How did the launch of Sputnik kick-start federal investment in science R&D?

- Public outcry & concern that U.S. had fallen behind in technology to Russians.
  - “defeat of the U.S.” according to Life magazine.
  - “Russians in control of outer space”
- Eisenhower named the 1st ever Presidential Science Advisor.
- But, Eisenhower was slow to react ⇒ wanted limited gov’t.

Vanguard Launch History

Embarrassing early failures but eventual success.

The Vanguard rocket launched 3 satellites out of 11 launch attempts:
- Vanguard TV3 - December 6, 1957 - Failed to orbit 1.36 kg (3 lb) satellite
- Vanguard TV3 Backup - February 5, 1958 - Failed to orbit 1.36 kg (3 lb) satellite
- Vanguard 1 - March 17, 1958 - Orbitied 1.47 kg (3.25 lb) satellite
- Vanguard TV5 - April 29, 1958 - Failed to orbit 9.85 kg (22 lb) satellite
- Vanguard SLV 1 - May 27, 1958 - Failed to orbit 9.85 kg (22 lb) satellite
- Vanguard SLV 2 - June 26, 1958 - Failed to orbit 9.98 kg (22 lb) satellite
- Vanguard SLV 3 - September 20, 1958 - Failed to orbit 9.98 kg (22 lb) satellite
- Vanguard SLV 5 - April 13, 1959 - Failed to orbit 10.3 kg (22 lb 11 oz) satellite
- Vanguard 2 - February 17, 1959 - Orbitied 9.9 kg (21 lb 10 oz) satellite
- Vanguard SLV 6 - June 27, 1959 - Failed to orbit 10.3 kg (22 lb 11 oz) satellite
- Vanguard 3 - September 18, 1959 - Orbitied 22.7 kg (50 lb) satellite

NASA Act of 1958

- Resulting Eisenhower space policy after 1957:
  - Satellites for communications & spying. Flyovers?
  - Cover military uses with blanket of “space for peace”.
  - Who owns space and the Moon?
  - Stability, not disarmament.
  - Project Mercury born in 1959 (first U.S. manned program)
Mercury 7 Astronauts
Selected April, 1959

M. Scott Carpenter - Mercury-Atlas 7 (Boulder native)
L. Gordon Cooper - Mercury-Atlas 5 & 7 (deceased)
Virgil I. "Gus" Grissom - Mercury-Redstone 4, Gemini 3, Apollo 1 (deceased)
John H. Glenn Jr. - Mercury-Atlas 6, STS-95
Walter M. Schirra - Mercury-Atlas 8, Gemini 6A, Apollo 7 (deceased)
Alan B. Shepard - Mercury-Redstone 3, Apollo 14 (deceased)
Donald K. "Deke" Slayton - Apollo-Soyuz Test Project (deceased)

Eisenhower's Farewell Address
January 17, 1961

- Need to maintain balance in & among national programs, public vs. private, cost & advantages, necessary vs. comfortable.

- Threats to the nation:
  - Guard against "unwarranted influence" by the "military-industrial complex".
  - Increasing share of research by federal gov't.
  - Danger of becoming "captive of the scientific-technological elite".