Case Study – 'Plain Jane'

By Bengt Collin, EUROCONTROL

The Controller

The drizzle made the train ride to the airport more depressing than normal. Everywhere grey concrete or old dilapidated brick buildings all, without exception, covered with meaningless tags. If this was art he was Marilyn Monroe.

He had seen her on television at eight o'clock the night before; the first thing that sprang to mind was there's a plain Jane if ever I saw one. She was dressed in an average grey dress, hair style from the 60s; she explained in a steady voice why these young boys (it was never girls) expressed themselves by tagging everything in their way. "It is graffiti" she explained and looked into the camera, they have the art inside them; we should accept and understand.

I bet you'd change your mind if they tagged your front door, he thought and looked out of the train window.

The "Airport Express" train stopped again. Express? He was late for his shift.

The Citation Pilot

"Have some more mussels for akfast", he told his co pilot d laughed; "you never know

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when you'll next get some food inside you". The hotel they were staying in was near the airport, which was what they normally did – it was convenient, and because there were sometimes sudden changes in destination and departure times, it was handy too. They had never stayed here before though, he was not even familiar with the hotel location. That goes for the airport procedures too, he thought, but what the heck, what could really go wrong? It was one of his last days before going on holiday; minor problems like that would not spoil his good mood. "Jolly good" he said to his co pilot, a small man with a white face and a shabby shirt who was still almost asleep "now try raw herring with whipped apricot cream".

The Project Manager

Why do air traffic controllers always believe they know everything? He was not a controller, but working in the airport organisation for many years, he knew all about how to organise documents and fill in templates. Ever since his best friend had promoted him to Project Manager for Level Bust, he had kept every single file where it should be; no audit process would be able to criticise him; his career was on track. But why didn't the controllers pay attention to his long-term ten-year plan for prevention of level bust, it was unbelievable how uninterested they were, just sitting there in their sloppy jeans and t-shirts, whereas he always had a jacket on and kept his hair neat and slicked down.

The Controller

He discreetly slid down onto the seat next to Linda, in his opinion the most beautiful brunette on the planet. She smiled. Being a few minutes late, he had missed the weather forecast, but had arrived in time for the presentation from the level bust

project manager. He looked at the first slides, heard the voice and stopped listening, thinking instead about the level bust incident two years ago that had gone all the way to Court. The prosecutor had finally dropped the case but the damage was already done; the reports stopped coming in. Why have these presentations when the real problem is elsewhere? He looked at Linda, she knew he was looking, but looked straight ahead with a Mona Lisa expression on her face.

The Citation Pilot

The small general aviation terminal was well hidden behind some old warehouses. Even the taxi driver had problems finding the right location. Although they were not late, the passengers were waiting for them when they arrived. The co pilot rushed through the NOTAMS and started to fill in the flight plan (I need to tell him to wear a fresh shirt next time), while he introduced himself to the customers. After a few minutes the minibus arrived, he told his co pilot to hurry up. They climbed in the transport and said hello to the driver, who for the bargain price of 55€ drove them the 30 metres to the aircraft. He helped the passengers to settle down in the cabin and went through the safety instructions while the co pilot prepared the flight, trying to figure out how to fly the departure route.

The Project Manager

He was about to start his presentation when another controller arrived late. Disrespect! They were simply not interested, not understanding the risk associated with level bust. He should suggest that the deputy manager insist on a mandatory reading of the long-term plan; that would show the controllers what is important in life!

The Controller

His sector was not one of the busiest, but it was complex. Most of the traffic he handled was inbound to the large airport nearby, but the sector also included two other airports. One was very quiet, light VFR flights that almost never called on the frequency, but the traffic from the other airport could create conflicts with a consistent flow of inbound and outbound business jets. It was from time to time surprisingly busy, more than you would expect from an airport that far out from the city.

He received a call from the ground controller, another departure soon to be airborne. "We changed runway to runway XX", the ground controller told him, "the wind is increasing". "OK, then it is POPPI 2 Bravo Departure, flight level 120, transponder 7172 for ABCDE". The readback from the ground controller was correct.

The Citation Pilot

"Can we please do the 'before start checklist'" the co pilot, who was going to be 'Pilot Flying' for the sector, asked him. He started reading very quickly. Call the tower for start-up and clearance, he instructed the co pilot quietly but firmly as soon as they had finished the check-list down to the line. They received clearance including QNH 992, continued the checklist, started-up the engines, 'after start check-list' the co pilot called. We need to do the flight briefing, they have changed the runway for departure, the co pilot said; his voice was low, he did not like to be too pushy. The pilot asked for taxi instructions, started taxiing out, "Everything OK, we will soon be on our way" he said to the three passengers in the back, while checking they had their seatbelts fastened. They looked relaxed, one was reading a newspaper, the other two were looking

at documents. Always busy, never relax, he thought as they approached the runway. "Should we do the flight briefing or are you prepared anyway", he asked the co pilot.

The Project Manager

He went through the door to the control centre and walked towards the watch supervisor. The supervisor, being busy discussing the roster with another controller, ignored him completely. "Can you make sure the controllers read through this important action plan" he said, interrupting the supervisor with a loud enough voice to arouse the interest of most of the controllers in the centre. The supervisor, not known for being a soft touch, looked at the project manager, waited a few seconds and surprisingly softly replied "Which rock did you crawl out from under, get out". The project manager was already half way towards the door; he hated controllers.

The Controller

Flight ABCDE was airborne, that was quick. He had a conflicting crossing aircraft maintaining FL 80, better be safe than sorry, he thought and re-cleared ABCDE to FL 70. Around him he noticed people turning around, looking towards the supervisor desk. Instinctively he also turned just in time to see the level bust project manager with a red face leaving the centre; that would probably keep

him away for a week or two. The STCA alerted.

The Citation Pilot

They got airborne and he called the radar controller. "Re-cleared FL 70". He inserted the altitude in the FMS, the co pilot, the Pilot Flying, looked a bit uncertain. "Should we turn at DMW 3 or 5", he asked, it was different from different runways last time I was here. Last time, the pilot thought, I have never visited this airport before! He started looking at the plates for the answer. The altitude alerter sounded and the co-pilot started levelling out.

The Controller

He turned back towards his screen, the ABCDE aircraft had passed the cleared level 70, now FL74 and still climbing. "ABCDE descend immediately to flight level 70, crossing aircraft at your two o'clock position, 500 ft above". Nothing happened. Another aircraft called.

The Citation Pilot

We are at FL70 he said to himself with a puzzled look on his face. "Traffic, Traffic" the metallic sound from the TCAS filled the flight deck, what is going on? The co pilot began a slow descent, "look at the TCAS screen" he said and changed the altimeter setting to 1013; "set standard" he said, not expecting any reply from his colleague. The warning stopped. ∎

Today: Level Bust Training by J. Jones Prj. Manager

Level Bust for ATCO Dummy

OPS Briefing Room

Sir, I don't understand what angers them... All I asked for was to fill in some Excel tables and a couple of templates along with their bloody strips...

Comment on 'Plain Jane' by Captain Ed Pooley

Well this time there's no equivocation about the 'root cause' of this loss of separation! Unfortunately, the relaxed, unprofessional, attitude displayed by the Citation Pilot is not particularly rare amongst professional air taxi aircrew who have been flying long enough to have achieved the status of aircraft command - and been in that role long enough to become comfortable in it, except (temporarily) as they qualify on a new aircraft type.

Captain Ed Pooley

is an experienced airline pilot who for many years also held the post of Head of Safety for a large short haul airline operation.

He now works as an independent air safety adviser for a range of clients and is currently acting as Validation Manager for SKYbrary.

But before we look a little further at him, what about the other players? Was their behaviour in keeping with the professional standards which are expected of them? In any case, even if their approach was a little lacklustre, did it make any difference?

The Project Manager

A man with the wrong attitude! And given the absence of any prior background as a controller, a man not in the best position to achieve the confidence and respect of the people he needs to influence in order to meet his own performance targets….perhaps some time off the project on a course to belatedly learn how to 'win friends and influence people' would be a good move!

The Controller

Anyone who thinks of themselves, even privately, as so good at their job that they are invulnerable to error and believe that they will never miss an opportunity to fix problems created by others is certainly not very sensible and potentially is quite dangerous. A superiority complex is as dangerous in controllers as it is in flight crew…Perhaps it's time for an awayday at a mid-career group discussion about recognising, accepting and managing one's own performance limitations with a suitable - and credible - human factors expert in the coordinator's seat.

The Co pilot

It sounds like he may be doing the job because he's not likely to pass pilot selection for an airline and besides, he may lack that particular ambition anyway. Nevertheless, he almost certainly is doing the job because he likes flying – almost all professional pilots do! However, they can't all choose the job they'd really like and sometimes junior pilots - like this one - have to put up with Captains who don't feel any need to establish an effective flight deck team and give themselves the best chance of staying out of trouble. Sometimes, too, Captains like this one had a hard time themselves as juniors and

still consider that being treated like an assistant rather than a fully functional colleague is normal. So whilst this co-pilot may not be the best available, he tries hard to stop the Captain generating the pre-conditions for an incident, but because of both his own weakness and especially because of the Captain's undue dominance - even disdain - he doesn't succeed. I'm sure that thinking about it afterwards, he wasn't surprised that they had failed to reset the altimeter sub-scale in time to avoid a 600 ft level bust. If at all possible, he should try and find a job with another operator!

The Citation Pilot

As we've already noted, there's no concept of a two-pilot team here! Since this Pilot probably didn't need to have a co pilot on these trips in the past, whereas now it's mandatory, it may well have led him to take the view that, whilst it's handy to have some help with all the boring bits in return for them being allowed to be 'Pilot Flying' occasionally, there's no need to treat him as a real contributor to the way the flight is conducted. He is still essentially a single pilot not the Pilot of a two man team. So, for this individual, there is seeming unawareness of 'Crew Resource Management' and a complete absence of any per-

ception of where key risks are and the priorities which managing them must bring. Taken together, we have the perfect ingredients for an incident or worse, even in good weather and with a fully serviceable aircraft. It's worth this Pilot remembering that the absence of one or both of those could have 'woken him up' - or perhaps led to even more trouble en route than he actually caused. Even his belated recognition of an unfamiliar operating environment didn't trigger any useful response or interfere with his focus on 'after the flight'. It may already be too late in his career for him to recognise his poor attitude to the job on his own, so all will depend upon his employer. Enjoy the leave and perhaps there will be a call to talk things over with the Company Chief Pilot if the co pilot has decided to explain why he's leaving for a better job elsewhere.

The Unseen Culprits!

Without wanting to fall too far into the trap of conveniently blaming managers for all the failings of their employees, there are clear signs here that there are systemic failures at both the Citation Operator and at the ANSP. Both helped set the scene for this event and, no doubt, many more. Management creates the context for the way the people in their respective organisations function.

The ANSP
The management appears to have decided that they could enable the delivery of real progress in their level bust reduction campaign by appointing a manager for it who was unlikely to be suitable. Without prior controlling experience, he was always going to risk a credibility gap with the con-

trollers, and add to that a personality seemingly unsuited to any interaction with people, the combination was really almost terminal. Promotions and appointments should never be predicated on who you know! Of course, some senior managers in many organisations prefer not to see the level below them as potential challengers for their jobs…This ANSP needs to carefully review their procedures for appointing managers internally to ensure they are selecting suitable people.

The Citation Operator
I think that it is unlikely that the poor operating 'style' of this particular pilot-in command was unique amongst all such pilots at the Operator. However, if it was, then for this particular Pilot either a period of successful re-education or an exit are the only options. In the more likely scenario of poor managerial oversight generally, the operator would need to consider the likelihood of safety achievement against long-term business survival. They either don't know that they have an ineffectively disciplined flight operation supported by an ineffective pilot training system, or they know this but have chosen not to act. I'm not sure which would be the worst since the result of either will eventually be very similar and would almost certainly be followed by business failure. I recommend that in either case, they allow an outside adviser to examine what is wrong and suggest a path to consistent and appropriate operating standards.

The Regulator
All aircraft operators are subject to regulatory oversight. I would have hoped that an Operations Inspector

with operational safety at the top of their agenda would, despite being able to take only an overview of their 'charges', have not found it too difficult to detect a significant, and quite possibly a wholesale, deficiency in the way this Citation Operator was performing. In a properly run flight operation, there should have been no possibility of having even a maverick pilot-in-command on line. If, as I have suggested, it went rather deeper than that, then it should have been even easier to have identified failures in the way that pilots were selected and trained and in the existence and/or application of suitable SOPs and in how the Company communicated their expectations of operating philosophy throughout their business. I would certainly recommend a new Operations Inspector be assigned and, unless it can be shown that the previous one really was an exception, it may also be time for this Regulator to undertake a wider review of how to achieve effective operational safety oversight of air taxi operators generally.

THE MOST IMPORTANT RECOMMENDATION?

Well, out of the choice that I have offered, it has to be the one for the Citation Operator. They have failed, either on a one-off basis or, probably, more generally, to sustain an operating regime fit for purpose. So they need a careful look at their flight operations and flight training system, probably by an outside adviser, to find out where improvements are needed and then they need to act on it so that they manage their risk to a level their customers would expect. ■

Comment on 'Plain Jane' by Svetlana Bunjevac

This scenario is so rich with attitudes and situations!
And it's so familiar too. Let me explain what I saw happening here.

Svetlana Bunjevac

teaches in EUROCONTROL Institute in Luxembourg. She is former controller, OJTI and shift supervisor.

The time pressure

In our business, time is of incredible importance. Both pilots and controllers may need to make their decisions in a split second. There you are, a straightforward statement which anyone can appreciate. Is that all? How about the time to prepare to do the job? If I do not give myself enough time to prepare for my shift, arriving "a minute late" after a great night out with friends, I find this is an additional burden we impose on ourselves. Whether pilots or controllers, we do not give ourselves a chance in such cases.

And in this specific case it meant, for the flight crew, no time to properly check out the NOTAMs, the airport layout or the SIDs. And at the very end of this case, time also becomes one of the reasons that the pilots do not change the pressure setting from QNH to QNE, thus causing their level bust…

Controller or Pilot experience

Experience cannot be bought, it is built over time and it can save lives. Again, another bold statement and nothing wrong with it. In this specific case we have a controller, a pilot and a co pilot who are all experienced professionals. And yet the controller stops listening after the first slides about the level bust project as he starts rolling the film of the level bust case he has in his mind. How much potentially useful new knowledge has he missed? On the other hand our experienced pilot has never been at this airport before but "what the heck, what could really go wrong?" I vote yes for experience that makes us reliable and attentive pilots and controllers. But how are we to remain reliable, attentive and experienced? That is the challenge…

Professional stereotypes

What is the difference between a god and a controller? A god does not believe he is a controller. Controllers resist change. Engineers are systematic, controllers are not. Project managers know how to run a project no matter what the nature of it is. Pilots may be team players – or they may be god. Co pilots may be able to be - and capable of being - part of a team - or just be along for the ride. We all know these "truths" and there are many possible results. In this case, our project manager is given a task that needs some understanding of controllers' and pilots' jobs. Unfortunately, he feels so antagonistic towards controllers that

QFE... QNH... Big deal... It's just about a couple of hundred feets...

J-TAXI

it prevents him from learning about their job. What could be the effect of raised voices in the Ops Room? How should the briefing presentation on the level bust project be made so as to keep the controller's attention. And the controller's perception (implicitly) of our project manager – he doesn't have a clue about air traffic control, why should I listen to him? I can learn nothing from him. Strong statements, aren't they? Are they wrong? Does this happen back home in your Ops Room? Does this happen here, where we are now? If no, that's cool. If yes, what is the risk? I did not say I had the answers…

The way we communicate

"Should we do the flight briefing or are you prepared anyway?" the Pilot asked his co pilot. What would you answer if you were the co pilot in this case? Honestly? I do not know if I would risk being taken for a fool if I said "I'd like to do the flight briefing please, if possible." Especially if I was a young co pilot having the "honour" of flying with an experienced Pilot! The way the original question is asked, it implies that the correct answer is "I am prepared". The "should we do the … or…" type of question is perfect for a dinner out. But in this case, I would

expect more of a "Let's start the flight briefing…" approach. That briefings are meant to be done – and done to good effect - is self-evident, don't you think?

RECOMMENDATION
Please always consider what effect you as a colleague have on others. Pilot on Co pilot, OJTI on Trainee, Engineer on Controller, Controller on Project Manager and vice versa for all. And of course what effect we all have on what ultimately happens. But let's start with small steps – how does what I do affect my immediate colleague? ∎

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Comment on 'Plain Jane' by Dragan Milanovski

An unfortunate level bust incident where the Citation pilot failed to adhere to the altimeter setting procedure of setting the standard pressure when passing the transition altitude.

To be fair, there were other contributing factors that individually might not have had any consequences, but in this situation played an important contributing role. We have a depressed controller, who has just taken over a complex sector, issued a relatively late re-clearance during a critical phase of flight. Additionally, he had been affected by his 'interaction' with the Project Manager and the Supervisor. And we have the co pilot, who did not want to be pushy and challenge the Pilot and his "happy-go-lucky" approach, passively contributing as well.

It is easy for us controllers to blame the pilots, and even easier (and done with pleasure!) to blame project managers of this sort. However, this will not help us avoid or limit the effect of this kind of incident in the future.

But can this kind of incident be prevented in the future? Probably not….

The nature of business flying often involves operating to/from airports unfamiliar to the crew. The "produc-

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Most of his operational experience comes from Skopje ACC where he worked for a number of years on different operational posts.
Now, his day-to-day work involves ATC training design as well as Initial Training delivery for Maastricht UAC.

Comment on 'Plain Jane'
Dragan Milanovski (cont'd)

tion pressure" from customers is high and usually, the crew is expected to organise additional tasks (hotels, taxi, flight plans, safety briefings, catering for the passengers and who knows what else), which significantly affects the overall impression of the service provided. All this is probably not going to change. The pilots are human (for now) and they make mistakes, especially when exposed to stress, when flying the aircraft is just one item on a list of many.

Can we learn something from this incident? – I think quite a lot.

No matter how experienced and confident a pilot you are, you must have respect for the aircraft you are flying. Cutting corners with procedures will not save you time or make you more efficient. Yes, customers have little understanding of all the procedures and the time it takes to execute them; but the last thing customers want to see is a careless attitude and safety consequences caused by it.

The co pilot has probably learnt his lesson. Next time, he will probably be pushier and challenge his Pilot if flights are not properly prepared or when briefings are skipped. Both of them can benefit a lot from this experience after analysing this incident and appreciating how it happened.

Controllers are well aware of altimeter setting procedures; however we tend to forget that our actions may contribute to associated level busts. Any late re-clearance involving a level-off shortly after passing Transition Altitude when QNH is below standard may increase the chances of a level bust. Of course, such clearances cannot be completely avoided, but sometimes we have to use them and when we do, we need to exercise extra caution when separation is at stake.

The way the Project Manager was described in this story is somehow rather familiar to me. Unfortunately, I know quite a few that match his description. Having project managers who will "teach controllers what is important in life" is not new to aviation. Many projects have failed or have not achieved the expected results because of this approach. Antagonism between controllers and the rest of the staff does not help. We need to respect and understand each other better.

The controller from the story knew that an important link (or tool in the kit) for preventing level busts was missing, but did not offer his opinion. Even if he did, it would have probably been ignored by the Project Manager. Instead of trying to impose compulsory readings, the Project Manager has to find a way to get the controllers onboard his project. Involving them, even to the extent of effectively delegating project 'ownership' and certainly tapping into their collective experience effectively are examples of how to enable success in this sort of project. Controllers tend to listen more to other fellow controllers.

Antagonism between controllers and the rest of the staff does not help. We need to respect and understand each other better.

RECOMMENDATION

The ANSP involved here must take action to restore effective incident reporting as soon as possible. Long-term plans for prevention of level busts (although sometimes necessary) are a lot less effective than an awareness programme (as part of refresher training) based on a solid reporting system. Helping both pilots and controllers understand how and why level busts happen is probably the best way of preventing them. Should a level bust happen, this understanding is also essential for the provision of positive actions to re-establish safety. ■

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Comment on 'Plain Jane' by Alexander Krastev

This story is a "text book" example of how casual factors and circumstances can align in a sequence that puts aircraft and the lives of their occupants at serious risk.

It started with the overconfidence of the Citation Pilot ("what could really go wrong?"), some may even describe his attitude as "negligence". This attitude and the "press-on-itis" which is not uncommon for business aviation flights led to improper pre-flight preparation and a failure to re-brief following the runway change. Obviously the Pilot underestimated the effect on the crew's ability to carry out their tasks with the required precision. The Co-Pilot, for his part, didn't dare to challenge the authoritative behaviour of the Pilot. As a result, the increased workload, stress and confusion on the flight deck caused both pilots to miss changing the altimeter sub-scale setting at the appropriate time (the change from QNH to 1013 HPa) which eventually led to the level bust.

Why couldn't ATC prevent it from happening? The easiest and most probably the wrong answer is that the controller lost concentration and turned away from the display to check what was happening at the supervisor's desk. However, he could equally well have been busy dealing with another conflict preventing him from monitoring more closely the climb out of the business jet. In view of the sector complexity we are told about, a more proactive approach to risk mitigation is required, namely to prevent level busts from occurring rather than to rely on the quick reaction of controllers and pilots once it has happened. In this particular case this would have meant issuing conflict-free clearances to traffic departing from the secondary airport which restricted departures to lower levels, which would result in them passing below the main traffic flow. A common ATC practice is to resolve such issues by use of a dedicated flight level allocation procedure.

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RECOMMENDATION

One could speculate that such a procedure was not in place because the risk of level bust had not been properly assessed. The reason behind this could be the impaired reporting seemingly consequent upon the absence of a just culture apparently evidenced by the controller's concern about legal proceedings. ∎