NASA Aeronautics
Fundamental Aeronautics Program
Technical Conference

Dr. Jaiwon Shin
Associate Administrator
Aeronautics Research Mission Directorate

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NASA Aeronautics FY 2013 Budget

- Continues support for conducting cutting-edge research at the fundamental and integrated systems levels to advance U.S. leadership in aeronautics R&D and to address national aviation challenges.
- Maintains research focus in improving aviation safety, minimizing the environmental impact of aviation, developing innovative air traffic management technologies and revolutionary vehicle technologies for NextGen.

- Continues support for the integration of unmanned aircraft systems into the National Airspace System and the validation and verification of complex aviation systems.
- Continues support for maintaining and improving NASA's key aeronautics facilities.
- Combines hypersonic and supersonic research into a single project that maintains core capabilities and facilities, and transfers responsibility for entry, descent and landing research to Space Technology.

NASA Aeronautics' Priorities

Accelerate implementation and **enhance** the capabilities of NextGen

Innovate to close critical gaps in both ATM and vehicles to achieve the full potential of NextGen

Lead the country with a vision and revolutionary capabilities for the Nation's future aviation system

NASA Aeronautics is making tangible and compelling impact today in all three priorities

Providing a Vision for Aviation

Challenges for commercial aircraft with Entry Into Service in 2030 (N+3)

The Need

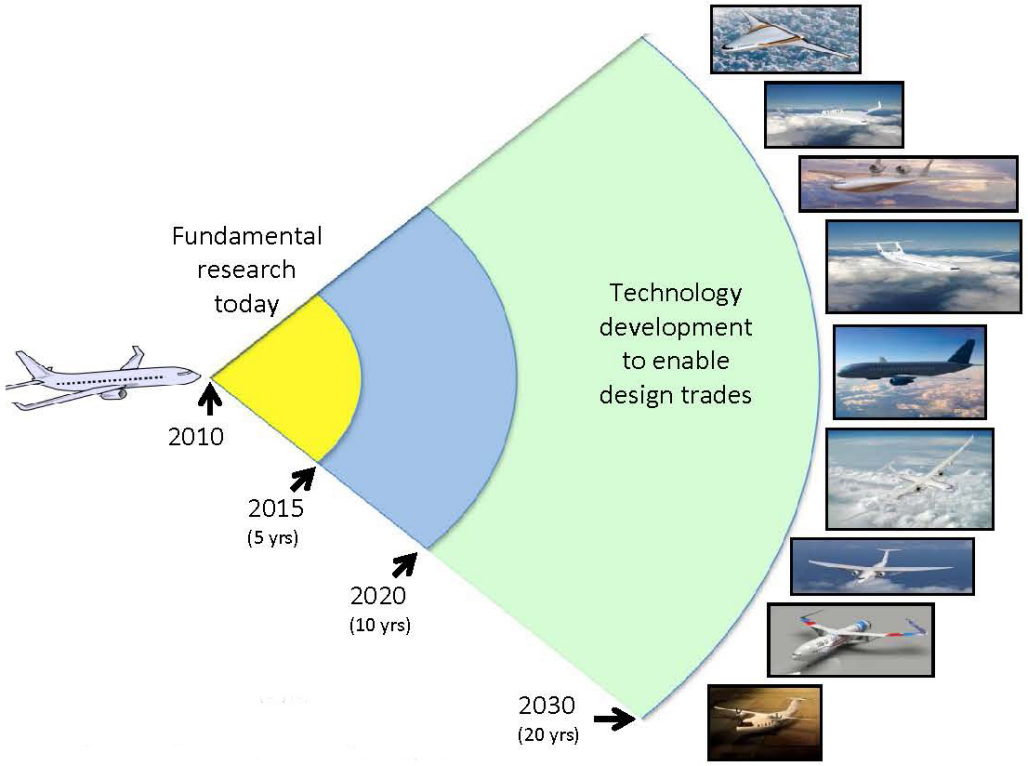
- Identify advanced airframe and propulsion concepts and enabling technologies
- Guidance for future NASA investments in fundamental research

NASA's Approach

- Stimulate thinking in industry and academia on revolutionary aircraft solutions
- Determine high-payoff technologies and research opportunities
- Address energy efficiency, environmental compatibility, and operations goals
- Fundamental Research portfolio robust to many possible futures

NASA's Contribution

- Providing the vision and focus for the fundamental research needed today to enable the far term outcomes/products, but with possibility of near/mid term impact



Sample Technologies

- Engine ultra high bypass ratios
- Small, high efficiency core engines
- Higher aspect ratio and laminar flow wings
- Alternative energy: conventional/biofuel/hybrid electric