

Dear readers,

For anyone who has had to assemble flat pack furniture, the potential gap between work-as-imagined (the version in the showroom) and work-as-done (the result at home) is clear. It is almost a cliché that something will go wrong – particularly as the instructions are either just diagrams or are written in a way that only vaguely approximates to your own language.

This is not only a problem for the purchaser, it's also a problem for the company making and selling the furniture. So there is a real incentive for the designer/manufacturer to reduce customer frustration, customer service calls and the returns of incorrectly assembled bits.

The first step is to recognise the problem and the same is true in aviation. There are some excellent examples in this edition's articles of how work-as-done is not as-imagined, even by ourselves. Often, this is for the best of reasons, to help out someone else, to save some time or some fuel, or because it is easier than following the official procedure.

The responsibility also lies with those designing the systems and writing the procedures. The blind assumption that everyone will follow the rules exactly, all of the time, is not realistic and, as a result, it is not safe. So it is necessary to ask the questions "What will or could happen in practice? What problems may arise that cause people to take a short cut, or make the official procedure unworkable?" One of this edition's articles, by Captain Starke, looks at this topic with the challenging title "Imagine Reality".

This is particularly important currently, with so much change happening – ranging from the introduction of free routes airspace to new arrivals management techniques to increases in runway throughput. A lot of work goes into simulating and validating changes to try to anticipate problems. Sometimes, these are identified during the training phase.

However, the task is not complete once the new system or procedure is in place. It is at this point that the real comparison between 'work-as-imagined' and 'work-as-done' becomes possible – and necessary. Feedback is essential so that systems and procedures can be refined to reflect the test of reality.

The good news is that it is possible to narrow the gap between 'work-as-imagined' and 'work-as-done'. We can see this in my example of flat pack furniture where the best manufacturers now put in a lot of effort to minimise the number of mistakes you can make. So the side of the cupboard is now symmetrical top to bottom – there is no 'wrong way round'; the instructions are much clearer and also highlight areas where a mistake could conceivably be made. As a result, the chance of ending up with too many (or too few) pieces has been greatly reduced.

For us in aviation, the consequences can be much more serious than a collapsing wardrobe. This edition shows some fascinating examples of how the gap between 'work-as-imagined' and 'work-as-done' still exists and also how it can be addressed. Everyone can help, all the way from system design to the highlighting of issues in everyday operations.

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