

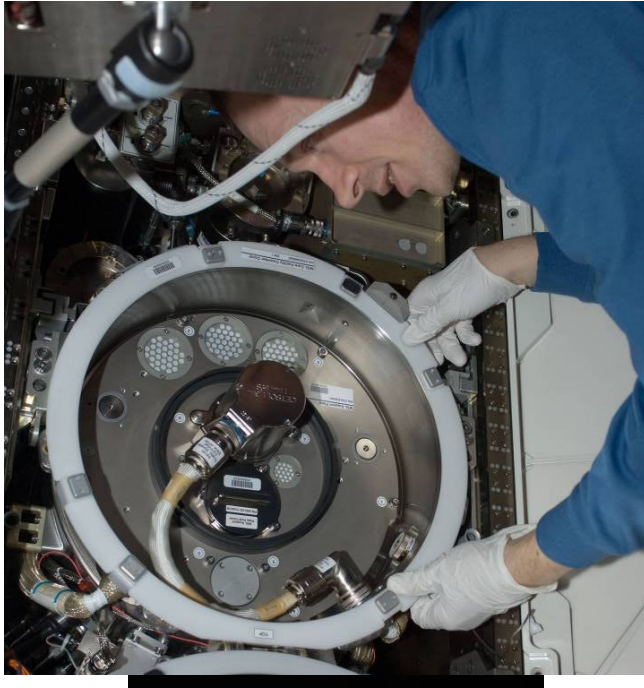


ASTRIUM
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Space Policy – Where Are We Now?

4th Wernher Von Braun Memorial Symposium
Launching the Future in Space Exploration



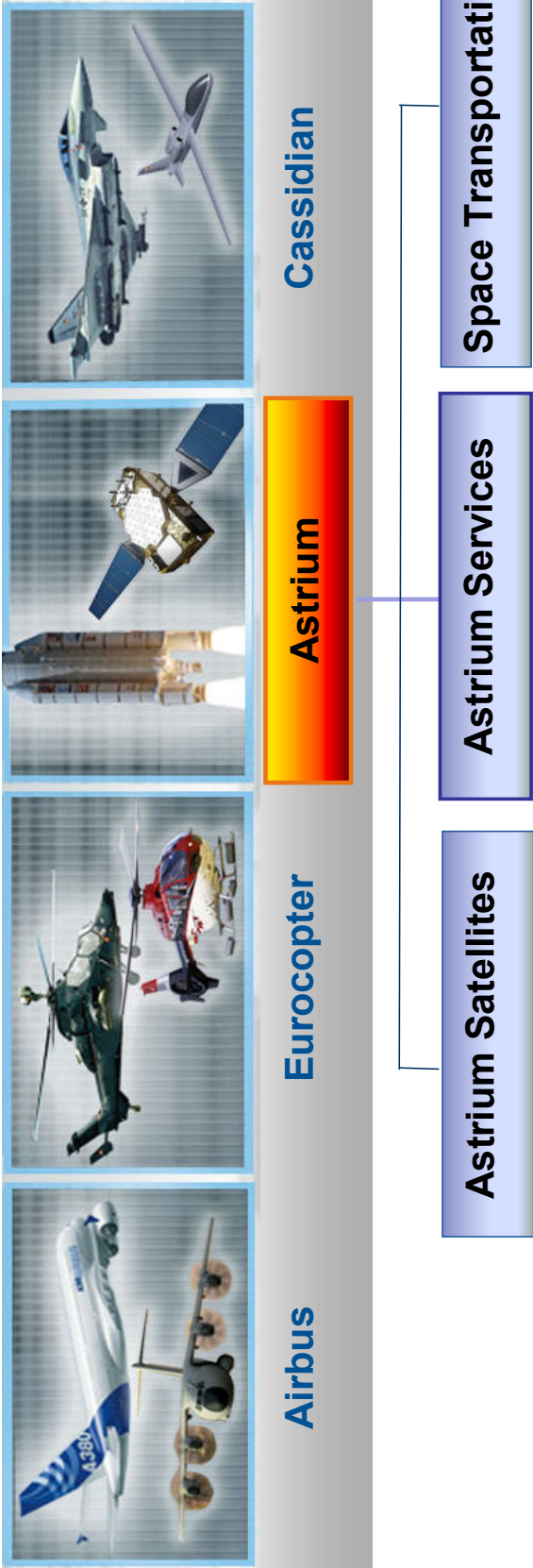
John Schumacher
Vice President for Space
EADS North America

10.26.2011



EADS in North America

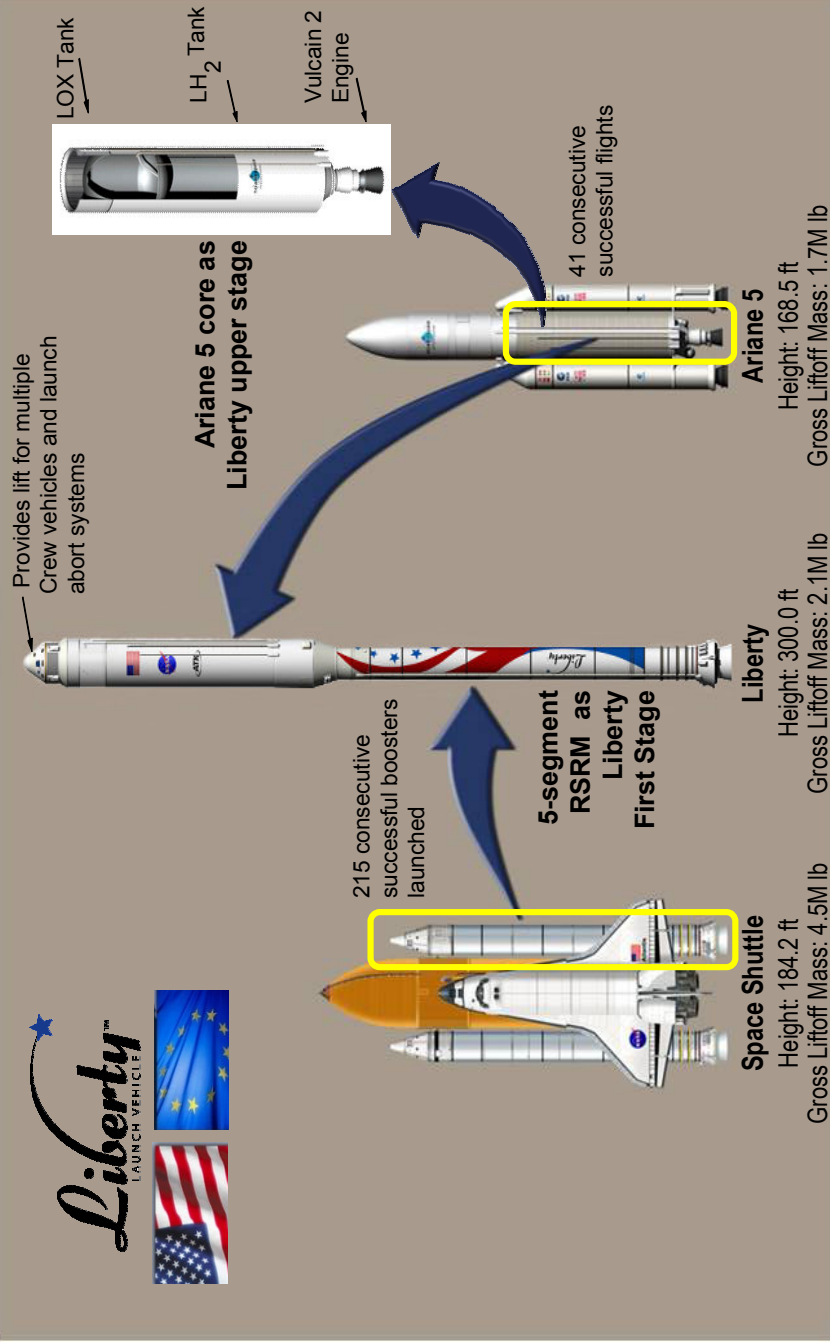
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Attributes for a Successful Space Policy

- **Compelling Vision**
- **Long-term Planning**
- **Solid Execution**
- **Sustainable**
- **Affordable**
- **Fosters Innovation**
- **Encourages International Cooperation**
- **Encourages Industry Cooperation and Competition**
- **Synergistic**

The Liberty Launch System



Airbus and Astrium are developing the Liberty™ launch system as part of a new international commercial space transportation business. Liberty's availability can be accelerated by CCDev2 Program funding

Flight-proven, human-rated hardware – better than 1/1,000 ascent PLOC

44,500 pounds into low earth orbit (ISS)

Most survivable abort trajectory

The potential for first test flight in 2013

Initial crew operational capability (IOC) in 2015

Cargo capability by 2016

Highly competitive unit cost

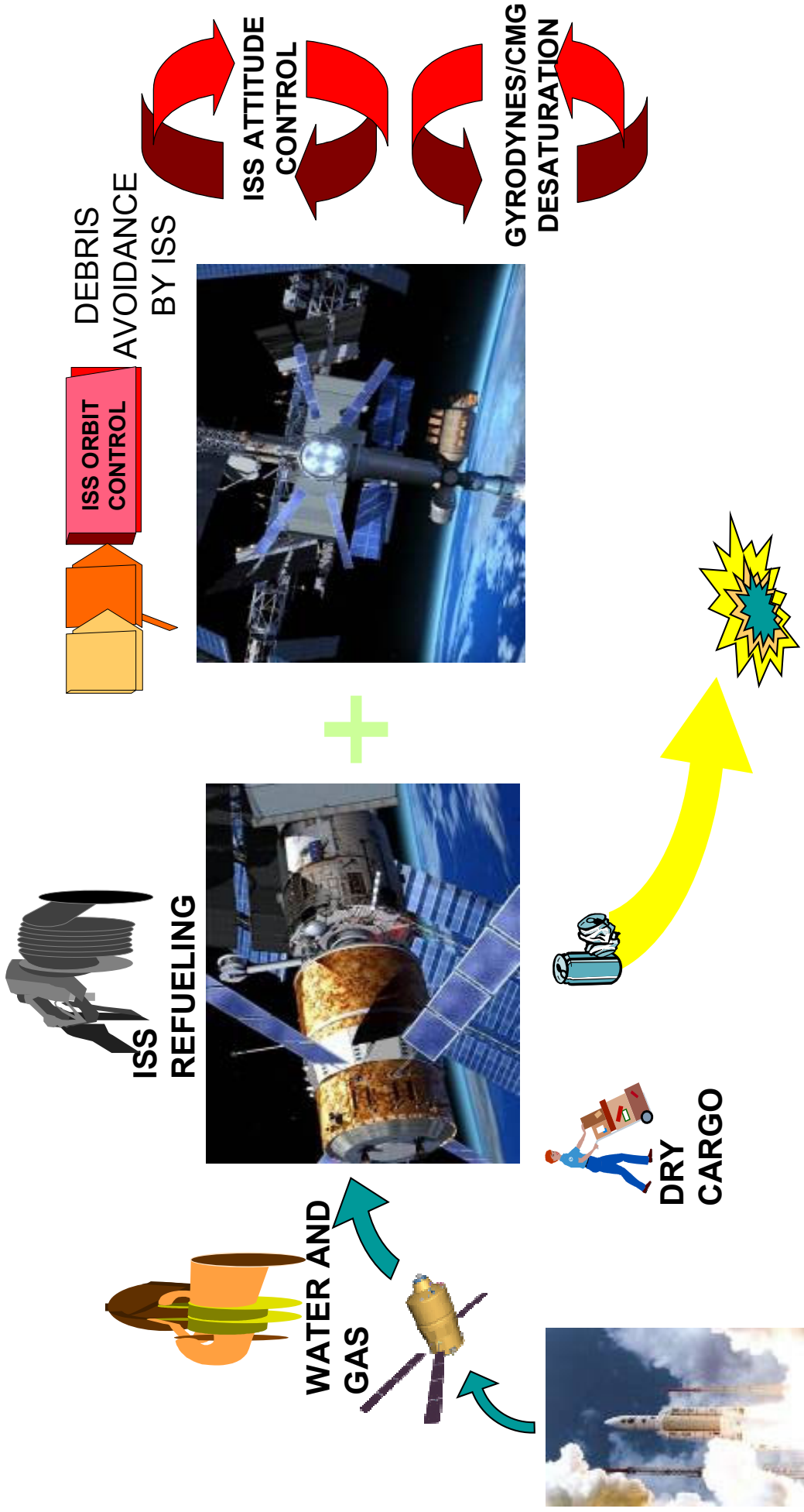


KSC Infrastructure Compatibility

- The Liberty Vehicle Offers:**
- Safest, most reliable launch vehicle
 - Heritage design and experience
 - Existing stages – minimal remaining development
 - Designed for human rating (Shuttle and Hermes programs)
 - Absolute minimum “moving parts”
 - International cooperation – advances U.S. national space policy
 - Commercial approach to acquisition – Lowest cost to government, advances U.S. national space policy
 - Maximum leverage of existing NASA and ESA investments – multi \$B from Shuttle, Ariane 5, and Constellation
 - Maximum utilization of existing NASA KSC & MSFC assets and infrastructure
 - Strong business case – best value for our space program, low remaining development cost jumpstarts the business
 - Synergistic with NASA’s Heavy Lift planned investments – both programs benefit by using common infrastructure



ATV: Not Just a Logistics Vehicle



Many possible uses for Exploration...