

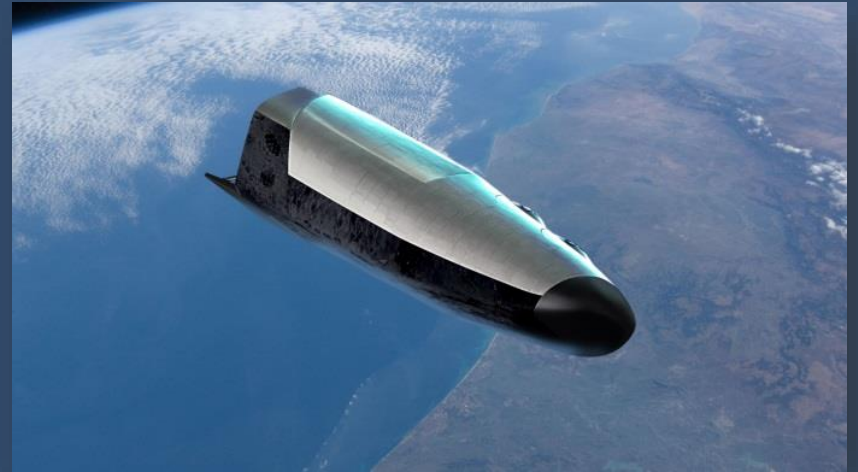


FALCON XX

High Altitude Operations

ECHO WORKSHOP 2

20-21/04/2022



A QUESTION OF TIME



A QUESTION OF VELOCITY



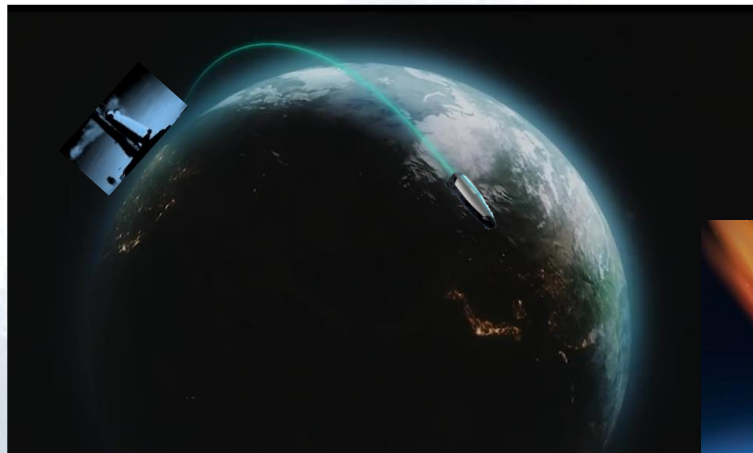
**Launcher Range to
ISS Transfer Orbit
8000 km**

**ISS
7.7 km/S
Altitude 400 km**

**Ariane 5
25 minutes**



MERGING AIR AND SPACE TECHNOLOGY ?



**Drastic travel time
reduction**



**100% reusable,
Clean and sustainable**

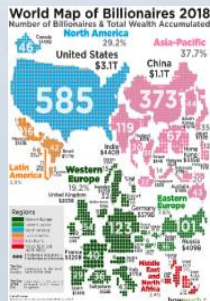
2h max door-to-door travel



PASSENGERS OR HIGH VALUE CARGO TRANSPORTATION













By producing wealth ...



With billionaires ...

Most attractive business friendly cities



Rang	Pays	Ville
1		New-York
2		Londres
3		Tokyo
4		Shanghai
5		Hong-Kong
6		Pékin
7		Chicago
8		Singapour
9		Los Angeles
10		Paris



...and money market



...and highly visited business airports

HIGH ACCESS PRICE FOR JUSTIFIED GOALS



Niche market



Vehicle for 6-8 pax max

Main

BUSINESS

Big companies
Wealthy business men



Upside

LEISURE

VIPs
Sport clubs

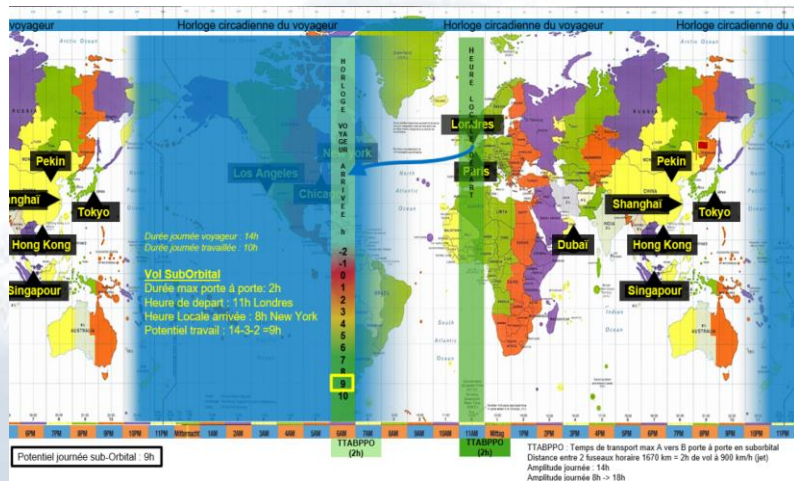


EMERGENCY

Medicine
States
Special freight



ULTRA LONG RANGE / ULTRA FAST BUSINESS JET



Ubiquity feeling, Face to face contact



Paris : New York

Time zones to take into account



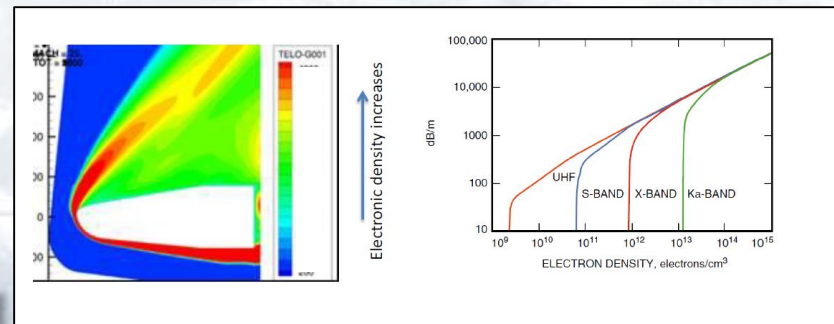
Worldwide return trip in a single day

New Business Opportunities

MANY TECHNICAL CHALLENGES



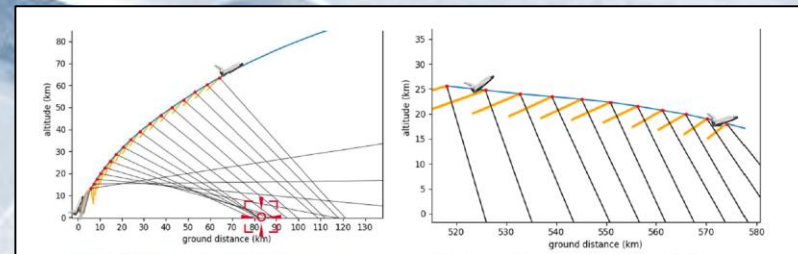
Non trained passengers



Communications

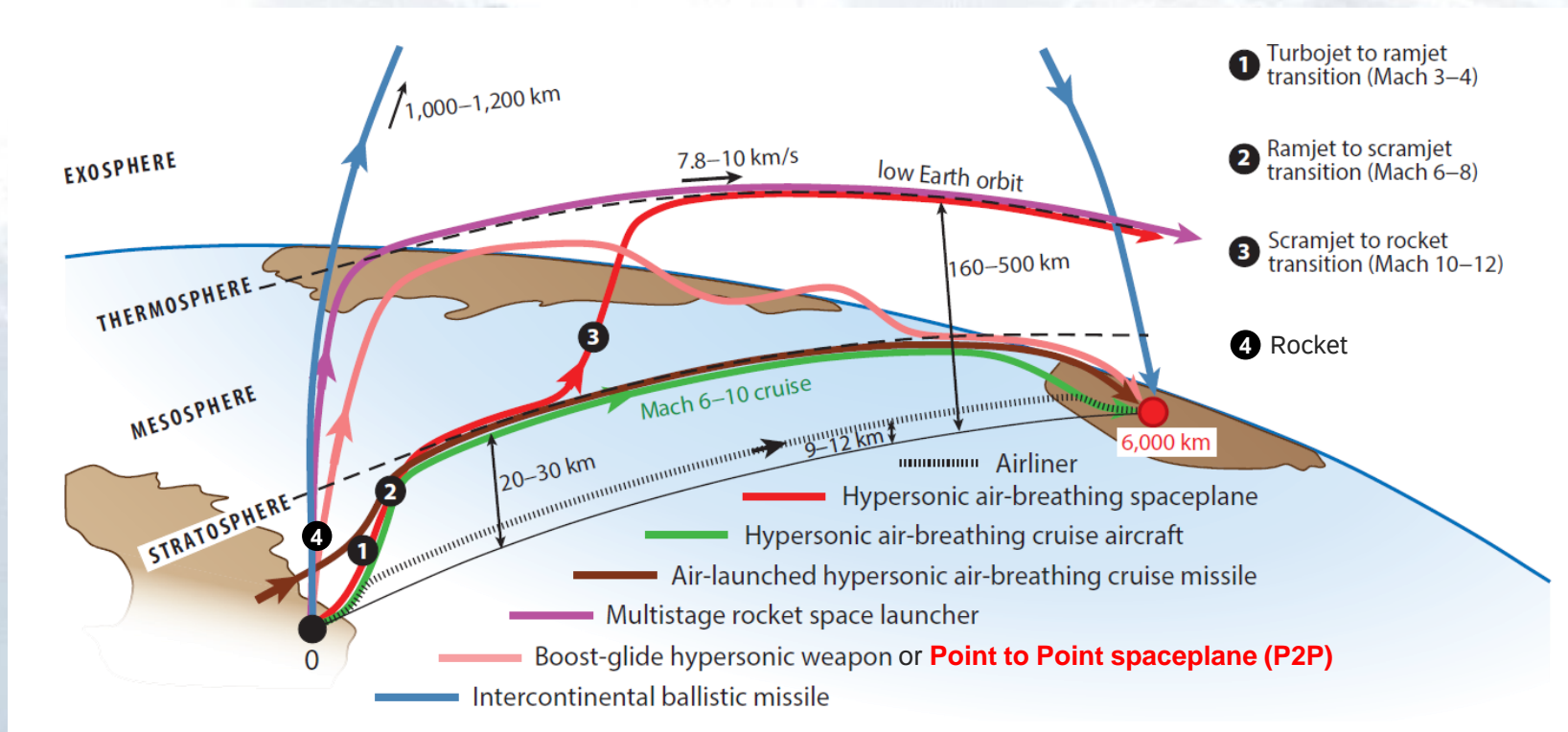


Investment and costs



No Supersonic Boom

SPACE BUSINESS JET TRAJECTORIES AMONG OTHERS



NEEDS: INTERNATIONAL REGULATION FRAMEWORK

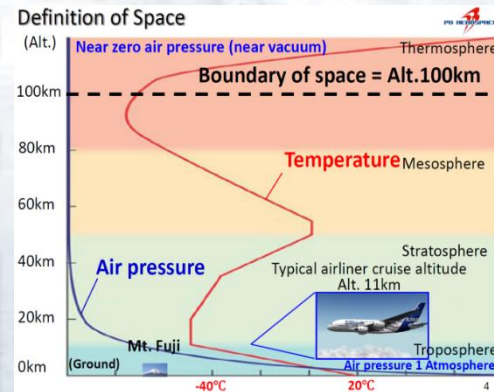
No regulation for this kind of aircraft (at the moment)

Need for extension of airworthiness regulations to a new domain

Cooperation with air traffic:

- For ascent phase: activation of a restricted zone with a high vertical extension
- Cruise: high above FL600. What about procedures and communications?
- Deceleration phase: possible communications difficulties in the “hot phase”, limited capacity for maneuvering and use of alternate airfields
- For approach & landing: routes in classical ATM, but with limited maneuvering capabilities (subsonic propulsion?)

Safety: similar to light aviation (10^{-5} to 10^{-6})



Regulation framework is on critical path, from architectural concept up to certification process

PRELIMINARY USE CASE



When? Expected Entry in Service: 2035, but development flights from 2027

Where? Worldwide

How many ?

#Vehicles operations per year			
Time Demand	< 2025	2025-2035 (Development phase)	> 2035
Low	0		
Medium	0	Increasing up to 10	Tens to Hundreds
High	0		

Type of traffic as for current business aviation

For what will they be used? High speed long-range transportation