



Safety Management International Collaboration Group (SM ICG) Industry Day

The Key to Safety



Robert W. Agostino

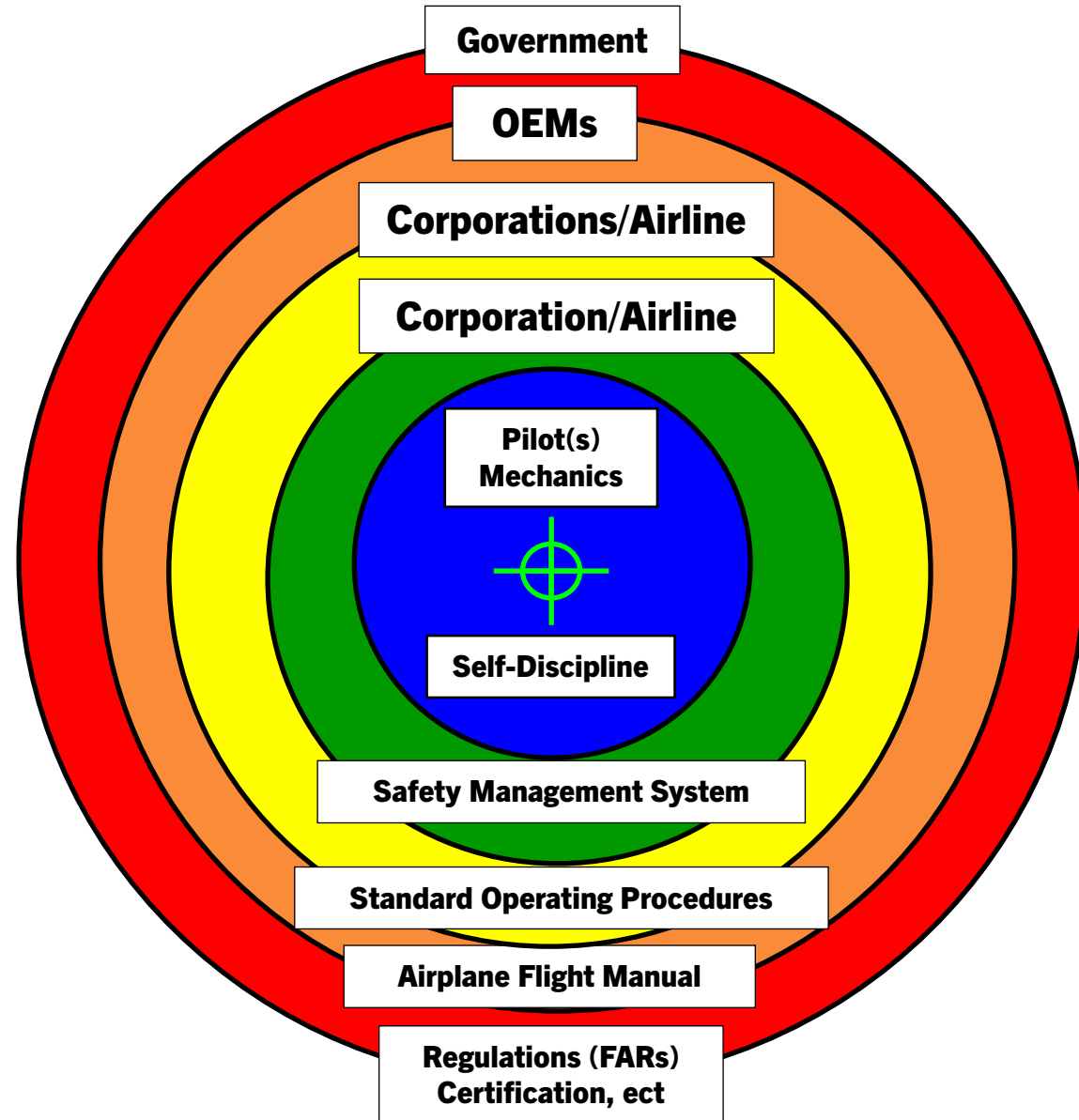
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What is safety?

Safety is a resultant.

Safety Protection Model





A Truism

- **No one thing “causes” accidents**
- **Confluence of multiple events, task demands, actions taken or not taken, and environmental factors**



Two Fallacies About Human Error

Myth: Experts who make errors performing a familiar task reveal lack of skill, vigilance, or conscientiousness.

Fact: Skill, vigilance, and conscientiousness are essential, but not sufficient to prevent error.



Two Fallacies About Human Error (con't)

Myth: If experts can normally perform a task without difficulty, they should always be able to perform that task correctly.

Fact: Experts periodically make errors as consequence of subtle variations in task demands, information available, and cognitive processing.



Six Overlapping Clusters of Error Situations

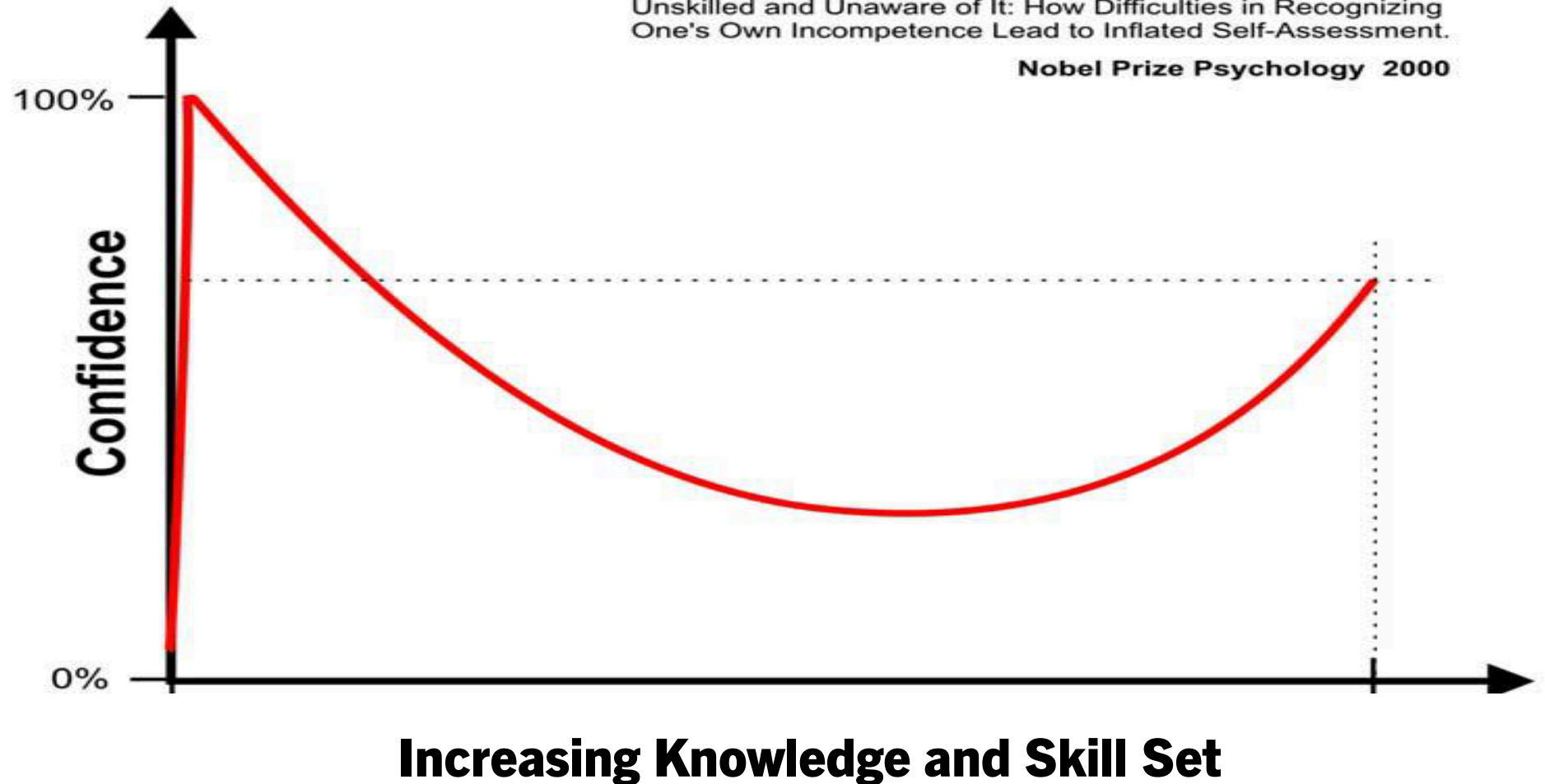
- 1) Inadvertent slips and oversights while performing highly practiced tasks under normal conditions**
- 2) Inadvertent slips and oversights while performing highly practiced tasks under challenging conditions**
- 3) Inadequate execution of non-normal procedures under challenging conditions**
- 4) Inadequate response to rare situations for which pilots are not trained**
- 5) Judgment in ambiguous situations**
- 6) Deviation from explicit guidance or SOP**

A very common cognitive bias where lesser skilled individuals suffer from **illusion of superiority**, mistakenly assessing their ability to be much higher than is accurate.

Dunning-Kruger Effect

Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessment.

Nobel Prize Psychology 2000

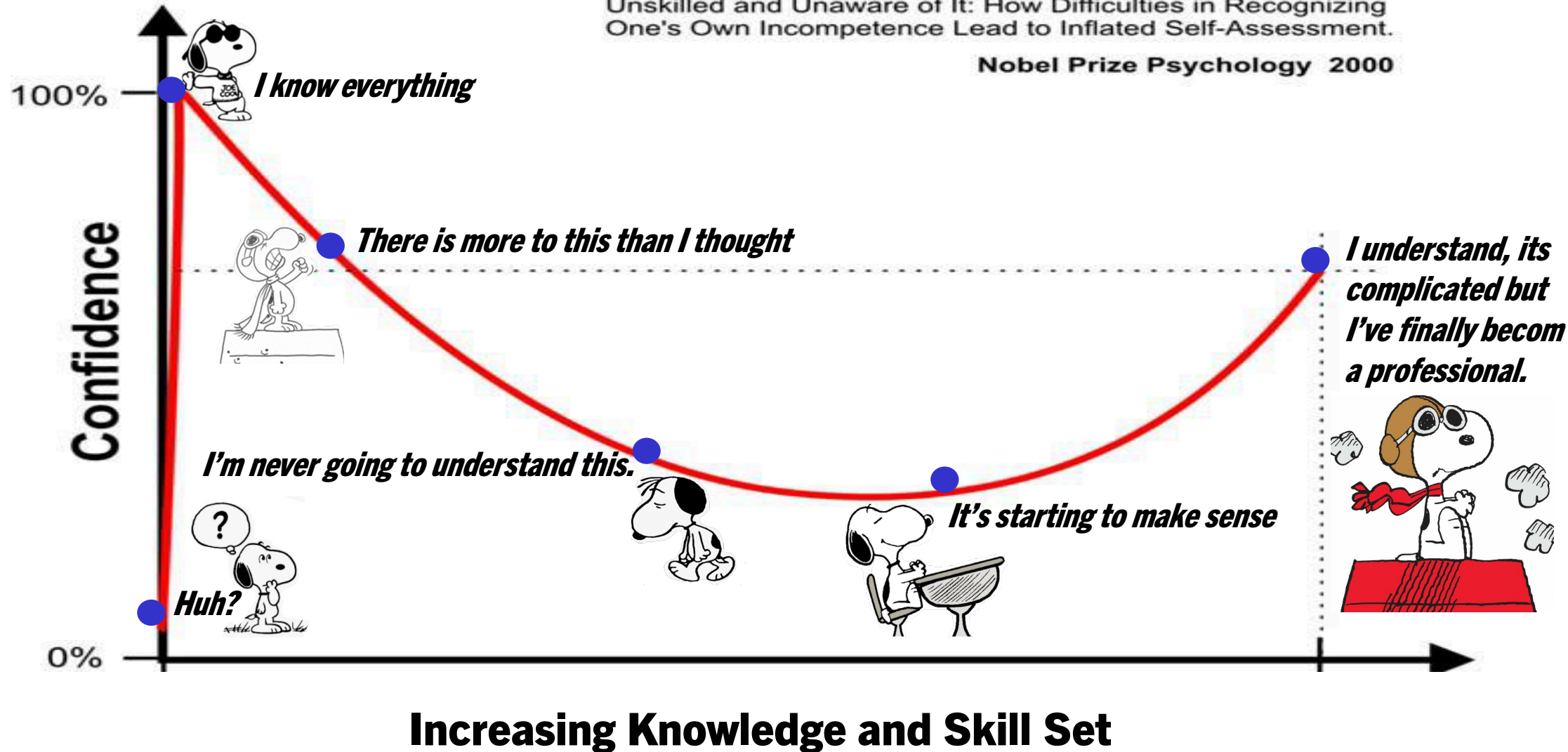


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“I don’t believe in **safety...**

I believe in **COMPETENCE.”**



**(Scott Crossfield,
First Pilot to fly the X-15)**

