

What if there were no regulations?

Why are we training 2030 technology in a 1970-ies way?

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Smarter simulators



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Current Situation



**IF WE KEEP DOING WHAT WE ARE DOING, WE KEEP
GETTING WHAT WE ARE GETTING!**

Safety and training must go hand in hand

The absence of events does not mean a situation is as safe as it can be.

- With a quadrupling of movements, accidents will quadruple as well. Safety is not absolute!
- By nationalizing and politicizing safety, we create a schism and ignore real safety issues
- Using statistics to prove a past decision (confirmation bias) is detrimental to an honest discussion.
- It feels great to whack the safety threat in the head and feel accomplished. However, the purpose of a Safety Management System (SMS) is to “Provide a systematic way to control risk and to provide assurance that those risk controls are effective”



Safety does not happen by accident!

From Competency to Compliance to ?

Do we really believe Wilbur asked Orville if he had sufficient simulated instrument cross country time in his logbook prior to piloting the Wright Flyer? What about Charles Lindbergh?

Competency was the basis of qualification

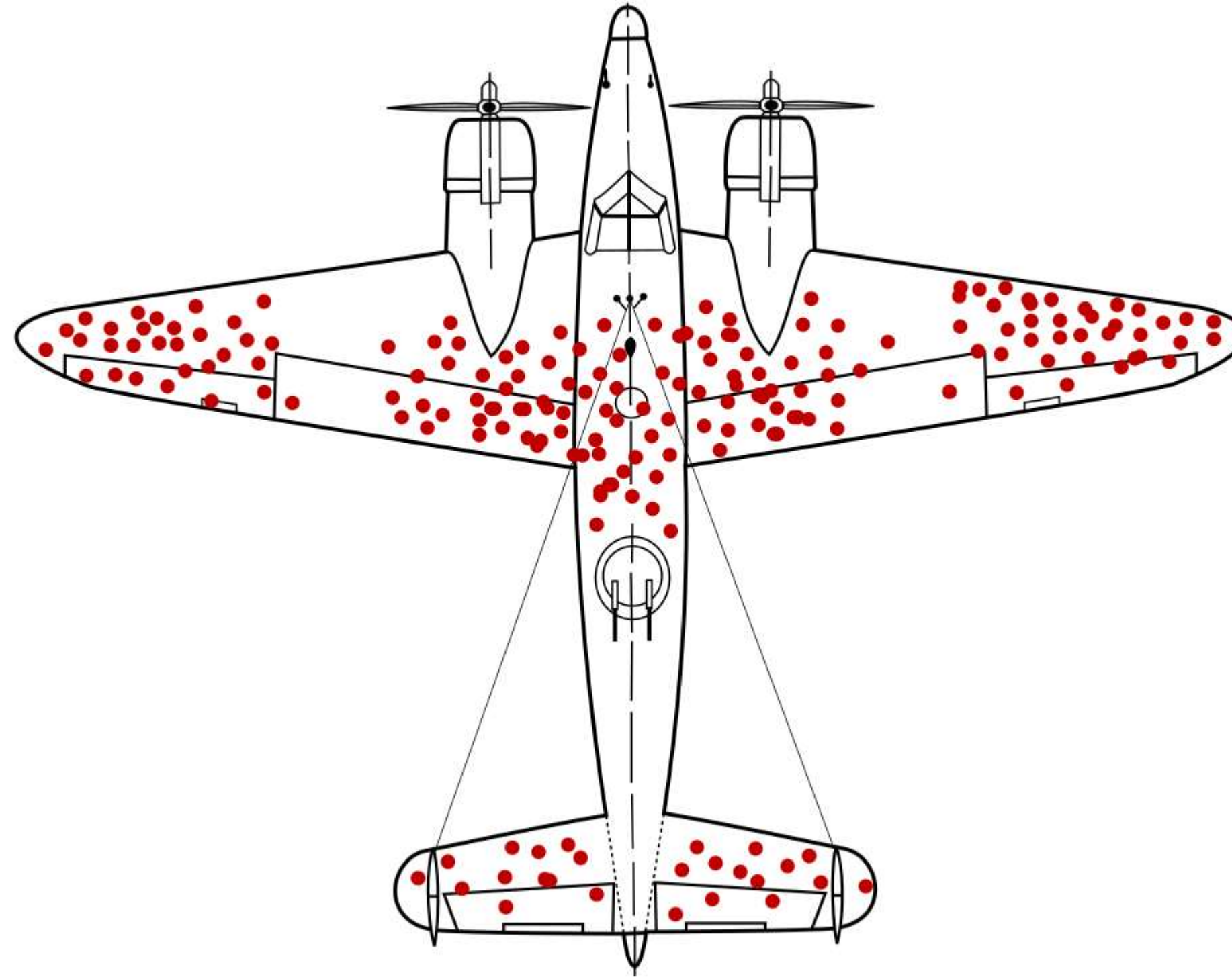
To codify this, the way we did business became the standard. However, we went from

- **A WAY** to do something
To
- **THE WAY** to do something
To
- **THE ONLY WAY** to do something

Without considering (and allowing!) other options and ignoring unintended consequences

Survivorship Bias

In addition to **THE ONLY WAY** to do something, we applied survivorship bias by fixing holes when they appeared, adding “easy fixes” and political solutions rather than do a bottom-up review.



Which has led to this mess





This gives me nothing about quality, only quantity and specification of tools

The grim reality.....

Although aviation technology has improved dramatically, training has not made an equal leap.

Training has become:

- Time based and Compliance monitored without much of an objective quality or safety standard
- Compiled of additive solutions (Whack-a-mole)
- Excluding capable and diverse workforce
- Not based on the actual job requirements
- Outdated and subjective



Resulting in

- Costly and unnecessary training on aviation-only technology
- Inability to attract and retain the appropriate workforce (yes, this is about PEOPLE!)
- Lack of interest / diversity in employment in aviation
- Repetitive training and testing not serving a purpose other than “to comply”
- Vested (political and business) interests growing stronger
- Survival becoming a competency

An untenable system maybe supporting what WAS, not what WILL BE

But what if there were no rules.....

How would we set up training now?

The RIGHT people

The RIGHT training

The RIGHT tools

The RIGHT objectives

To do the job RIGHT

Going forward rather than looking backwards



What are the focus areas in this effort to better training?

- Selection
- Training to Competencies
- Technology and Evidence Supporting Learning Objectives
- Incorporating the final job requirements
- Adjusting to generational learning changes

Selection

- First of all, just because you can **afford** flying training, it does not make you a competent pilot (and the other way around!)
- Selection should be solely based on **interest** and **capability**, much like the US Armed Services ASVAB testing available to students

The **Armed Services Vocational Aptitude Battery (ASVAB)** is a multiple-aptitude battery that measures developed abilities and helps predict future academic and occupational success in the military. It is administered annually to more than one million military applicants, high school, and post-secondary students.

Training to Competencies

Rather than focusing on short term goals (passing the next test), the goal should be strategic:

Acquire the **necessary Competencies** to operate as a **safe and effective crew member**.



Picture courtesy of Aviation Voices/Jop Dingemans

Technology and evidence supporting learning objectives

With the previous in mind, only now should we ask the question: HOW (Task-to-Tool) and WHAT do I need to teach and assess these Competencies?

- What are the correct tools for the learning objectives to be achieved?
- What tool and fidelity do I need? (And why do these tools need to resemble an airplane?)
- How can we allow for proven and new technology to gain optimum training and safety credit?



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Incorporating the ultimate job requirements

Airlines will have additional **focus** and **expectations**, which may become additional learning targets once they are known and understood. Flying an airplane is only one (important) part of the job description. **Set clear objectives and communicate them!**



Picture courtesy of Aviation Voices/Jop Dingemans

Adjusting to generational learning changes

- **Gen Z** students are digital natives who prefer an independent learning style with **less passive but more visual and kinaesthetic learning**.
 - In a study by Barnes & Noble College (bncollege.com), more than half of respondents said they **learn best by being hands-on**, while **38 percent learn by seeing**. When it comes to classroom learning, students find **class discussions are the most beneficial**. Working through **examples of a problem** also topped the list, which further supports Gen Z's desire to **learn by doing**.
 - Begin a dialogue — Long lectures aren't the best technique for Gen Z students. They're used to **multitasking** and **skimming** for the most valuable information. Try a **variety of teaching methods** to keep the class moving.
- Curiosity is a **Generation Alpha** attribute that educators are encouraged to build upon.
 - Having **information** at their fingertips has made these kids **curious** and we need to **create space for the big questions** they have. Building **more choice** into learning allows students to **explore their curiosity**.

Solution proposal



ICAO and global regulatory agencies to:

Convene a global panel of experts to reimagine aviation training (revolution over evolution) and set global minimum quality standards

- Setting aside politics, National and personal pride and agendas and stay away from vested (business) interests
- Don't ask the same old people the same old questions, as you will get the same old answers!
- Keep the good, get rid of the bad and add competency-based targets, not hour requirements
- Understand the future audience (Gen Z and Alpha)
- Focus on quality outcomes rather than quantity inputs

OEMs, Airlines, TDMs, ATOs and trade organizations to:

- Set up, fund and administer an independent selection system for global use to encourage aviation employment and diversity in industry. Think globally, not locally. Your people are global as well!
- Provide evidence of quality improvements. Don't expect regulators to agree "just because you say so"!
- Do what is right, not just easy, convenient, cheap or compliant!
- Stay away from traditional thinking because that's "the way we've always done it"
- Create early and often information exchanges and support between training providers and the end users and update training and equipment as needed
- Support the personal financial burden by guaranteeing loans etc.

Conclusion



Conclusion

Henry Ford famously is quoted as saying:

“If I had asked people what they wanted, they would have said faster horses.” People can easily describe a problem they're having — in this case, wanting to get somewhere faster — but not the best solution.

Hope is not a strategy, it's time for action!

THANK YOU

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