

Forum 360: NASA Aeronautics at the Dawn of a New Era of Aviation

Commercial Supersonics Strategy



AIAA Aviation 2018

June 28, 2018

Peter Coen, Project Manager Commercial Supersonics Technology

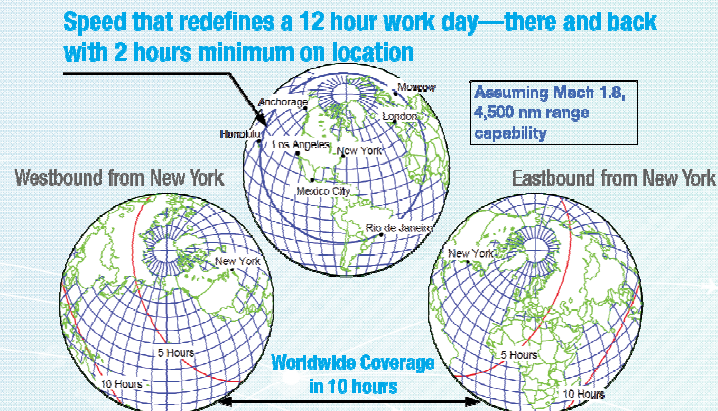


Innovation in Commercial Supersonic Flight

WHY?

Commercial supersonic flight represents a potentially large new market for aircraft manufacturers and operators world-wide

The government plays a central role in developing the data needed for the regulation change that is essential to enabling this new market



- Global demand for air travel is growing, which places a demand on speed
- Supersonic air travel offers many benefits including personal productivity and welling for travelers; rapid for transport time-critical cargo
- New supersonic products will create substantial value for aerospace manufacturers, employees and users
 - Large potential market predicted: - business aircraft followed by larger commercial aircraft
 - Technology leadership established through initial products will lead to development of larger, more capable airliners



The Vision for Commercial Supersonic Flight

The emerging potential market has generated renewed interest in civil supersonic aircraft

- Evidenced by the appearance of several commercial programs even with existing restrictions on overland flight and other challenges

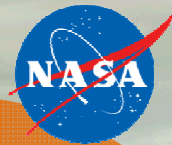


The vision of the Supersonics Community is a future where fast air travel is available for a broad spectrum of the traveling public.

- Future supersonic aircraft will not only be able to fly overland without creating an “unacceptable situation” but compared to Concorde and SST will be efficient, affordable and environmentally responsible

Overland Flight Restrictions based on unacceptable sonic boom noise are viewed as the main barrier to this vision

Overcoming the Barrier to Overland Flight



NASA's Low Boom Flight Demonstration is specifically planned to generate key data to validate design approaches and support development of en route certification standards based on acceptable sound levels

- **New Environmental Standards are needed to open the market to supersonic flight**
- **An En route Noise Standard is the biggest challenge**
 - Requires proof of new design approaches
 - Must replace current prohibitions
 - No relevant data on exists to define limits
 - Community data from large, diverse population is a requirement
 - Standard must be accepted internationally