SAFETY IS REAL ONLY WHEN SHARED:
UNDERSTANDING CONTROLLERS' AND MANAGERS' PERCEPTIONS

Controllers and managers have different responsibilities and viewpoints, and may think about safety in different ways. In this article **Florence-Marie Jégoux** reports on interviews with controllers and managers to understand their perspectives, and the gaps that might exist between them in thinking about safety. Perhaps mutual understanding of problems, and opportunities, is necessary for collaboration to flourish.

KEY POINTS

1. **Air traffic controllers and their managers may perceive safety differently.**

2. **There is a need for improvement in regulation-related risks.**

3. **There can be misinterpretations about communication between controllers and managers.**

4. **Organisational risk mitigation actions may improve safety and efficiency when posing problems differently.**

As a TRM/HF facilitator, I am used to hearing controllers talking about their daily life and about the problems they encounter. I also attend some managers' meetings, and then I see the same problems for managers. Often, I feel contradictions, divergence or misinterpretations between these two worlds. As both points of view sometimes do not match, for instance about safety events, risk mitigation actions may turn out to be inefficient, or even counter-productive.

That's why, while undertaking a university degree in human factors (HF), I decided to dig deeper into these differences, and try to explore the issue further. The aim of the study was to get a more accurate understanding of the values, objectives and constraints of controllers and managers in order to help fill the gaps that may exist between those two groups. It is important to note that the aim was not at all to put them in opposition.

The study involved semi-structured interviews with six ATCOs and six managers, who were asked about their jobs and what they thought about safety, risks, rules, communication, and lessons learned. The interviews were recorded and transcribed and the transcripts were analysed regarding different topics, which were counted by two people. Even though it represents approximately 104 pages of interview, it is not scientifically representative. Therefore the aim of this article is not to claim any truth, but rather to give some food for thought: How is safety perceived in my own group, in my own ANSP? Which risks are addressed? Which risk should perhaps be addressed

further? What is taken for granted? What can be improved? And by whom?

We will first see how controllers and managers perceive safety, then how they perceive regulation related risks, and finally how they perceive communication. I invite you to reflect on the findings.

Do controllers and managers perceive safety differently?

In the previous issue of HindSight magazine (Jégoux, et al 2017), we described 'regulated safety' and 'adaptive safety', as part of safety as a whole. As a reminder, regulated safety comprises rules and norms in anticipation of situations. Adaptive safety acts responsively as situations arise. What are the perceptions of controllers and managers about that?

Figures 1 and 2 show the different parts of safety that controllers and managers talked about. In these figures, the word 'positive' means that safety meets expectations or works well. The word 'negative' means that safety that does not meet expectations or does not work well.

Figure 1 shows that the controllers talked as much about adaptive safety (49%) as regulated safety (51%).

When controllers talked about adaptive safety, they talked more about adaptive safety that works well, for instance: "We have to be ready to face this 'never'
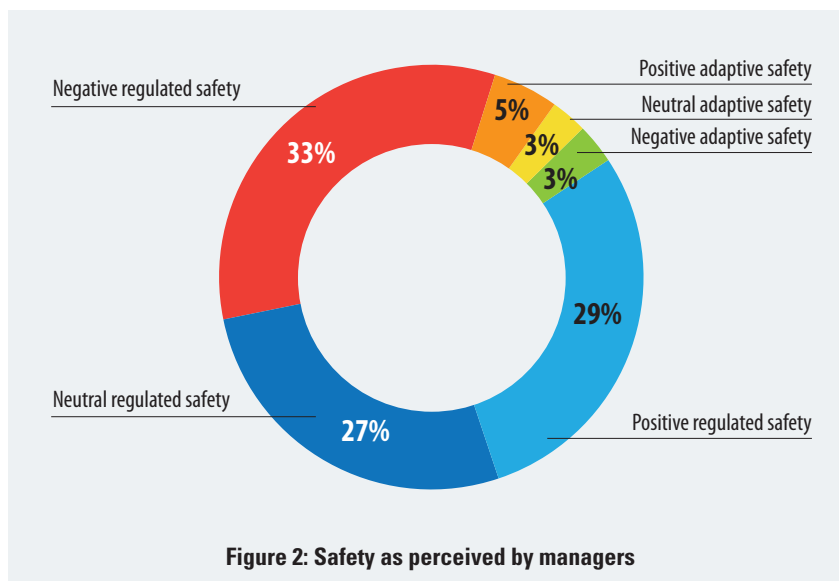

Figure 2: Safety as perceived by managers

that will happen. To prepare ourselves for this 'never' that will happen, for this day when this 'never' happens. We can face the situation with a probably downgraded, but acceptable safety." "It was an unusual situation, then, it made us work on open-mindedness, on flexibility."

Sometimes, but less often, they talked about possible negative consequences of adaptive safety, like about handling uncertainty: "It's saying to ourselves 'oh, yeah, I'll fit this plane into the take-off sequence, it should be fine.'" "Coming back from holidays and going straight onto shift, even in summer. That's taking risk."

Controllers talked almost as much about regulated safety, but in a negative way:

"With regulation [in Class D airspace], you have no means to avoid that it [a conflict] continues, there you go. So it's the limits of the system." Sometimes they considered the positive side if regulated safety, e.g. "Safety means respecting rules and instructions." "We can't work without references, without limits."

Figure 2 shows that the managers talked much more about regulated safety (89%), compared to adaptive safety (11%).

Managers rarely talked about adaptive safety. In a positive sense, they considered what is important: "If there's a problem, it has to be taken care of immediately." In a negative sense, they sometimes talked about controllers' risk estimation: "it's also a risk, because their estimation is not always good." Managers sometimes talked about what is done by controllers to demonstrate their own performance to the detriment of safety: "Very often when people are on this sector, they keep one rack and a half [flight progress strip racks], and don't split the sectors."

Managers talked much more about regulated safety: "If we don't find any risk mitigation means to ensure normal operations on the field, we will take measures to limit operations, to limit risks." To a similar degree, managers talked about regulated safety in a negative way – when it does not meet expectations: "We say: here's what we're going to do, we decide beautiful
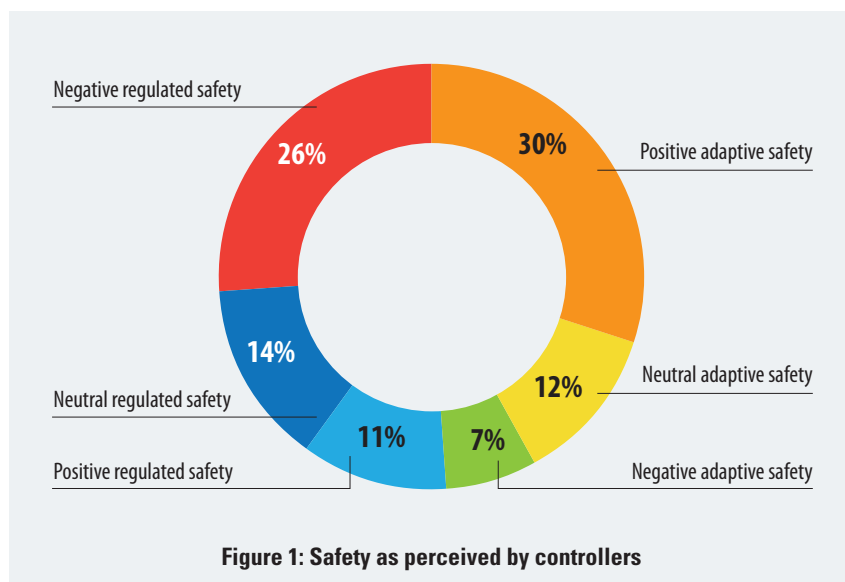

Figure 1: Safety as perceived by controllers

actions, but often, it's not implemented."
"The way it's written … we have often difficulties to implement that in real life."

The key difference between ATCOs and managers is that managers emphasised regulated safety over adaptive safety

The key difference between ATCOs and managers is that managers emphasised regulated safety over adaptive safety. Although it is logical to have differences between two jobs, it may show a lack of understanding of, or connection with, adaptive safety. This may lead managers to disregard adaptive safety in risk mitigation actions. For instance, is training designed for adaptive safety as well as it is for regulated safety?

Another noteworthy commonality is the importance that both ATCOs and managers gave to negative regulated safety. This point will be discussed further by the next section about the perceived risks.

Do controllers and managers perceived similar risks relating to regulation?

Managers and controllers found different risks relating to regulation, but they agreed on the fact that sometimes, in some contexts, rules may bring about some risks.

For managers, the top risks mentioned related to high workload and time pressure, contradictions between rules and safety, and rules that are difficult to implement or are otherwise unsuitable. The most critical risk relating to regulation mentioned was workload and the time available to ensure rule implementation (e.g., "We're going to realise at the very last moment that, oh, no, we can't do it that way."). Managers also mentioned gaps or contradictions between regulations and safety, for instance when some rules are implemented: "There was a terrible gap between these rules and safety itself." "In absurd ways, we end up asking people almost to work the opposite way to how they used to work!" "There are contradictions that can be permanent or not. It can depend on the context." For controllers, two risks were especially

prominent. First, like managers, controllers also found contradictions between rules and safety: "Typically, Special VFR! This is typical, regulation, you know, you have some beautiful stuff, but in real life, it doesn't match at all!" Second, controllers thought that some rules can be unsuitable, depending on the context: "EASA rules, it's possible on big airports, but we see that those rule people thought about big airfields, not about medium or small airfields, and it can't at all be adjusted to!"

Controllers and managers found a contradiction between rules and safety to be one of the biggest risks relating to regulation

Both controllers and managers found a contradiction between rules and safety to be one of the biggest risks relating to regulation, along with unsuitable rules. Both also found it difficult to give feedback to rule writers about the contradictions that controllers and managers experience, and to have this feedback taken into account. Controllers said that when they report contradictions between rules and safety, they are told that rules have to be implemented, no matter what the consequences are on performance and safety. As this goes against their operational culture, sometimes they just stop applying rules and stop reporting (e.g., about a new system implemented for ATIS: "Sure, they won't make a new ATIS every minute!").

After this study, recommendations were suggested. One relates to the need for 'regulation deflation'. As stated by Morel (2016), this regulation deflation movement started a few years ago. Some countries implemented rules to decrease the number of rules, simplify and update them, and give better consideration to the end user. Possible negative consequences of rules were also studied.
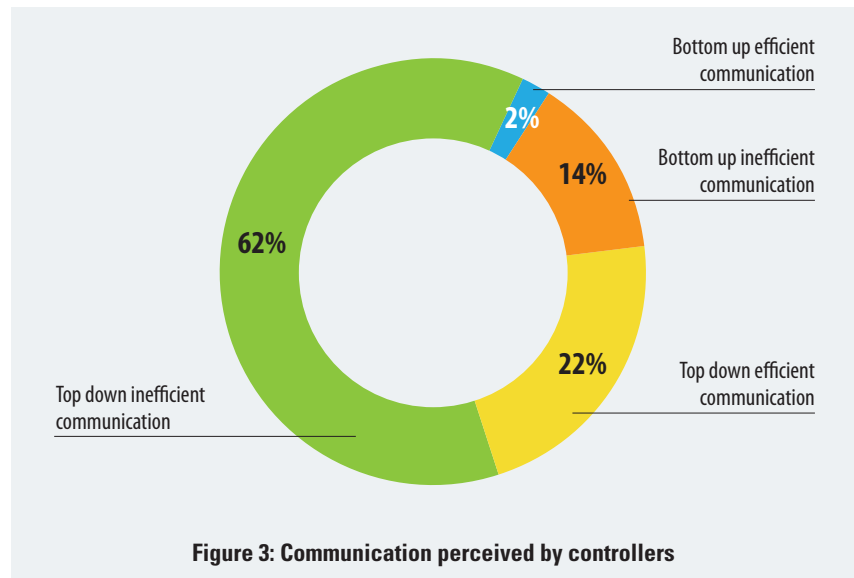
Pilots and controllers need a formal system in which they can give feedback to regulation writers about the problems they encounter and in which their feedback is properly considered.

Do controllers and managers evaluate communication differently?

Figure 3 shows how controllers perceived bottom up and top down communication.

Controllers perceived communication as a whole as inefficient (76%). They also talked much more often about top down communication (84%) than bottom up communication (16%). Regarding bottom-up communication, controllers said that it is difficult for them to give feedback up the hierarchy.

Controllers said that a part of top down communication is efficient: "It works pretty well for the upper level management." But they more often spoke of top down communication as inefficient, sometimes perceiving it as
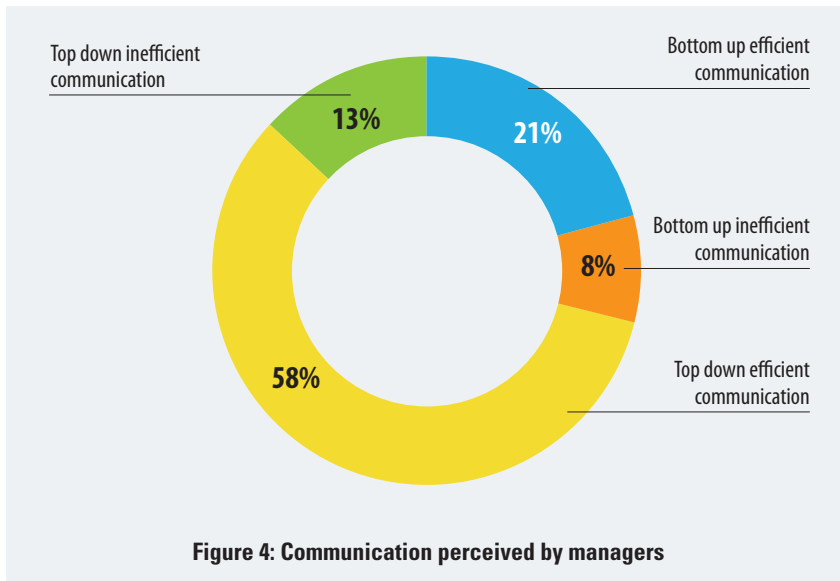

Figure 3: Communication perceived by controllers

Figure 4: Communication perceived by managers

(Chart labels: Top down inefficient communication 13%; Bottom up efficient communication 21%; Bottom up inefficient communication 8%; Top down efficient communication 58%)

Posing problems in a concerted way

Theillard de Chardin said (translated) "Solving problems is not the most difficult, it is rather posing them." Usually, we spend very little time to understand issues deeply and collectively, and much more to act, whether or not these actions are relevant. Posing problems differently may help organisational risk mitigation actions to improve safety.

Problems do not lie in elements, but in interfaces between elements

judgemental: "They always come to see us saying 'you did wrong. There is always that judgement, that re-assessment, which is felt like re-assessment of our skills." "If we're out of the norm, they're going to point that out, but there is no recognition when we do a good job." "For us it's very far away, it's like a farmer in a field with Brussels bureaucrats." "We are controllers. We could be car assembly-line workers, I have this feeling that we would almost have the same management." "It's only written communication, pffff, there's no dialogue." "Reports or minutes, it's not as efficient as discussing! I think that we don't talk enough, we don't talk enough!"

Figure 4 shows that when managers talked about communication, they mostly talked about top down (71%) rather than bottom up communication (29%). And they mostly spoke about communication between them and controllers as efficient (79%).

Concerning bottom up communication, managers said that it is mostly efficient: "Some like to discuss after filing a report. To explain more about what they just wrote." However, managers also experienced negative comments from controllers: "When did you last touch a mike?"

More was said by managers about efficient top down communication: "We have briefings. It's really a place for conversation." "There are many meetings – navigation chiefs, heads of tower – where we communicate." Some of the top

down communication is perceived as inefficient: "It's not a done deal, it's not sure it's going to end up to the controllers."

The fact that the two groups emphasise top down over bottom up communication suggests there may be room for improvement. Field experts may need to be more considered in a concrete way, in actions. Divergence between managers and controllers on efficient communication (79% for managers, versus 25% for controllers) shows the gap between them, and therefore the risk of inefficient or even counter-productive organisational mitigation actions, when communication is needed.

Knowing more about these points of view associated with job differences may help to fill in the gap by paying more attention, more curiosity, more questions, from each side. As said in systems theory, problems do not lie in elements, but in interfaces between elements.

The aim of this article is not to put a judgement on the ANSP or centres where it has been done, but rather to give pause for thought on these essential aspects of safety in one's own centre or company, in order to find solutions that are joint, concerted between field operators and managers, and relevant for everyone. After all, safety is real only when shared. ⑤

References

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