



European Higher Airspace Operations Symposium

The Italian Approach to Commercial Suborbital Transportation

Bruxelles, 2 April 2019



1.

National Legal Framework



- **USA-IT Gov. framework agreement** for cooperation in the exploration and use of outer space for peaceful purposes – 19 March 2013 (Law 197/2015)
- **FAA-ENAC-ASI Memorandum of Cooperation** in the development of commercial space transportation – 12 March 2014 / 30 July 2016
- **Ministry of Infrastructures and Transport (MIT) Decree** on the sustainable development of the commercial suborbital transportation – 10 July 2017

MIT Decree (July 2017)



Address on the sustainable development of the commercial suborbital sector

- Access to space to foster **Space Economy**
- **ENAC** to develop regulatory framework by 2020
- **3rd Parties & Occupants Safety** @ **state-of-the-art**
- **Spaceport** selection criteria & procedures

The Task Force

- Led by **ENAC** with the coordination of **MIT**
- **Experts** form **Government & Industry**





2.

Operational Scenarios

Horizontal Take-Off and Landing Suborbital Flight





Air Launch to Space



3.

Italian Spaceport for Europe

MIT Decree (May 2018)

Taranto Grottaglie Airport (TAR)

National Strategic Infrastructure

Airport, Spaceport, UAS Test Bed & Industrial activities





4.

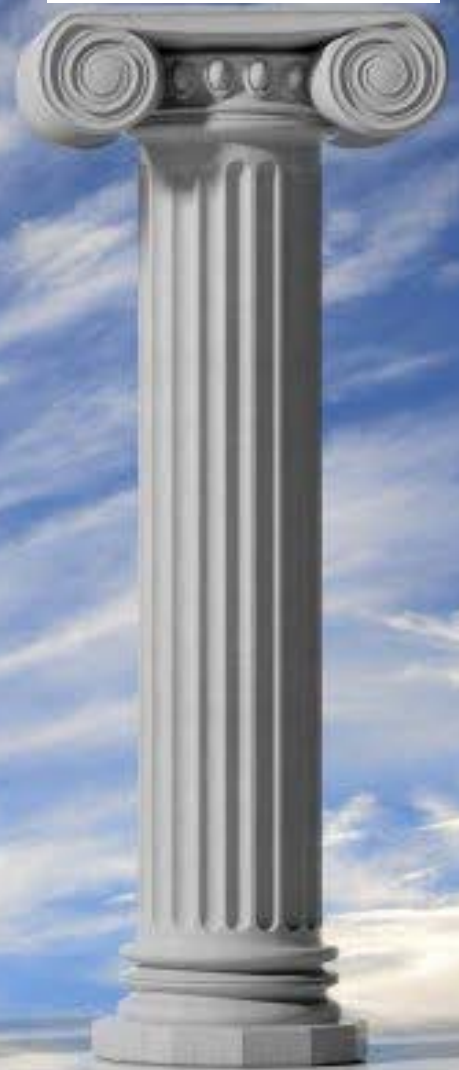
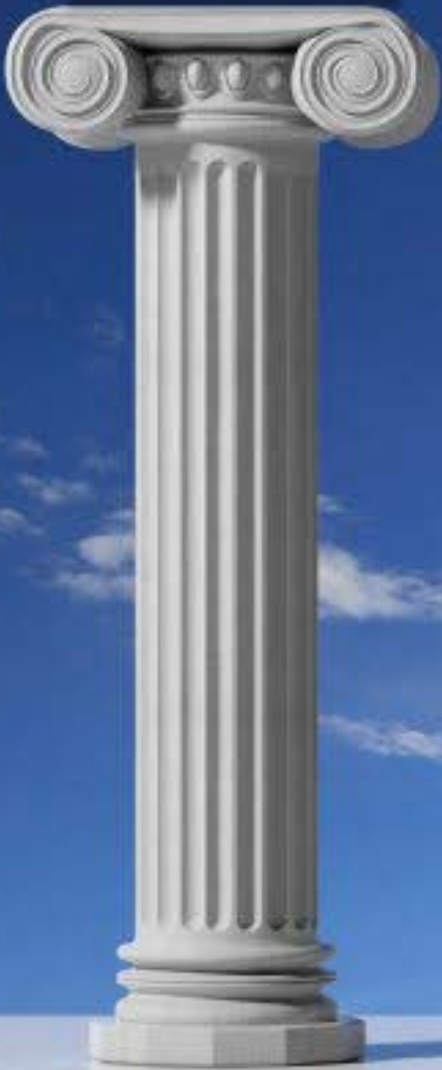
Regulatory Structure

**OPERATION
CENTRIC**

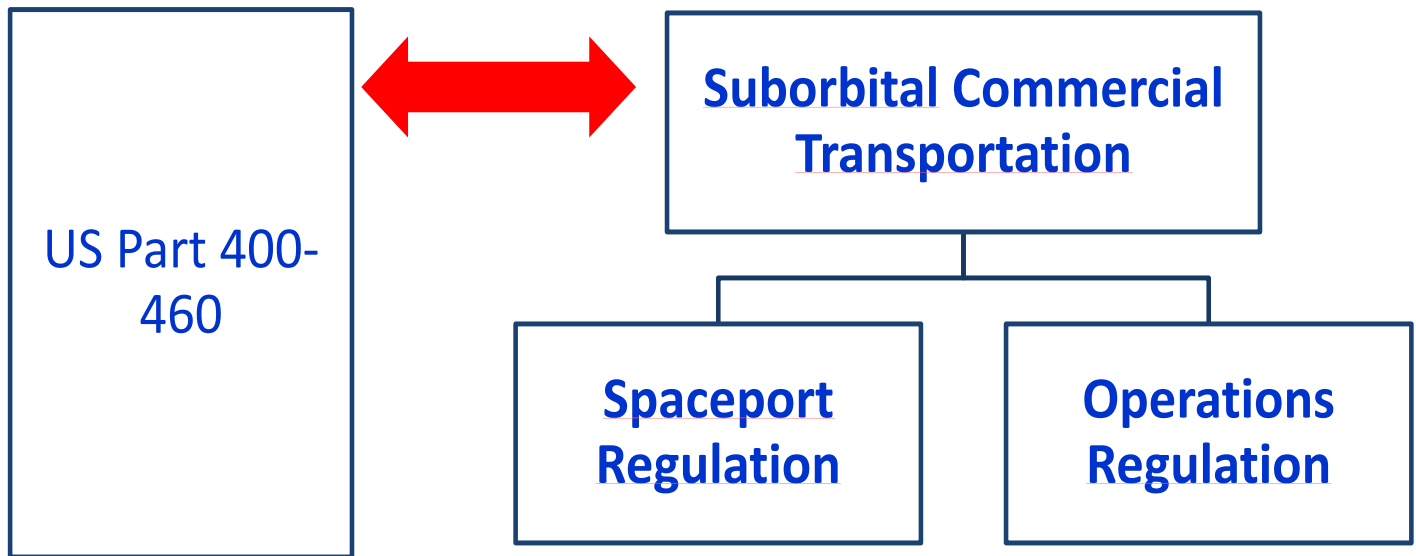
PROPORTIONATE

**RISK
BASED**

**PERFORMANCE
BASED**

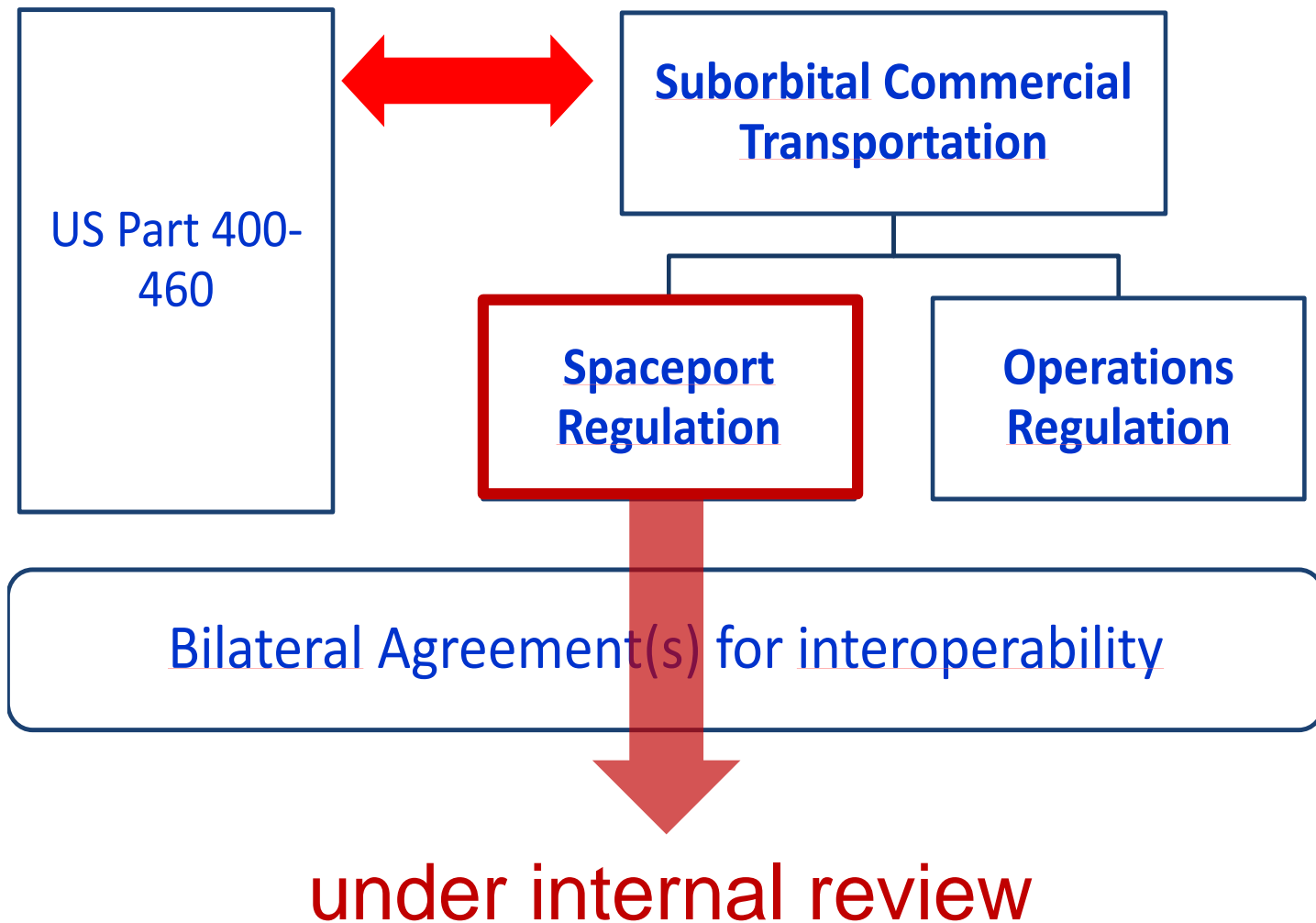


Harmonization



Bilateral Agreement(s) for interoperability

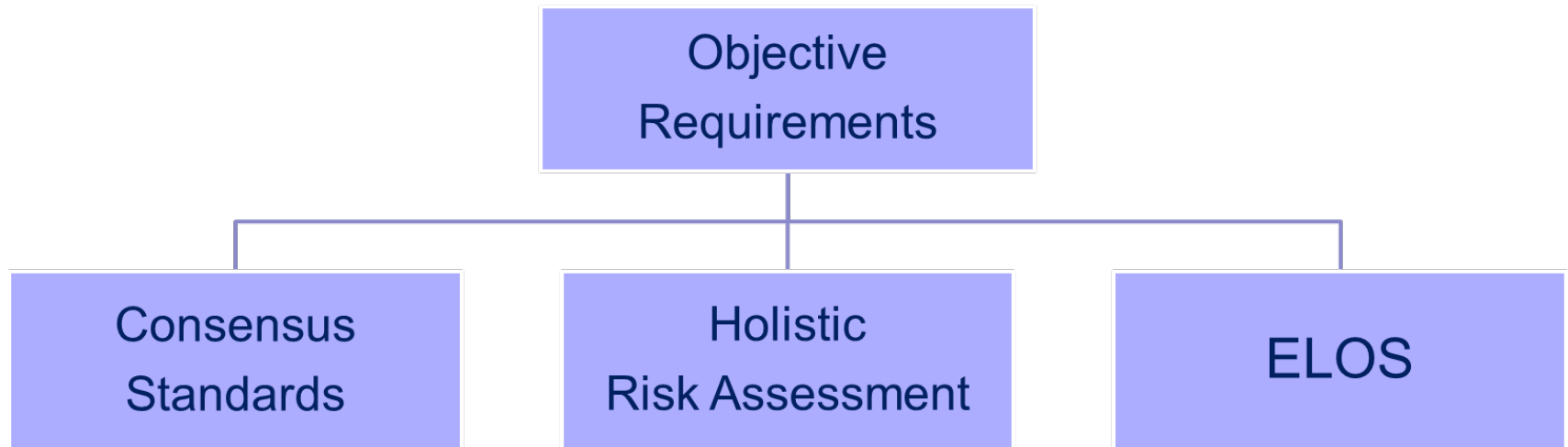
Harmonization





Public Safety by QRA

Occupant Safety by PBR



ATM / STM Considerations



- 
- **Static segregation volumes sized probabilistically (“ 3σ ”) for containment purposes < FL 650**
 - **Possible Contingency Procedures** to clear (residual) AHA outside the segregated volume, by
 - Non cooperative Tracking & Surveillance and/or
 - Real time simulation capability for debris evolution (e.g. FAA SDI) based of telemetry input

would allow for

- Reducing static segregated volumes, and/or
- Dynamic Segregation (FUA)
- Future Integration/Accomodation within Airspace



**Who will provide in the future
Tracking & Surveillance Services
above FL 650 ?**

**Under which regulatory
framework?**

LEGAL ISSUES

(under examination)

What legal frame should be considered as the most suitable to this specific activities, Aviation Law or Space Law?

What kind of insurance for third parties damages and what level of coverage should be provided?

Should the Operator of space commercial operations hold a License from the State of Operations?



**Thank you for your
attention!**

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