



# Barriers to Practical Supersonic Commercial Aircraft

## Environmental Barriers

### Sonic Boom

- Design for low noise sonic boom
- Understand Community Response

### Airport Noise

- Noise levels not louder than subsonic aircraft at appropriate airports

### High Altitude Emissions

- No or minimal long-term impact at supersonic cruise altitudes

## Efficiency Barriers



### Light Weight, Durable Vehicles

- Low airframe and propulsion weight in a slender flexible vehicle operating at supersonic cruise temperatures

### Efficient Vehicles

- Efficient airframe and propulsion throughout flight envelope

### Efficient Operations

- Airspace-Vehicle interaction for full utilization of high speed

*Solutions to barriers drives selection of our Research Themes*