

ARE WE READY YET FOR SAFETY-II?

WORK-AS-DONE vs. WORK-AS-IMAGINE: THE ROLE OF AIR TRAFFIC CONTROLLERS PROFESSIONAL ASSOCIATIONS

**Today's work environments require
that we look at Work-As-Done rather
than Work-As-Imagined, hence at
systems that are real rather than ideal**

Source: Safety-I to Safety-II: A White Paper (EUROCONTROL)



***SYSTEMS SHOULD BE BASED
ON AN UNDERSTANDING
OF WORK AS DONE WHEN
THINGS GO RIGHT***

Mr. Hollnagel



Mr. Safety-III?

	Safety-I	Safety-II
Definition of safety	That as few things as possible go wrong.	That as many things as possible go right.
Safety management principle	Reactive, respond when something happens or is categorised as an unacceptable risk.	Proactive, continuously trying to anticipate developments and events.
View of the human factor in safety management	Humans are predominantly seen as a liability or hazard.	Humans are seen as a resource necessary for system flexibility and resilience.
Accident investigation	Accidents are caused by failures and malfunctions. The purpose of an investigation is to identify the causes.	Things basically happen in the same way, regardless of the outcome. The purpose of an investigation is to understand how things usually go right as a basis for explaining how things occasionally go wrong.
Risk assessment	Accidents are caused by failures and malfunctions. The purpose of an investigation is to identify causes and contributory factors.	To understand the conditions where performance variability can become difficult or impossible to monitor and control.

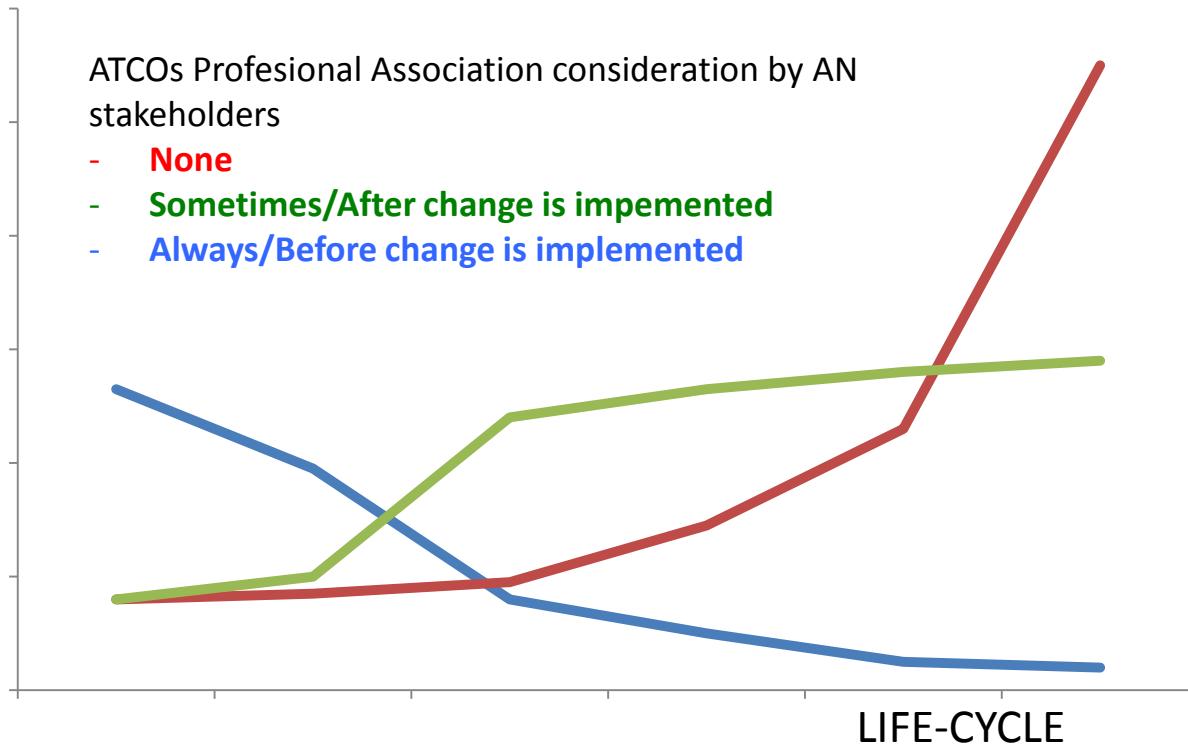
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HUMAN INVOLVEMENT WITHOUT SAFETY ISSUES

COST/PERFORMANCE

ATCOs Professional Association consideration by AN stakeholders

- **None**
- **Sometimes/After change is implemented**
- **Always/Before change is implemented**



Based on ICAO's Doc. 9758. Human Factor Guidelines for Air Traffic Management (ATM) Systems



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