Tuesday lunch, my colleague and the new ATC system

By Svetlana Bunjevac

Over time, over budget, over-worked staff – why is this often the case when new ATC systems are implemented?

On returning from lunch at work or at training establishments, we often meet people who have attended our courses in the past. This was the case today, and I had a great chat with a colleague I met from a Member State which will be implementing a new ATC system relatively soon.

My colleague is a young engineer willing to contribute all his effort and knowledge to this new system, although he is witnessing things which he wonders about. For example, he has seen that (for the time being) there is not a single ATCO involved in the group which is working on implementing this new system. Although my engineer colleague has not been in our industry for very long, he saw a possible risk here. This reminded me of one of my own memories, so I told him about it, but I also believe many of you could continue the story.

Once upon a time, months and months were lost because of one sentence in a functional ATC system specification document. The sentence described, in a very precise manner, the technical requirement for cleared flight level (CFL) distribution through lateral and vertical sectors of the airspace concerned. The problem was that it did not make any sense operationally.The outcome, as already mentioned, was that more than a few months (for which, read euros) had to be invested into reworking it. Right from the start of our efforts, it was clear that involving both ATCOs and technical staff was going to be necessary to correct this sentence. It was a cunning plan, but we gave it a go, and yes - we started arguing right from the word go!

After a few "arguing sessions", in which we learned that ATCOs know nothing about the technical side of the ATC system and that technical staff likewise know equally nothing about the operational side, we took a short break. I would like to think that both "camps" used this break for reflection and that the subsequent intervention by our manager was not necessary. Anyway, the team continued to work on the project for many hours, with discussions which were not always easy, but eventually we managed to appreciate the differences in our expertise and to actually take advantage of them.

My colleague from the start of this article and I both thought that this is a lesson we have all been taught so many times, but it seems that we have still not learned from it. For both of us, the project plan discussions contained a sentence which we have heard all too often and felt was not quite right.

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"At the start of system specification, having a mixed team will cause project delays, as engineers and ATCOs may spend time arguing how the system should actually work."

Are you sure that they'll reach a common language soon?

There are 3 potentially serious misconceptions in this sentence:

1. **The reference to "... will cause delays …" is to the start of a project, but experience has shown that delays are caused because the project requirements are not properly understood right from the start.**
2. **"… may spend time arguing …" suggests that we tend to see argument as a bad thing and want to avoid them. What is wrong with a healthy (non-threatening) argument if people need to clarify their understandings? Why not give it a go, collect all concerns and suggestions, use them when checking the system performance, and then move on?**
3. **"… how the system should actually work." Assuming it is bad thing, the two "camps" may start off from two completely opposite understandings of how it should work. Of course they will – one will have technical understanding and the other will have an operational understanding. This is certainly not a problem, as these are two essential aspects of any system which people will use.**

After we had had our talk about everything which I have written about above, my colleague said: "I am on the system development team and I have never been encouraged to sit next to an ATCO to see how they work. I will use my free day to do that next week."

I thought of this as a great initiative on his part, but I also thought that it should be a part of their project plan. At that point, both of us realised that we need to talk more about this before it turns into another case study with an unfortunate outcome. That is what I am trying to achieve with this article, and I also wish our colleague a safe and successful ATC system implementation.

Thank you for reading the article.