# Post Mortem

## What went right

* **Found the fun early**: the team found the fun easily and experience no real changes throughout development. During pre-production, we iterated on the pitch concept, brainstorming and discussing multiple ideas for weapons, scenarios, pickups, which also engaged the entire team. Quick prototypes helped us in terms of evaluating their feasibility as well as deciding on which ideas seemed to create more interesting, fun gameplay situations. Finally, although it took us a long time to test the in-game mechanics properly (in a multiplayer scenario), the very first playtest immediately showed us how fun *Luft* was and, despite some balance adjustments, we did not have to make any big changes to our design concept.
* **Unified and cohesive vision**: since the beginning of development, the team established a cohesive and enjoyable theme, which subsequently ended up being a unified, shared vision of the game itself. The artists provided great concept art, which helped the entire team better visualize the concept, while the level designers kept folders with valuable references to the discussed ideas. These elements kept the team on the same page, contributing to the delivery of cohesive and fun game.
* **Positive team culture**: other teams, which with we shared workspace, called us the “get-along team”. Overall, we had a lot of fun throughout the development, establishing a very positive team culture. Each member had strong work ethic, kind-hearted personality, and no huge conflicts. On top of that, we had team dinners!
* **Proudly completed two levels**: the original requirements included delivering only one map. However, despite the map we were originally shipping with being excellent, the team realized the need of a map that emphasized more the flying aspect of our game (Luftkanon weapon). This way, we decided to take another level to shippable quality, which was only possible thanks to the great effort of our entire team towards that and to the modular building assets created by the artists, greatly assisting the production of levels.

## What went wrong

* **Switching engines midway through development**: a mid-development, the team changed engines, causing quite a vast amount of rework and frustration. Although that was necessary, (in order to make builds for our game), it could have been foreseen, and therefore, done earlier, if we tried to build the game right from beginning, which would cause less to work to be lost. In addition, the fact that we could not make builds also delayed proper playtest sessions (in multiplayer scenarios), which caused uncertainty about our core design decisions.
* **Crunch**: before almost every milestone, the team crunched, working many hours after the original schedule. A big part of that was because we failed at obeying any asset lock: we did not plan/list the necessary assets right and had issues organizing the tasks in the beginning – given the absence of a producer in the team. Moreover, the artists produced assets but usually did not upload them into the engine for testing, causing issues found only near the integration stage, subsequently, before milestones. All those, aligned with the fact that we overscoped the art requirements for the project, caused us to work overtime a couple of milestones throughout development.
* **Losing a programmer**: the team lost a programmer late in the development process, given personal issues. On top of the absence of a teammate and his work force, he did not usually comment his code, causing unforeseen issues upon his departure. Other team members had to take over his tasks, which demanded restructuring our plans and adapting to our new scenario.

## What we learned

* **Designing without Aesthetics in mind**: this was a particular challenge faced by the Level Design department. In the beginning, we struggled prioritize gameplay before aesthetics. The unusual theme we chose, Swiss balloon-like village, made us design initially focusing on the visuals instead of gameplay. After a little while, our leads advised us in the right direction and we were able to create designs that achieved the expected gameplay.
* **Lighting in Unreal and in general**: during the Alpha milestone, the team uploaded a static mesh as one giant asset (the windmill). Since it was one object, it did not process lighting correctly. That was right before the milestone day, and cost lots of extra stress and time. Our Professors explained how lighting works generally in game engines and told us about the importance of having different, smaller pieces making a scene. That was a very valuable lesson, which leads to the next topic:
* **The value of modular assets**: although we had that issue with one giant asset, the team originally planned for modular assets, which was a fantastic decision and helped a lot the development process. On top of having a way better effect with lighting, those assets helped us successfully building to complete levels at shippable quality.
* **Asset lock and crunch**: as pointed out in “What went wrong”, not respecting the asset locks was a big mistake we committed. As a lesson learned, we understand now how important is to asset lock regardless of personal feelings to prevent unnecessary crunch and stress.

**The importance of morale boosters**: besides the known importance of playtest sessions, we found out how they can positively affect the development in terms of boosting the team morale. As explained before, it took us a long time to proper playtest *Luft* in a multiplayer scenario. However, when we did, being able to see all of our work together and delivering fun gameplay incentivized us to work even harder on the project. Along those lines, we realized how including fun, thematic elements can also boost the team spirit: during the beta milestone, we added a confetti particle effect, which we have been willing to add a long time before. Although that effect was not crucial for our game, adding such a thematic element brought joy to the team, and gave us the feeling of going to the right direction.