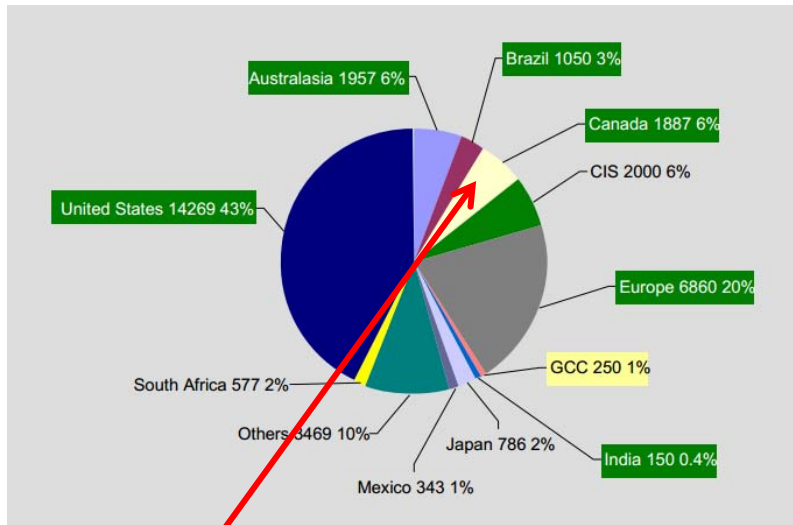
Q: What do we do now?



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## Canada Snapshot

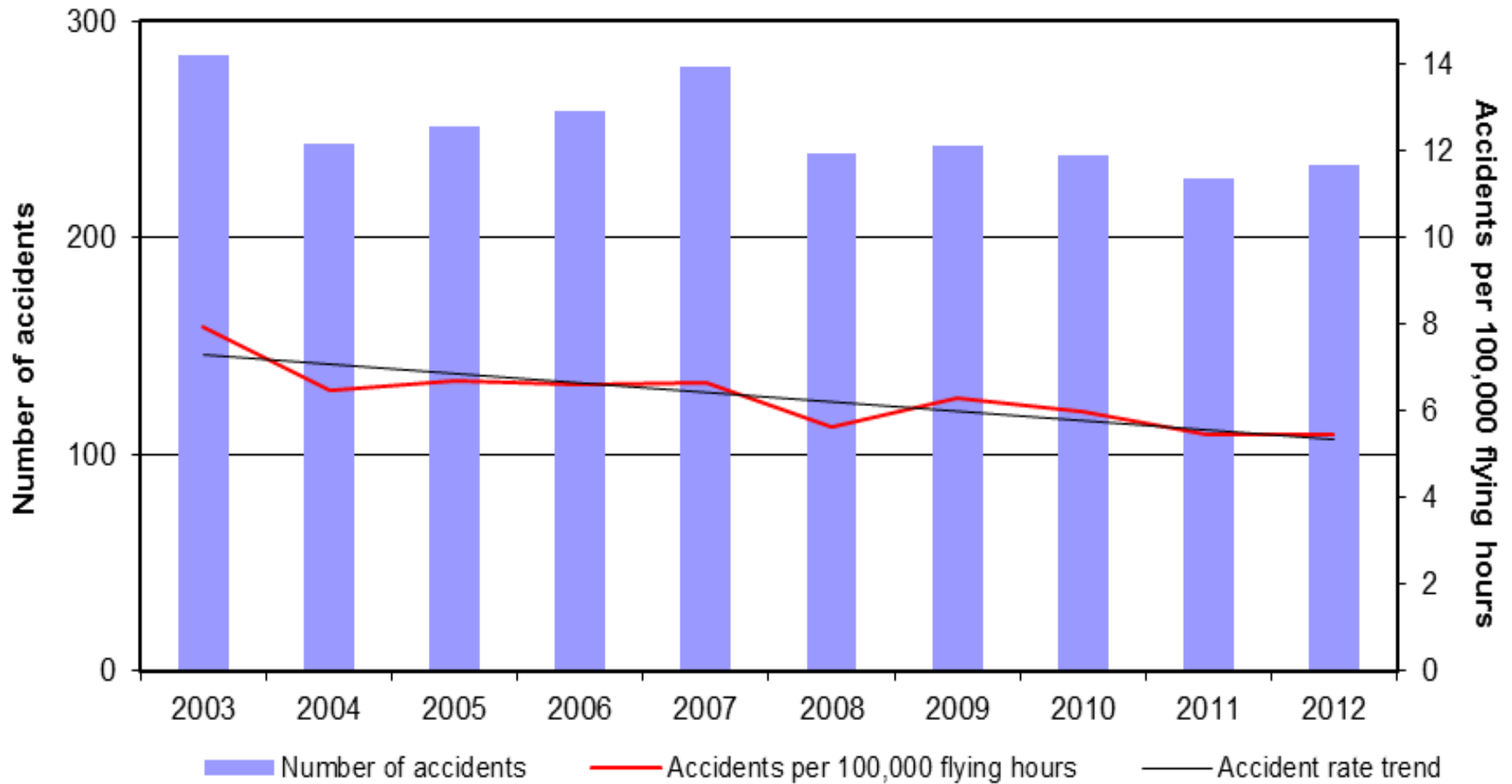


● Fleet average age 23.39 years

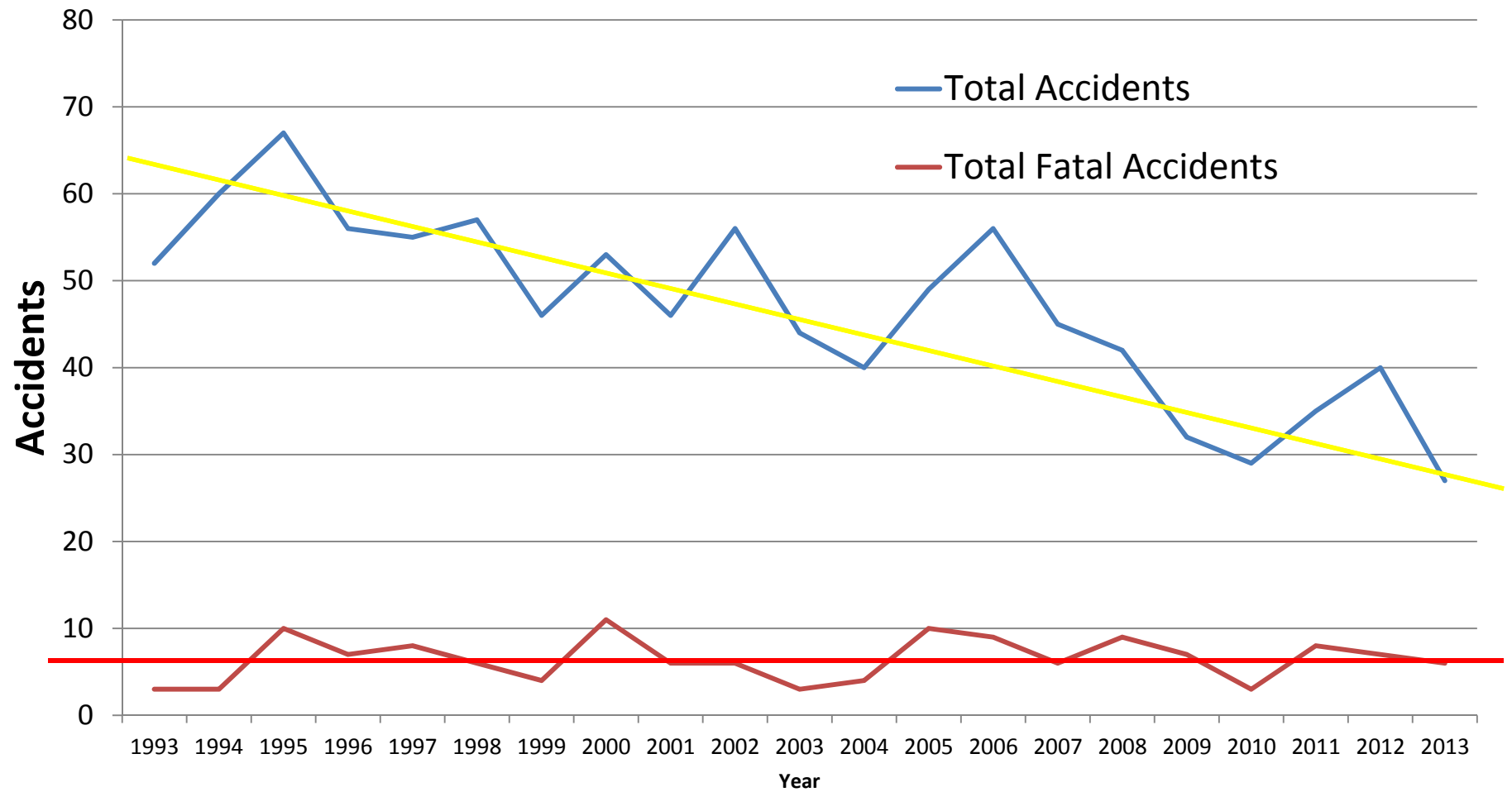
2nd largest in the world – approx 6-7%

Annual fleet hours are approaching 700,000

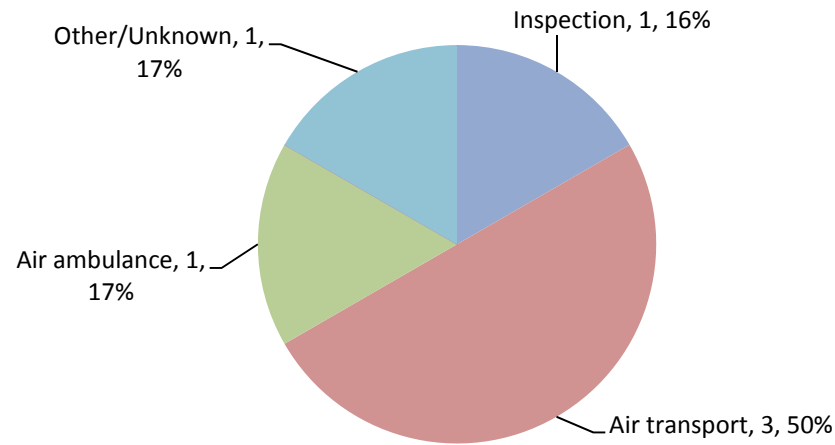
## Accident rate data



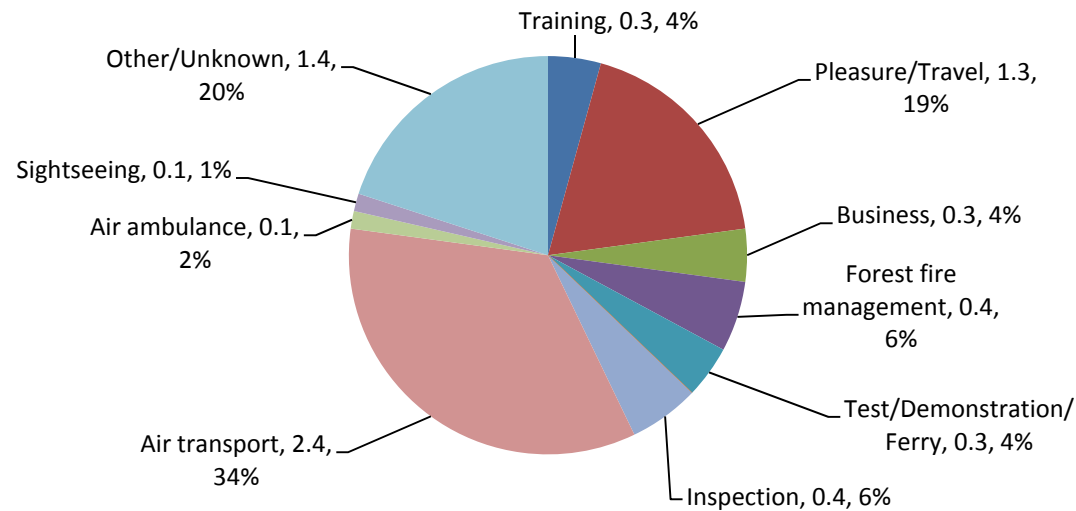
## Accidents and Fatal Accidents involving a Canadian Registered Helicopter



## Number of fatal accidents involving Canadian-registered helicopters by operation type, 2013.



## 10-Year average number of fatal accidents involving Canadian-registered helicopters by operation type.

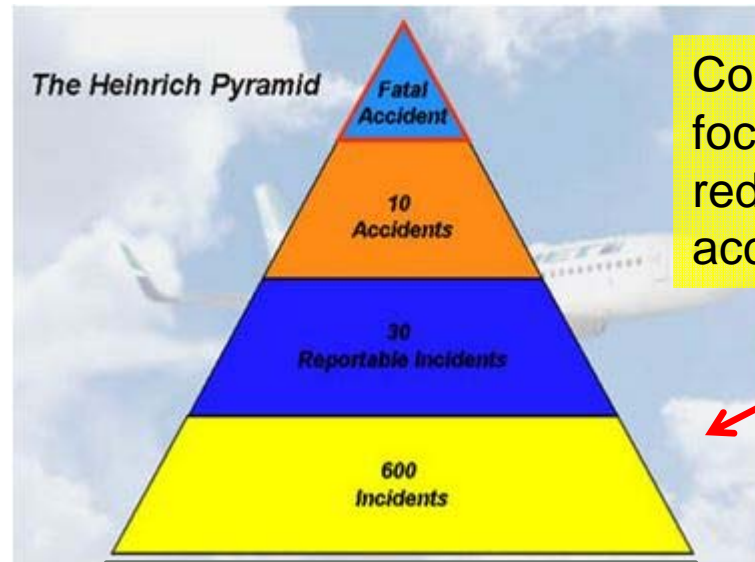




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# 1. Towards Zero Step 1



Common wisdom says to focus on the incidents to reduce the number of accidents

This is by it's very nature REACTIVE!

Eliminate or mitigate!

There's a hidden base to the pyramid:

**HAZARDS**

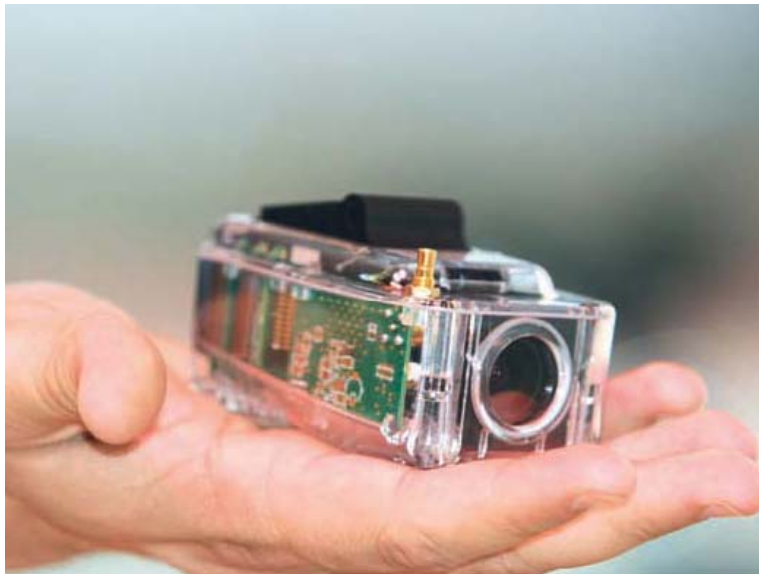


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## 2. Towards Zero Step 2

MORE FDM... Perhaps attached to the pilot instead of the aircraft!



Vision 1000 – Small and Easily Installed



A portable GPS is ubiquitous in commercial helicopters. Why not an FDM unit?





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FDM Options Are Limitless if we Expand our Minds:



Open Source Cell Phone –  
Automatic Uploads of all  
inertial data



Two Way Cameras – Inside view and  
outside view – People change their  
behaviour when they see their own face!





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### 3. Towards Zero Step 3

Manage Our Clients!



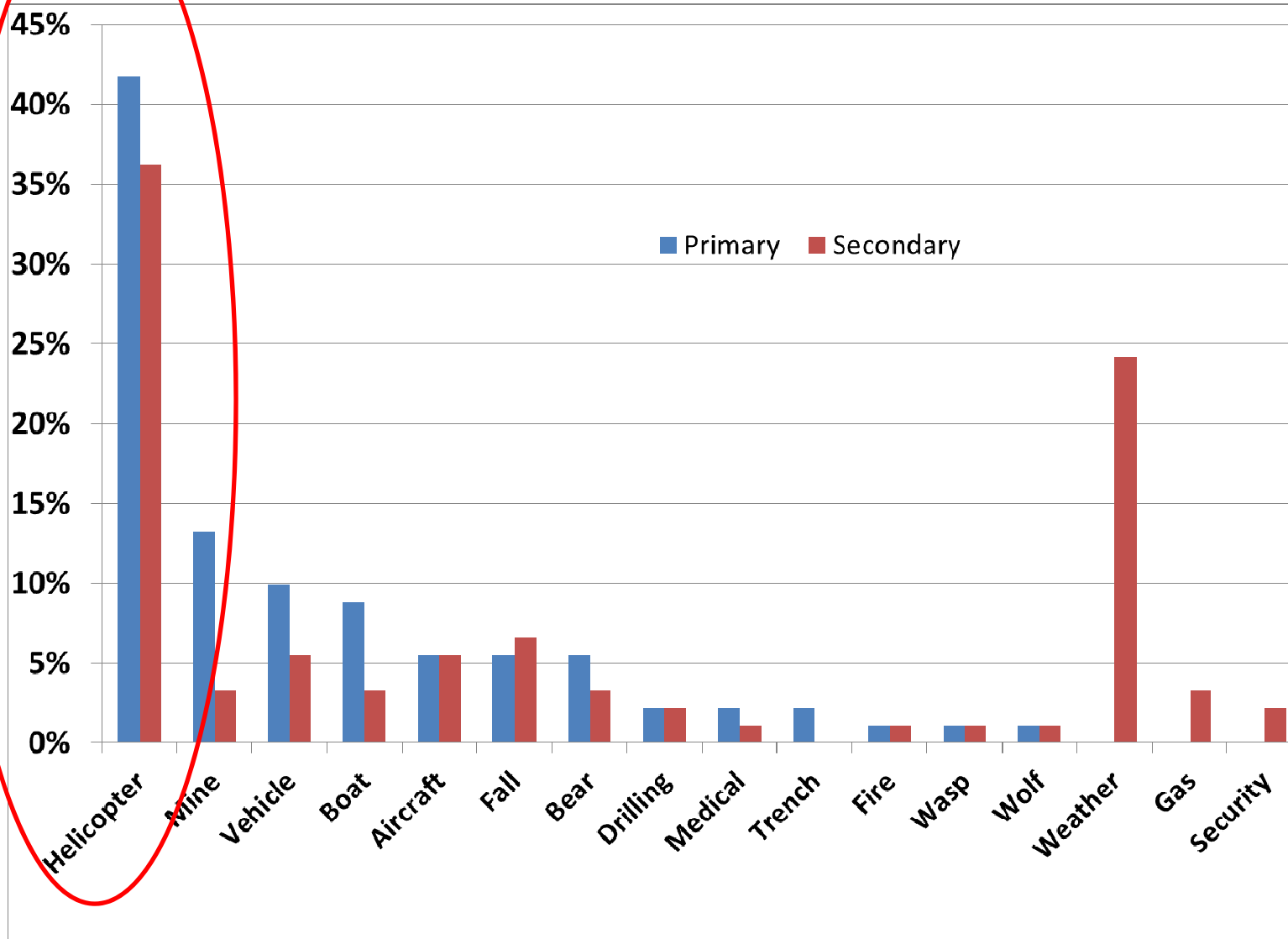
Prospectors and Developers Association of Canada  
- Host of the world's largest mining show

#### EXPLORATION FATALITIES PER YEAR ALL CAUSES (Canada)

	Fatalities	Per year
1980s	36	3.6
1990s	6	0.6
2000s	38	3.8
2010s	11	5.5

Almost 35% of helicopter activity in Canada, or 250,000 annual hours are flown in mineral exploration programs!

# Fatal Accident Causes 1980-2012 Canada





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## Client Management

1. Establish a mutually acceptable standard
2. Insist that the corporate culture and the field culture of the client are in sync
3. Back your pilots and mechanics with the client but ensure they are in compliance
4. Close the feedback loop to ensure the service is meeting expectations without compromising safety, i.e. the standards are supposed to forward the cause of safety, not impede it.
5. Do not accept the almost inescapable pressure to “trim the bill” due to the client’s perception that things could have been done “faster”.
6. Clients have been primary or secondary causes in many an accident, through implicit or even overt pressure to meet a budget. This has to be resisted as much as possible, which is exceedingly difficult since the clients pay the bills.
7. See number 6...



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**Thank you!**