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**“Tough decision, can you go along with it?”**

**The safety relevance of opening up and closing decisions in cockpit communication when dealing with technical troubles in line-oriented flight trainings**

When dealing with technical problems in commercial airliners, the pilots are forced to step outside the the framework of routinized procedures of a normal flight mission to make safety-relevant decisions, e.g. the choice of an alternative landing airport. In our research project we have investigated such decision-making processes on the basis of videorecordings from training missions in flight simulators. In general, decisions are taken with great caution and are marked as being provisional over periods of time, and different styles of decision-making communication can be observed. One style can be referred to as “deliberative communication”. Pilots generate possible resolutions while at the same time searching for new options or pointing out criteria against the considered option. While discussing, both pilots cooperate in “opening up” and “closing” different options for action. By the time the decision is made, the crew has assessed a broad range of risks, considered multiple options and evaluated them according to different criteria. The final joint decision is accompanied and sustained by multiple accounts and several loops of mutual ratification.

Another type of decision-making situations can be observed in which, on the basis of personal preferences, one of the pilots early on commits him- or herself to one of the available options and uses different arguments to defend and support his or her position. This “argumentative” type of decision-making is characterized by a special division of labour, in which the tasks of opening up and closing the decision are distributed between the crew members. It can be shown in the data that this type of decision-making has certain costs: criteria are elided, objections are ignored and the colleague is finally more or less overruled, which altogether results in the loss of redundancy and thus potentially compromises airline safety.