SEEING THE NEED FOR CHANGE… FROM THE OUTSIDE

Aviation is a conservative industry and change to working practices is often resisted. **Florence-Marie Jegoux, Ludovic Mieusset** and **Sébastien Follet** describe a case where the need for positive change can be triggered by an outsider, who sees problems more clearly.

KEY POINTS

- **Changing is difficult. It means leaving the comfort of habits.**
- **Outsiders can often see problems that insiders don't see, and can question well-established practices in a way that insiders find more difficult.**
- **Given this outsider insight, front-line staff can co-design work, going back and forth between work-as-imagined, work-as-prescribed, and work-as-done.**

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In one control tower, there are some common practices, rules and work methods regarding the paper strip board. Each plane has its own strip, including some of the flight plan information. Strips are laid out on a specific board in a specific order to help the controller to represent mentally the situation. It helps the controller to detect conflicts, and to keep the situation in mind even if he or she loses the sight of airplanes. Thanks to this tool and its associated work method, controllers keep a mental picture of the traffic, especially when the fog comes in or in case of a radar failure.

But in this control tower, there used to be a very specific practice regarding the use of the paper strip board. It was considered that the runway is a bay in the middle of the board, without any form of coloured distinction. Traffic are sorted by type of flow; expected or leaving traffic above the runway bay, traffic on frequency below, traffic on the ground and waiting at the holding point next to the runway bay. This method, unique in ATC towers, was used for years. No incidents related to this practice were reported. It was taught to new controllers with success for years.

This method was, one day, unexpectedly challenged by a trainee. It turned out that some felt that the method was too complicated, requiring great flexibility. But so far, there was no real reason to make the effort to change it. The first hint that a change was needed came after a trainee failed to qualify. One of the reasons the person failed was the lack of a dedicated strip representing the runway. The controllers first rejected these criticisms: this has worked for years and one failure is not representative. However, the growth of the traffic flow and the need to increase the number of qualified controllers questioned the local practices. The trainee had inadvertently triggered a change process.

Therefore, the whole group decided to go back to a blank page and try to imagine new methods. In the same period, the civil aviation authorities released a new set of rules regarding the control board, stating for example that a strip featuring the runway was mandatory. The group of ATCOs and their local manager decided to set up a brand new control board, totally changing their working habits, to comply with the new regulation. To do so, they used two large sheets of paper to draw a draft board. Then, they enacted new basic practices to be able to use it. For the next six months, they met weekly to implement changes either to the board or to the method of use. Finally, the process was successfully applied. In that case, the back and forth motion between work-as-imagined, work-as-prescribed and work-as-done truly led to a successful change. So far, every trainee found the use of the paper board very clear and easy. And no more trainees failed to qualify.

Changing is difficult. It means leaving the comfort of habits. In the example above, it meant controllers leaving a practice they had mastered. They lost the tool that helped them to build their mental picture of the situation for a new one that momentarily made them partly 'visually handicapped'. But they did it. The trainee highlighted the limit of the practice. His experience raised the group's awareness of possible incoming problems (e.g., training difficulties, lack of qualified controllers). These threats were sufficiently important for the group to make them accept the difficulties. They seized the control board problem, debated, tested and enacted a new rule. The work-as-imagined became the new group reference, the new work-as-prescribed. As this was a co-designed rule, it was fully applied and therefore it became the new work-as-done, making this change a model of its kind.

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What made the trainee a good trigger for change? If the 'whistle-blower' had been an existing member of the group, he or she would have struggled to challenge the current, well-established practice. The trainee, however, was not yet part of the group. He didn't have the comfort of practice. Therefore, he saw its design flaws and how it affects performance more clearly from an outside perspective. He acted as an alarm clock for the group, pulling the group out of the comfort of the usual practice. But if the story went another way, the failure of a trainee could have easily been attributed to the trainee's competency, and the flawed design could have lived on, affecting future trainees. Sometimes we need to be more receptive to 'outside' perspectives, when others see what we can't, and can trigger positive change.