Commercial Aviation Risk Management: Useful for Financial Industry?

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Question

Could an unbiased and impartial mishap investigation process, such as an NTSB-type investigation, help the financial world manage risk more effectively?

Answer: It depends.

Two Categories of Mishaps

- Low Frequency High Consequence Events
  - Insiders surprised, rarely if ever seen it before
  - Exhaustive investigation, may take years
  - For transportation mishaps, NTSB investigates

- High Frequency Low Consequence Events
  - If longstanding, probably indicates process problems, rather than people problems (thus, punishment is not usually helpful)
  - More efficient to address the trends than individual events
  - Suggest voluntary collaborative effort
  - In aviation, Commercial Aviation Safety Team (CAST)

High Consequence Events: NTSB

- NTSB is an independent federal agency, investigates transportation accidents and incidents in all modes
- Determines probable cause(s) *(not liability or blame)* and makes recommendations to prevent recurrences
- Not a regulator, can only recommend
  - Favorable response to recommendations: > 80%
- Single focus of recommendations: *SAFETY*

Independent

- Political “independence”
  - Members appointed/confirmed, but with a fixed term (i.e., not discretionary appointees)
  - Member terms staggered
  - Political party balance
  - Technical expertise
  - Objective: Conclusions from the facts, not the politics
- Functional independence
  - Role is solely as investigator; not an operator or regulator
  - No “dog in the fight”
  - Objective: Unbiased and impartial investigations and analyses

The "Party" System: Developing the Facts

- NTSB relies heavily on parties who were involved in the mishap to develop the facts
  - Carrier/Operator
  - Manufacturers
  - Unions
  - Air traffic controllers
  - Regulator
- Parties are selected for their *technical expertise*
  - Excludes plaintiffs, attorneys, insurers

The Party System: Undertaking the Analysis

- Once the facts are developed, NTSB undertakes analysis, makes findings, determines probable cause, and develops recommendations *without* the parties
- NTSB's neutrality is important for unbiased and impartial analyses, findings, and recommendations
- Anyone, including the parties, is free to submit their own analysis into the public docket

Keeping the Public Informed

- Objective: *TRANSPARENCY* of the facts and the process
  - Factual information is placed in the public docket (except proprietary information, as appropriate)
  - Sunshine Act requires Board deliberations to occur in public
  - Final NTSB accident report is also in the public docket

BUT . . .

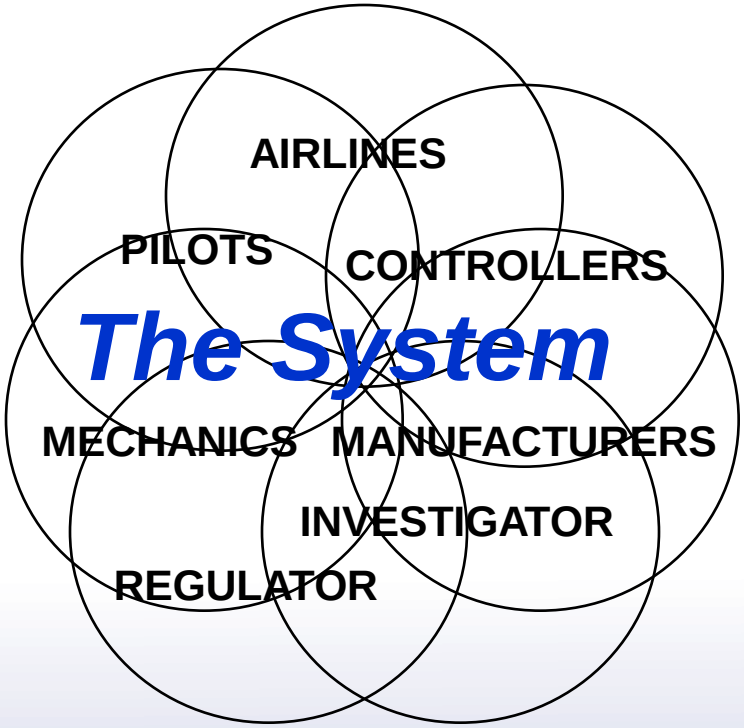
- Final NTSB accident report is *not admissible in court*

High Frequency Events: CAST

- Suggest voluntary collaborative effort
- Suggest focus on trends, rather than individual events
  - If trend is longstanding, problem is probably systems and processes rather than people
  - Employees are more willing to participate in the investigation because it is focused on improvement rather than punishment
- Example: Commercial Aviation Safety Team (CAST)

The Challenge: Increasing Complexity

- More system *interdependencies*
  - Large, complex, interactive system
  - Often tightly coupled
  - Hi-tech components
  - Continuous innovation
  - Ongoing evolution
- Safety issues are more likely to involve *interactions between parts of the system*



The Solution: System Think

Understanding how a change in one subsystem of a complex system may affect other subsystems within that system

"System Think" via Collaboration

Bringing all parts of a complex system together to collaboratively

- Identify potential issues
- *PRIORITIZE* the issues
- Develop solutions for the prioritized issues
- Evaluate whether the solutions are
  - Accomplishing the desired result, and
  - Not creating unintended consequences

Collaboration Success Story

83% Decrease in Fatal Accident Rate, 1998 - 2007

largely because of

System Think

fueled by

Proactive Safety Information Programs

P.S. Aviation was already considered *VERY SAFE* in 1997!!

Major Paradigm Shift

– Old: The regulator identifies a problem, proposes solutions

- Industry skeptical of regulator's understanding of the problem
- Industry fights regulator's solutions and/or implements them begrudgingly

– New: Collaborative "System Think"

- Industry is involved in identifying the problem
- Industry "buy-in" re solutions because everyone had input, everyone's interests considered
- Process is *completely voluntary*
- Prompt and willing implementation . . . *and tweaking*
- Solutions probably more effective and efficient
- Unintended consequences much less likely

– Note: The CAST process generated no new regulations!

Challenges of Collaboration

- Human nature: "I'm doing great . . . *the problem is everyone else"*
- Participants may have competing interests, e.g.,
  - Labor/management issues
  - May be potential co-defendants
- Regulator probably not welcome
- Not a democracy
  - Regulator must regulate
- Process is voluntary, but all must be willing, *in their enlightened self-interest,* to leave their "comfort zone" and think of the System

TRUST

Manufacturer Level Collaboration

Aircraft manufacturers are increasingly seeking input, from the earliest phases of the design process, from

- ***Pilots*** **(*User* Friendly)**
- ***Mechanics*** **(*Maintenance* Friendly)**
- ***Air Traffic Services*** **(*System* Friendly)**

Collaboration at Other Levels?

- Entire Industry
- Company (Some or All)
- Type of Activity
- Facility
- Team

Moral of the Story

Anyone who is

involved in the problem

should be

involved in the solution

Suggestion: Beta Test

- Select troublesome area
  - Nagging problem for many years
  - Many interventions have been tried, not successful
  - Likelihood that problems are systemic, not just people
  - Collaboration as effort to address the system problems
  - Less employee defensiveness because not focused on single event
- Select collaborative corrective action group
  - All who have a hand in the process
  - Manufacturers?
  - Operators?
  - Regulators?
  - Others?

Conclusions

- Method of determining appropriate intervention depends upon the type of mishap
- Collaboration can be very powerful when everyone who is involved in the problem is involved in the solution
- Risk management programs that hurt the bottom line are probably not sustainable
- Collaboration can help ensure that risk management programs improve productivity while reducing risk

Thank You

Questions?