

# The NACA and Research Policy at the Hands of History

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# Argument

In the long history of U.S. aeronautical research, many of the most important organizational characteristics have been accidental rather than explicit and purposive policies.

# Subtext

Research organization and practice have been poorly understood, poorly illustrated, and slowly replaced by methods that lack any privileged understanding of discovery and innovation.

## From the NACA to NASA

- In spite of the pivot to NASA, the aeronautical laboratories are best understood as traveling a continuous trajectory.
- The NACA era established the fundamental outlines of long-term research organization and practice.

# World War II

- The NACA initiated multiple laboratories in the pre-war mobilization period.
- Advanced weapons research, especially in Germany, prompted the Army Air Force (later Air Force) to establish its own fundamental research capabilities.
- WWII and its aftermath established the long-term structural dynamic of federally funded aero research.
- Sputnik/NASA further destabilized the legacy wind tunnel hierarchy.
- Competition encouraged entrepreneurial behavior.

# Technocratic Processes

- Committee system adopted from progressive era engineering practice.
- Informal insulation of laboratories and budgets.
- Wind tunnel hierarchy as a functional (albeit accidental) managerial system.

# Erosion of the NACA way

- Roland labeled the NACA system anachronistic. It was already under attack in the 1950s.
- Space program was a Trojan horse, introducing engineering-inspired program management methods.
- Subsequent trends would see the adoption managerial methods entirely unrelated to any fundamental understanding of discovery and innovation.

# The NASA Era

- The decline of the NACA way. No champions. No enunciation of the laboratories' traditional organizational strengths.
- Simultaneously, an increasingly hostile bureaucratic environment encouraged entrepreneurial behavior. Niche seeking led to methodological exploration.