

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Future Space Transportation Systems (4)

Author: Mrs. Emma Lehnhardt
Bryce Space and Technology, United States, emma.lehnhardt@nasa.gov

Ms. Carissa Christensen
Bryce Space and Technology, United States, carissa.christensen@taurigroup.com

KEY CHALLENGES FOR POINT-TO-POINT TRANSPORTATION

Abstract

Traveling anywhere on the planet in a matter of a few hours, or delivering packages around the world far faster than currently possible, are future capabilities envisioned by many in the aerospace community. However, Point-to-Point transportation must overcome many crucial barriers before cargo, crew, or mixed manifest operations are possible. This paper will outline the key challenges facing Point-to-Point Transportation, in the categories of technology, logistics, and the business case. The technology challenges include fully understanding hypersonic phenomena, developing new craft, and controlling them through the flight profile. Logistics includes legal and regulatory concerns, as well as infrastructure needs for air- or spaceports. The business case challenges will be illuminated by an original comparison to the Concorde Supersonic Transport, as well as the possible impacts of future supersonic business jets. This work is an expansion of prior work conducted on the topic of Point-to-Point transportation.