



## "CLEARED TO LAND" – WHAT PROJECT LEADERS CAN LEARN FROM PILOTS

### **The parallels between project leadership and experience as a private pilot and flight instructor.**

I continually notice many similarities between my work as a project manager and a private pilot. In particular, I notice where the workplace could benefit from the basics of flight training. The purpose of this article is to motivate using the "PIC - pilot in COMMAND" philosophy, in order to confidently and successfully reach your desired goal and not to lose sight of "the landmark on the horizon."

#### **The 8 Key Factors:**

- 1. «Flight plan»: A good plan is more than half the battle**
- 2. «Expect the unexpected»: Training for and anticipating emergency situations:**
- 3. «Checklist procedures»: Structured procedures based on checklists**
- 4. «Cleared to land»: clear communication**
- 5. «Your control, my control»: Clearly allocate responsibilities**
- 6. «Focus on your horizon»: Stay on course, observe the general conditions, incorporate changes into the plan**
- 7. «Make a Decision»: It's better to make a wrong decision than to make no decision**
- 8. «Debriefing»: Error culture and "continuous improvement"**

#### **1. «Flight plan»: A good plan is more than half the battle**

Good flight preparation is "half the battle." As a pilot, I plan the route and write the course, altitude and distances on the map routes. I prepare the radio – the «voice» – I use to communicate with the tower and air traffic control. In the best case, I review the various «procedures», the processes, and mentally «fly» the route. It is also advisable to go through any eventualities in your head in advance that might happen along the way. On the morning of the scheduled departure, I check the weather and decide on the start. In private aviation, there is usually no must, because a «getaway» is considered purely recreational pleasure, which is certainly different than working on projects. Otherwise, the planning of my projects is quite similar to the flight preparation: developing the concept, gathering all of the information for the route, scheduling, defining responsibilities and objectives and, in the best case, clear communication. The composition of the crew plays a major role in both areas. In the workplace, as well as in the cockpit, it is preferable to have like-minded employees, who can also take responsibility and ask critical questions, and with whom the work can be divided. One flies, and the other takes over the rest.

#### **How it applies to project work:**

Good preparation and planning such as before a flight is also an essential part of project work and ensures a more stress-free process flow.



## **2. «Expect the unexpected»: Training for and anticipating emergency situations:**

Both in flying and in business, there is a constant need for multitasking on different levels. It is therefore all the more important to be able to anticipate developments and situations. Always make sure to stay one step ahead.

When flying, it's essential to stay one step ahead. **IMPORTANT:** Before talking to the tower or doing other tasks: «First fly the plane». This means that in all of the multitasking you do, don't forget the basic task of flying the plane!

Situations of great stress or pressure apply to both the workplace and flying: Mistakes can always happen. When flying, they can even kill you. It is important to not be pressured and, if possible, to choose your own pace. It is better to take a step back and calmly reconsider the next steps. This applies to the flight as well as the go-around procedure. A restart is necessary if you are too high or too fast and a safe landing cannot be guaranteed. As the pilot, I'll choose to go-around and make a new approach.

Stress creates tunnel vision and makes clear decisions impossible. When flying it is difficult, after a second go-around, to remain calm and try to land yet a third time. Again, it is very important to keep calm and to have a plan B or plan C in case a third go-around maneuver is necessary. This plan could be to fly to an alternate airport that has a longer runway, other wind conditions, or offers a higher level of safety equipment.

The prudent response to unexpected situations can be practiced. The standard training of a pilot includes the following maneuvers, which are practiced intensely during regular training:

- Power-off landings (simulated engine failure)
- Go-around
- Start aborted due to technical problems
- «Power-off after take-off» – one of the most unfavorable situations, by the way, because the engine fails at a low altitude at take-off and the aircraft is climbing
- Behavior during the «stall», loss of power

### **How it applies to project work:**

Simulate crises, train for emergency situations, be prepared for the «worst case» without exuding a negative mood or anxiety. A well-prepared and attentive team is a strong team.

## **3. «Checklist procedures»: Structured procedure according to checklists**

For all phases of the flight, there are detailed checks that can, in the best case scenario, be recalled even without a checklist. For example, at the departure check, the take-off procedures and the departure route are discussed in the form of take-off and departure briefings. Similarly, the emergency procedures for an “aborted take-off” or “engine failure in climb” are internalized. In this way, one is mentally prepared for any situation, so that the necessary actions can be quickly recalled and implemented.

The radio frequencies can be turned down when there is a quieter phase on the flight. With the «Approach Check», all of the instruments are set in such a way that the landing can be conducted in a calm and orderly fashion. It is important to be organized in such a way that work stages can happen sensibly and without hassle.



### **How it applies to project work:**

Checklists are recommended for recurring projects and project steps. They provide guidelines and can be processed systematically step by step. In addition, projects also require flexibility and unusual solutions to problems.

The prime example in aviation is surely the successful landing by Captain Chesley Sullenberger on the Hudson River in January 2009 after a bird strike and the failure of both engines.

## **4. "Cleared to land": Clear communication in the cockpit**

In aeronautics, a misunderstood sentence can have fatal consequences due to poor acoustics or poor English skills. Clear and unambiguous communication is essential in aviation. That is why uniform terminology is used worldwide. The «language» used in aviation, the so-called "voice," is impressive in its clarity of instructions and comments: «D-EFHG, you are cleared to land RW28».

When flying, all instructions must be repeated. The «double check» ensures that the pilot has correctly understood the instructions or that air traffic control has understood the request or, in extreme cases, the pilot's problem.

### **How it applies to project work:**

Project managers must ensure that their orders or requests are understood. What sounds completely trivial is not in practice. The project members also need to speak up if they have not understood something. If necessary, it is advisable to use a glossary to ensure uniform terminology on a project.

On some projects it would be desirable to make announcements to the team just as short and concise as in flying. One example is: «Cabin crew, we will be landing in 10 minutes».

## **5. «Your control, my control»: Clearly allocate responsibilities**

When flying, the «pilot in command (PIC)» has a well-defined responsibility: "The pilot in command (PIC) of an aircraft is the person aboard the aircraft who is ultimately responsible for its operation and safety during flight."

It is about who is «in charge» and thus responsible. The «pilot in command» is not necessarily the captain. This hierarchy can also change. If the pilot passes control on to the copilot, the previous PIC says: «your control» and the copilot repeats clearly: «my control». The same thing happens when control is passed from the copilot to the pilot. The distribution of tasks in the cockpit can also change after an explicit announcement. Thanks to the clear communication and definition of terms, the responsibility is always defined.

Over the last few decades, in addition to the "crew resource management," a new style of management has found its way into the cockpit that benefits from the knowledge and thinking of the entire crew. From this, a cross-hierarchy of action can be derived. This will help to avoid accidents that have occurred in the past due hierarchical structures that are too rigid. Previously the maxim was: "The co-pilot does not contradict the captain." This is different today. It is more about making the whole crew responsible, thoughtful and active contributors to the flight.



### **How it applies to project work:**

Clear accountability forms the basis for the success of a project. Otherwise, it could lead to a lack of expertise or gaps. Therefore responsibilities, interfaces and also deadlines need to be clearly defined: Who does what by when? Only with this clear allocation of responsibilities can a project «safely land», that is to say, be successfully implemented.

## **6. «Focus on your horizon»: Stay on course, observe the general conditions, incorporate plan changes**

As a pilot, in order to reach my destination, I need a course – more or less a guide from A to B. To avoid drifting from my planned course from external factors such as wind, I focus on the horizon – the ultimate goal. This can be a prominent landmark or a rise in the ground or a radio tower. With this point clearly in mind, detailed navigating can be prevented.

If the landmark on the horizon is clearly defined, minor adjustments along the way can be made. The adjustments made while working to reach the goal must keep the basic parameters in mind. The parameters may change in the course of the flight. Therefore, the general conditions must be re-evaluated regularly for their timeliness and relevance. When flying, the weather can change unexpectedly and on short notice. Sudden fog can quickly deteriorate visibility, for example. In this case, the pilot has to make a split second decision to either land the plane or change the route. Many accidents happen because pilots are so fixated on the destination that they disregard the conditions and just continue flying. Some common factors for these errors are an overestimation of skill or an underestimation of the situation, as well as pressure to succeed and time pressures. In aviation, it is extremely important to not ignore the warning signals, and avoid tunnel vision. During a flight, as well as with a project: while on track, regularly evaluate whether the conditions are still right.

People react differently to stress. Flying presents special challenges. The third dimension increases the stress in critical situations even for experienced pilots. These moments reveal personal behavior patterns, both positive and negative. One may, for example, be able to keep calm under duress, or be capable of astonishing feats. However, they may not be able to make a decision or become panic stricken.

In the cockpit as well as on the project team, a wide range of human behaviors are at work: leadership, education, beliefs (negative and positive), the ability to adapt, and learned patterns.

### **How it applies to project work:**

Finally, it is ultimately the responsibility of project leadership to have the overarching objectives in sight and to not lose oneself in the details. What matters is steering the aircraft – or the department or company – toward the goal. This trail goes from one point to the next, from one vantage point on the horizon to the next and on to a safe landing.

In project leadership there is a danger of losing sight of the ultimate goal and falling back into old habits and the chaos of the daily grind. Therefore, it is crucial to focus on what is essential and important.

On every project that means being precise and setting realistic goals for all of those involved. The «focal point on the horizon», the objective, must be visible to all.



## **7. «Make a Decision»: It's better to make a wrong decision than to make no decision**

In an emergency situation, decisions need to be made quickly. As an example, in case of engine failure, I only have a few seconds to get the plane into glider mode. After I have done that, I can quickly look for a suitable field for an emergency landing. Once you have chosen one, there is usually no time left to change your mind.

Flying is not the same as project management or business: one usually does not have to make split-second decisions – and that's a huge advantage. But the example still applies: have the emergency landing field or alternative waypoint in sight in order to be able to reverse course or make a change in course if necessary.

In other words: Even with projects it is worthwhile to have alternatives ready and in an «emergency situation» be able to change course, such as the sequence of the project, in order to adapt in a timely manner and be able to bring it «in for a landing» or to a conclusion.

Once you have chosen your emergency landing strip, glide the airplane (your project) to a safe, controlled landing, if that is technically possible. A controlled emergency landing would be the goal in such a case.

### **How it applies to project work:**

Projects have specific defining points or milestones, which can mean it is necessary to cancel a project («forced landing»). The motto “It is always better to make a wrong decision than no decision at all” applies to project work as well as to flying.

A decision can later be found out to be wrong, but at that given moment it was the correct decision. Refer back to the emergency landing on the Hudson River. This flight maneuver could have been the wrong decision, but even worse would have been to have made no decision at all.

## **8. «Debriefing»: Error culture and “continuous improvement”**

Once the stress has passed and the airplane – or the project – has landed safely or been completed, a debriefing is recommended. The following points should be brought up for discussion:

- What needs to be closely paid attention to next time?
- Where were the errors and how serious were they?
- Where are potential areas of improvement and how I can I achieve them?

Human failure, the «human factor», is the main cause of accidents in aviation. In addition, human errors are indicators of more deep-seated errors in the system. In order to explain a failure, one should not only look for WHERE humans made errors but also WHY people made the decisions and took the actions they did in the given situation. In this way miscalculations and bad decisions can be better understood. It's about identifying and reflecting on mistakes that were made and identifying where improvements can be made in the future. That is why the aviation industry created the Critical Incident Reporting System.



### **How it applies to project work:**

Particularly in the case of recurring projects, it can record the room for improvement for next time in a thorough debriefing. Ideally, this is where an open “culture of error” is established and utilized.

«Continuous improvement» should always be a part of the work everyone contributes. That should also be the internal attitude of each project team. It is important to know oneself well enough to realistically estimate ones abilities, and the ability to work on ones weaknesses and always honestly reflect upon oneself. That is a solid foundation for achieving personal goals, either on a project or in a cockpit.

### **Authors:**

Rahel Kindermann, private pilot (private pilot’s license), Head Visitor Services & Events, project leader, Zurich Airport in co-operation with Anne Hennig, flight instructor, lead flight instructor at the Hans Grade Flight School, Schönhagen/EDAZ