



## What Museums Want

**Technological museums have changed over time. Museum staff must use their museums' greatest assets, their objects, to draw audiences into critical engagement with broader issues.**

Suggested revision for the inventors section of the Jet Aviation Gallery of the Smithsonian Institution's National Air and Space Museum.

Two key early jet engines provoke questions about the invention story.

Why are Frank Whittle and Hans von Ohain important?

Both men were determined and inspired others. They were crucial in raising awareness of the potential and practicality of a new type of power plant in industry and within their Air Ministries.



Why do these engines look so funny?

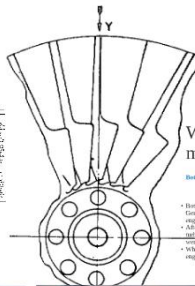
The engines displayed here look nothing like engines in military or civil use today.

• Both men received support for their work, and both the British and German Air Ministries turned to the civil industry to develop an engine that their Air Forces could use.



**Why does it look old?**  
This engine is the product of the late stages of the British engine project. It was developed by Frank Whittle and his team at the Royal Aircraft Establishment, Farnborough, Hampshire, in the late 1930s. It was the first of a series of engines that would eventually lead to the development of the first British jet fighter, the Gloster Gladiator.

Donated by Power Jets Ltd, 1949



Why did Whittle and von Ohain succeed in making the first practical turbojet engines?

Both men were dedicated to the new type of engine and convinced that it would work.

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Donated by the Deutsches Museum, 1980

What problem were they solving?

Both inventors wanted to build a power plant that was smaller than a piston engine.

• von Ohain wanted to build a power plant that was smaller than a piston engine.  
• von Whittle's engine was based on the first to fly a jet. His engine was built from sheet metal and was built to last for a long flight.  
• Whittle wanted to build a powerplant that could propel a plane faster and higher than piston engines could manage.  
• Whittle wanted to impress the British Air Ministry with the practicality of his engine for use by the Royal Air Force. He wanted to achieve a performance similar to the piston-engine fighters then in use.



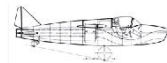
The engine that von Ohain built for the German Air Force in 1939.



The engine that Whittle built for the British Air Force in 1941.

Why do these aircraft look different from later jet fighters?

• Both were experimental prototypes, with a single turbojet engine. The air entered the engine through the plane's nose and was exhausted from its tail.  
• The airframes were based on the designs of familiar, piston engine airplanes.  
• The engine, air and exhaust took up the whole bulk of the plane's long fuselage, resulting in performance losses and were not designed in later aircraft.



## What Museums Want: A Critical Review of the National Air and Space Museum's Jet Aviation Gallery

NASM's jet aviation gallery opened on July 1, 1981. It was an outstanding example of museum practice and epitomized the type of exhibits that filled the new Air and Space Museum in Washington D.C. The gallery highlights some of the challenges facing technological museums. Its story emphasizes the strengths and continuing public authority of museums today.

Since the museum's opening, elements of the Smithsonian Institution, the museum's staff, and the academic community have all sought to reshape the museum's practice in different ways. By examining the jet aviation gallery in its proper historical context, we can better understand how the exhibit came to be and why it is out of step with the museum's goals thirty years later. The increasing emphasis on presenting academically informed history in museum exhibits should not be allowed to create conflict with the particular purposes, functions and strengths of the technological museum.



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