Aeronautics Research & Development Funding: Benefits and Implications

Transportation Systems

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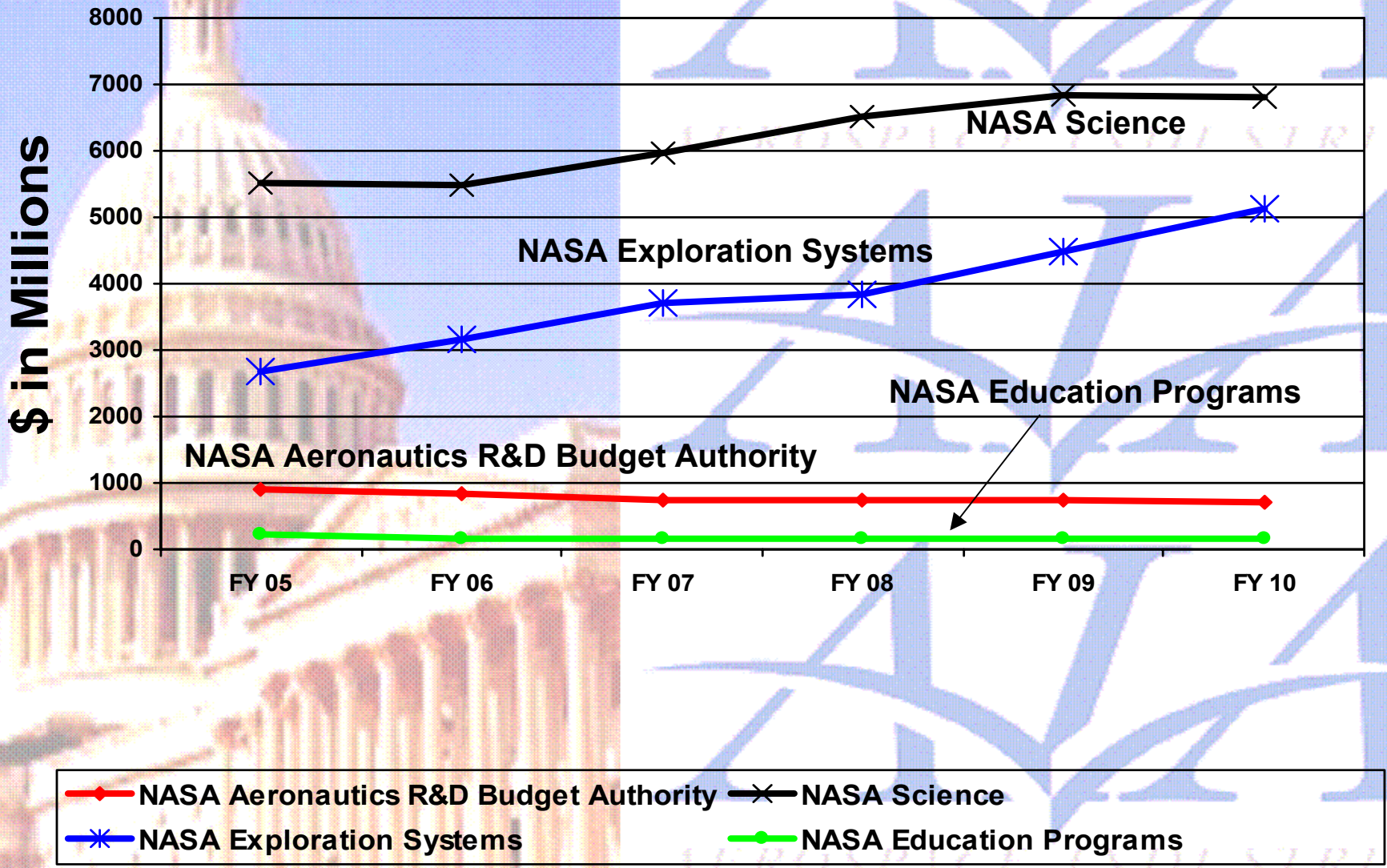
Impact of the Aerospace Industry on the U.S. Economy

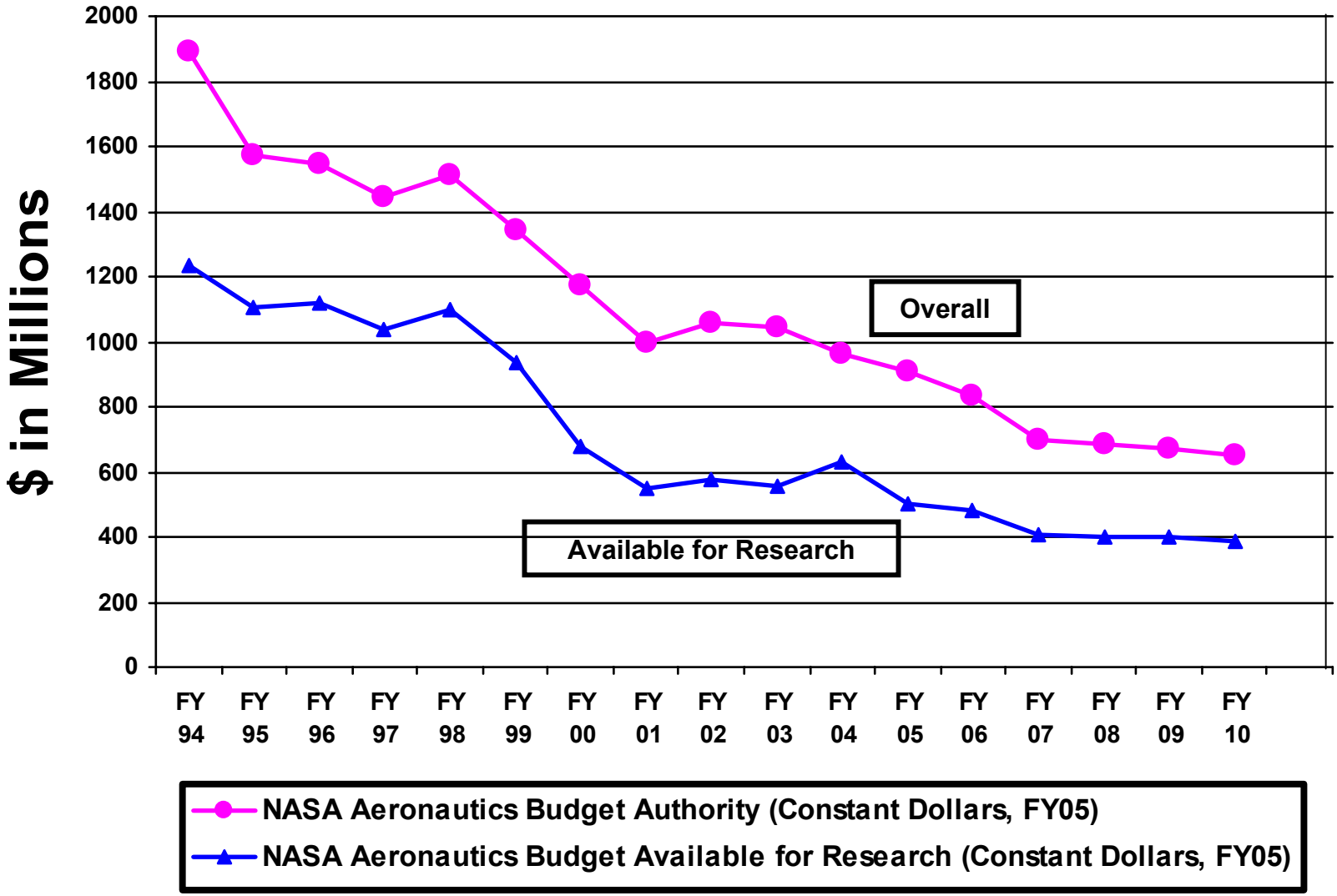
- In 2004, a time of record trade deficit, the aerospace industry has a $31 billion trade surplus
- Aerospace sales rose 8% to $161 billion in 2004
- Aerospace made up ¼ of manufacturing job growth in 2004
- Third straight quarter of job growth

NASA Aeronautics R&D Budget Remains Underfunded

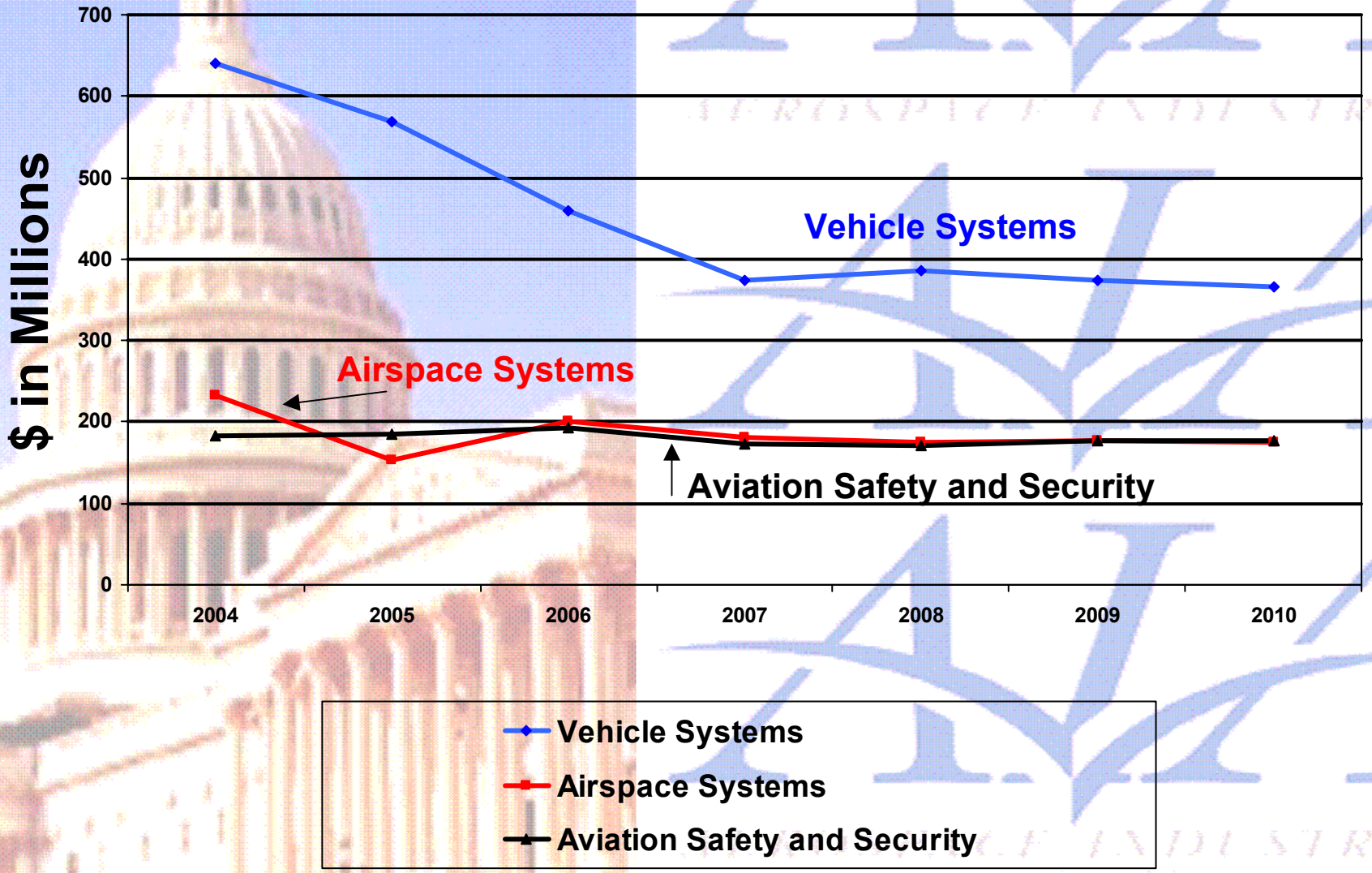


Critical Need for NASA Aeronautics R&D

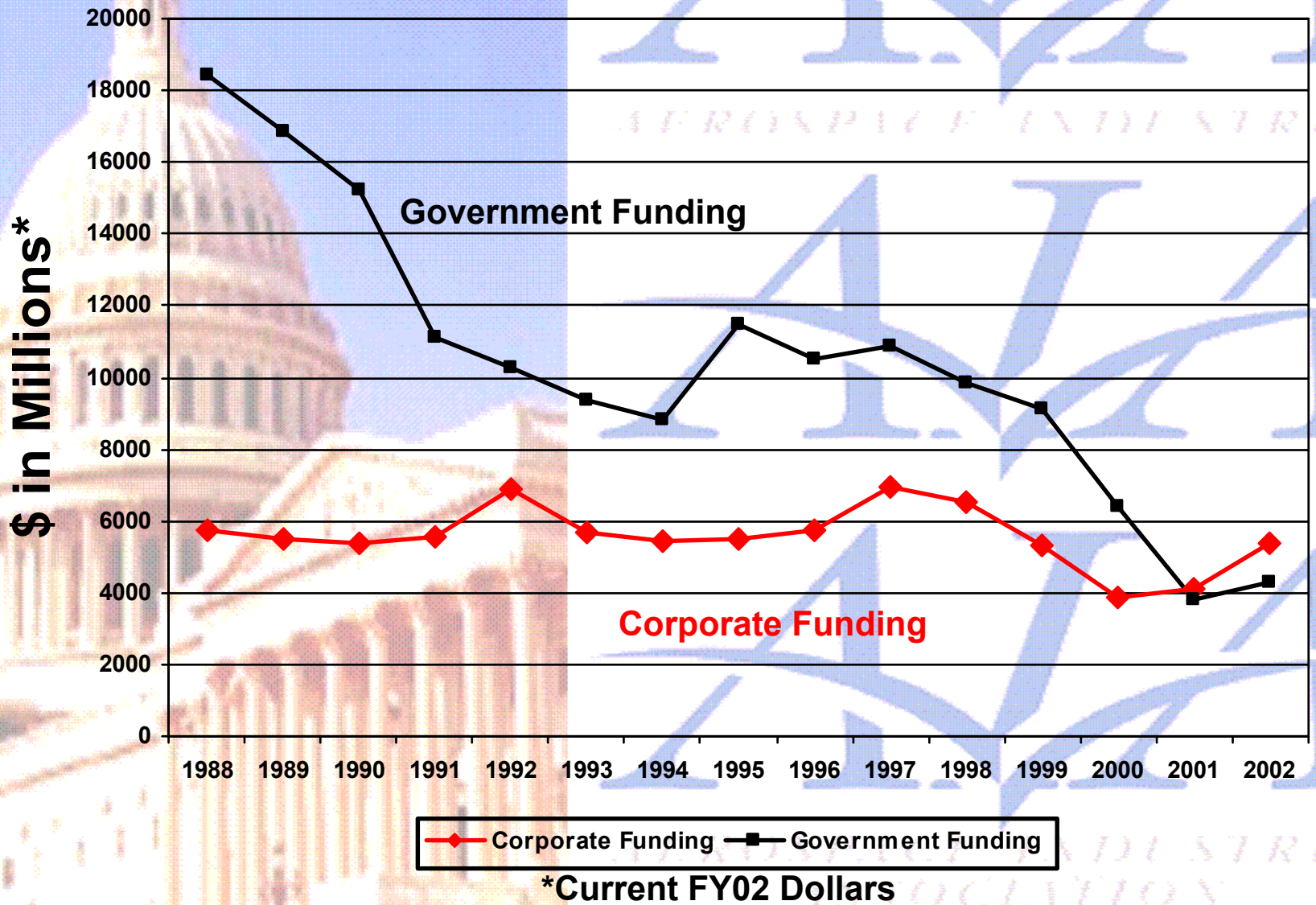
Funding Continues to Decline



NASA Aeronautics Funding Breakdown



Industry Now Outspends Federal Government in R&D



Contrasting Approaches to R & D

Europe

Highly Integrated

United States

"Organized" Chaos

Growth of Aeronautics in Europe

- *European Aeronautics: A Vision for 2020*
- Increase R&D spending to 3% of GDP by 2010: aeronautics will receive $2.6 billion
- **Recent Announcements:**
  - VITAL, $115 million research program introduced by EC and Snecma to reduce aircraft engine noise and emissions
  - Airbus and Dutch Aerospace Industry partner in the field of research and technology development

Planned NASA Aeronautics R&D Projects FY06-FY10

- 50% noise reduction to 1997 state of the art
- Acceptable sonic boom level
- Aircraft powered by hydrogen fuel cells
- Long-duration (14 day) remotely operated vehicles

NASA Aeronautics R&D Projects <u>Left Out</u> of FY06-FY10 Budget

- Ultra Efficient Engine Technology (UEET)
- Rotorcraft research and development
- Facilities
- Mid-term and long-term research

Key Areas to Ensure Continued U.S. Leadership

- Engine technology
- Rotorcraft technology
- Coordination of DOD, FAA, and NASA initiatives to ensure affective aeronautics program
- Mid-term research (5-10 years)
- Long-term research