# Limitations of Human Performance

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# Solutions Proposed

- Training
- Standardization
- Crew Resource management
- Professionalism
- Situational Awareness



#### Additional Considerations

- Incursions are either
- Situational confusion (don't know where you are)
- · Or
- · Clearance confusion (think that you are supposed to be where you are)
- Controller/pilot human factors always an issue



## Solution

- Landing without lowering the landing gear.
- · An example of Human Factors that required a technology solution
- · Training is not the entire answer
- Technology may be able to do for incursions what TCAS has done for mid air collisions



#### Additional Considerations

- Excursions are not so straight forward
- unstabilized approaches
- Poor runway condition
- Mechanical failure
- Unanticipated wind effects
- Lack of vertical guidance
- Just to name a few causal factors



### Solution

- · Again, training is not the entire answer.
- · Go Arounds are not always a solution
- Excursions will probably always be a fact of life, if not off the end then off the side of the runway
- If the hull is intact the people usually survive an excursion



### Solution

- We must accept that excursions will happen
- We must delethalize the area surrounding the runway
- · If there is insufficient real estate, alternative solutions MUST be used
- Really the only answer

