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Assignment 2- Lindbergh

What were the ingredients of Charles Lindbergh's successful flight?

- Single-engine plane (compared to others' failed multi-engine efforts)
- Single pilot (no co-pilot)
- Decision against carrying a parachute and radio in favor of more gasoline
- Experience in flying at a U.S. Army flying school and as an air mail pilot
- Work in helping design the monoplane he would fly (Spirit of St. Louis)
- The fact that he only carried what he deemed necessary
- Performance of multiple test flights
- Enough financial backing
- Technical research and smart planning

Research:

Single-engine monoplane with a single pilot

Because of the support from the St. Louis backers, Lindbergh was given the freedom to pursue his dream of crossing the Atlantic in a single-engine monoplane with a single pilot, which he knew was safer and more likely of success. Mr. Bixby would later name the plane, the *Spirit of St. Louis*. Having been turned down by all the major aircraft manufactures, including his attempt to purchase a Bellanca (the only pre-built plane available for such a flight), Lindbergh traveled by train to San Diego and Ryan Airlines, Inc. at the insistence of his St. Louis backers. He had queried the small company before being turned down by Bellanca.

Ryan Airlines of San Diego

If Ryan Airlines of San Diego could complete a specially modified aircraft, it would need to be ready in two months. Though a possible task, as far as Lindbergh was concerned his chances for success were waning.

Arriving on February 23, Lindbergh soon realized that the decision whether to place an order with Ryan, and their ability to build such a plane in 60-days, rested in his estimation on one man, Donald Hall, the new Chief Engineer. The two men, scholars of current aviation technology in their own right, and experts in their fields, had much in common. Both had attended flight school in Austin, Texas at Brooks field a year apart. Hall was 28 and Lindbergh 25. Fueled by a common interest, there was a spark between the two men, and on February 25, Lindbergh placed his order for the *Spirit of St. Louis*.

Hall and Lindbergh

Immediately, Hall and Lindbergh started the work that would develop into a solid plan for crossing the Atlantic. Most issues the two agreed upon, while on other points they compromised. Lindbergh and Hall both believed that the decision to use a single-engine plane was best since it offered less chances of failure if a proven engine was chosen, like the Wright Whirlwind J-5C. The two men also agreed that the main fuel tanks should be in front of the pilot, yet Hall was concerned with forward visibility. Collaborating on a constant basis meant the two men rarely parted each other's side. Each knew the tragic result if a single fuel line busted, if icing weighed down the plane, if a major navigational error occurred, or if pilot fatigue overwhelmed Lindbergh.

It quickly became clear to Hall that a completely new design was a better option compared to modifying the older Ryan M-2 model. "...It was concluded that a redesign of the production model 3-seater, open cockpit, Ryan M-2 could not make the 3600 mile flight between New York and Paris with ample reserve fuel, and that a new design development was necessary," Hall later wrote in the appendix of *The Spirit of St. Louis*.

Decision to forego a radio

When pressed in New York about his decision to forego a radio, Lindbergh said, "When the weather is bad you can't make contact with the ground. When the weather isn't bad a pilot doesn't need a radio." Lindbergh had already lost his patience with the incessant and sensationalistic press. To make matters worse, he had not yet become technically eligible for the Orteig Prize, which stipulated that 60 days must elapse between acceptance of his entry papers and take-off of the flight to qualify. His St. Louis backers told him to fly when he was ready, despite the Prize.

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