



World Space-Biz

2nd International Conference on Space Business

Access to Space

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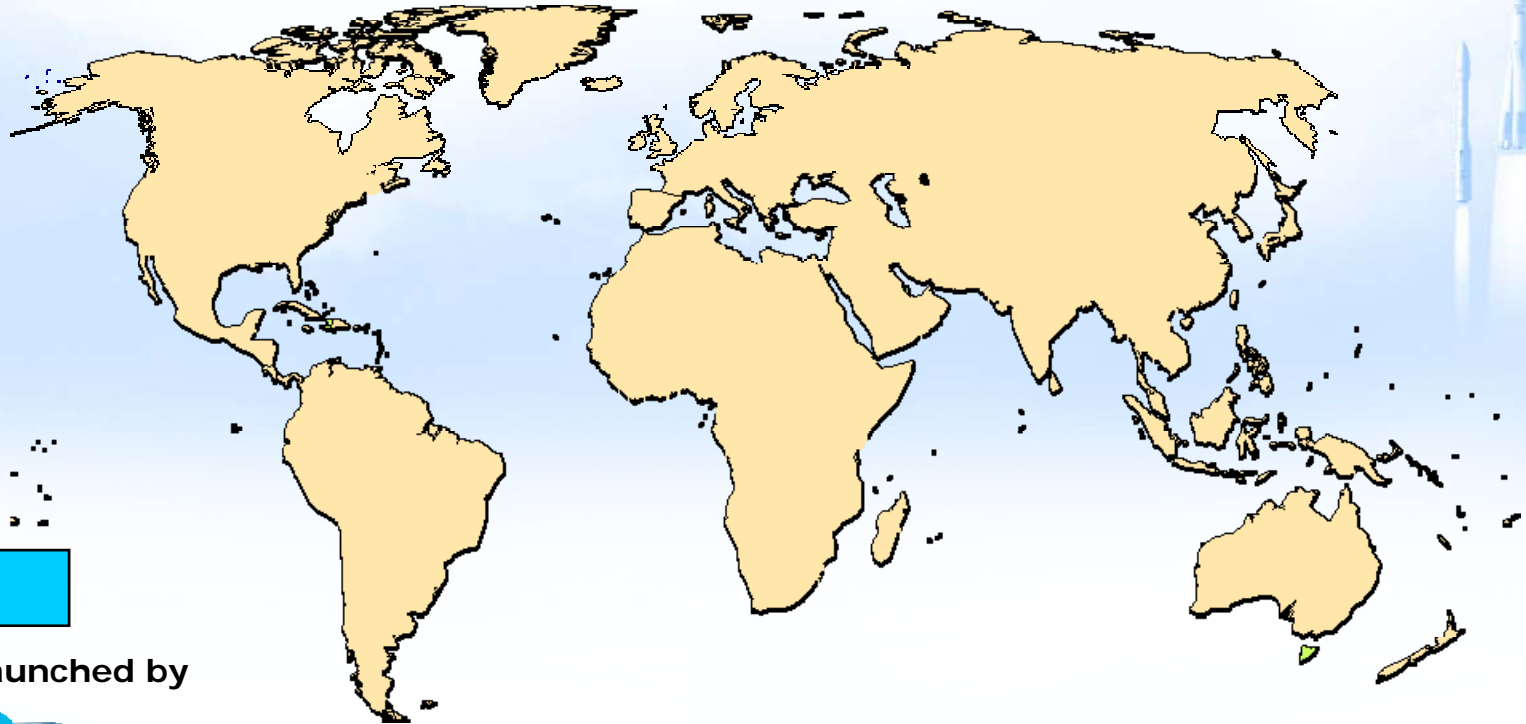


Arianespace in Daily Life

- **Since 1980, Arianespace has placed space at the center of daily life:**
 - **Space for Science: understanding the Universe**
 - **Space for Earth: monitoring the environment**
 - **Space for Security: delivering information**
 - **Space for Communications: connecting the world**
- **In this new global, digital, interactive and mobile world, Arianespace is launching the most advanced satellites for:**
 - **High Definition Direct Television**
 - **Broadband Connectivity (Internet)**
 - **Mobile Communications**
- **Serving 77 customers, Arianespace has already launched 283 payloads representing more than 50% of operational commercial satellites**



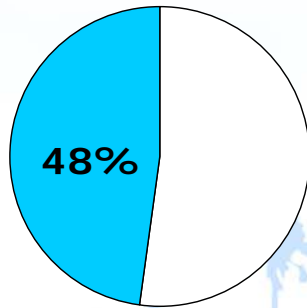
World Reference



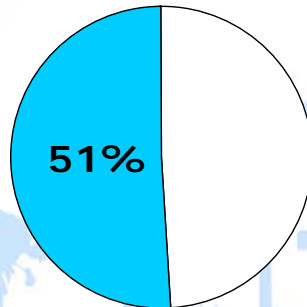
Satellites launched by



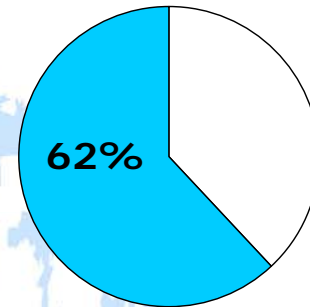
Americas



EMEA



Asia-Pacific



Guaranteed Access to Space



- **Arianespace is an European company:**
 - 24 shareholders
 - 10 European countries
 - Arrangement with the European Space Agency
- **Launches are performed from the Guiana Space Center (CSG) in French Guiana**
- **Three launchers are operated by Arianespace:**
 - The heavy-lift Ariane 5 (fully operational at CSG)
 - The mid-size Soyuz (fully operational at Baikonur, operational at CSG in the coming months)
 - The light Vega (operational at CSG from 2011)

Service & Solutions

- From contract signature to in orbit delivery, Arianespace is committed to:
 - Providing financing, insurance and schedule assurance
 - Procuring launchers from industrial manufacturers and monitor their quality
 - Performing the mission:
 - Mission analyses and interface validation
 - Satellite, launcher and combined operations
 - Launch facilities and launch operations
- With orders from 27 customers worldwide, Arianespace has the largest order book in the industry:
 - 32 GTO satellites to launch with Ariane 5
 - 6 Ariane 5 – ATV launches
 - 17 Soyuz specific launches



Ariane 5

- **The most reliable heavy-lift launcher:**
 - 52 launches overall
 - 38 successes in a row
- **Ariane 5 ECA: the best solution to launch satellites in GTO (9.1 → 9.4 tons in dual launch)**
- **Ariane 5 ES: the perfect launcher to deploy complex systems in LEO (20.0 tons to the ISS)**
- **Unmatched launch tempo:**
 - Up to 7 launches per year: 14 launch opportunities
 - 39 launchers currently in production
 - 2 launch tables: surge capability and reactivity
 - 7 Ariane 5 (12 payloads) launched in 2009



Soyuz

- **The Soyuz at CSG launch pad is now being completed by the European Space Agency, Arianespace, CNES and their Russian partners**
- **Soyuz at CSG will launch:**
 - **Telecommunications satellites in GTO (3.2 tons)**
 - **Earth observation satellites in LEO (5.0 tons)**
 - **Constellation satellites in LEO or MEO**
 - **Scientific satellites in specific orbits**
- **Soyuz at CSG will inaugurate commercial service in the coming months**



Vega

- **Vega is a new launch system being developed by the European Space Agency**
- **Vega is a light launcher adapted to LEO (1.5 ton) for:**
 - **Scientific missions**
 - **Earth observation satellites**
- **The Vega launch pad at CSG is currently under construction**
- **Vega will inaugurate commercial service in 2011**



Ready for any Requirement

- **Arianespace can launch the heaviest payloads:**
 - The operators demand is triggered by replacement with expansion needs
 - The capacity to launch any mass is the answer
- **Arianespace can also launch smaller programs:**
 - The perfect solution to address replacement needs and new markets
 - This option is particularly optimized for quick program delivery
- **Combined operations of Ariane 5 and Soyuz at CSG allow a flawless dual launch system**

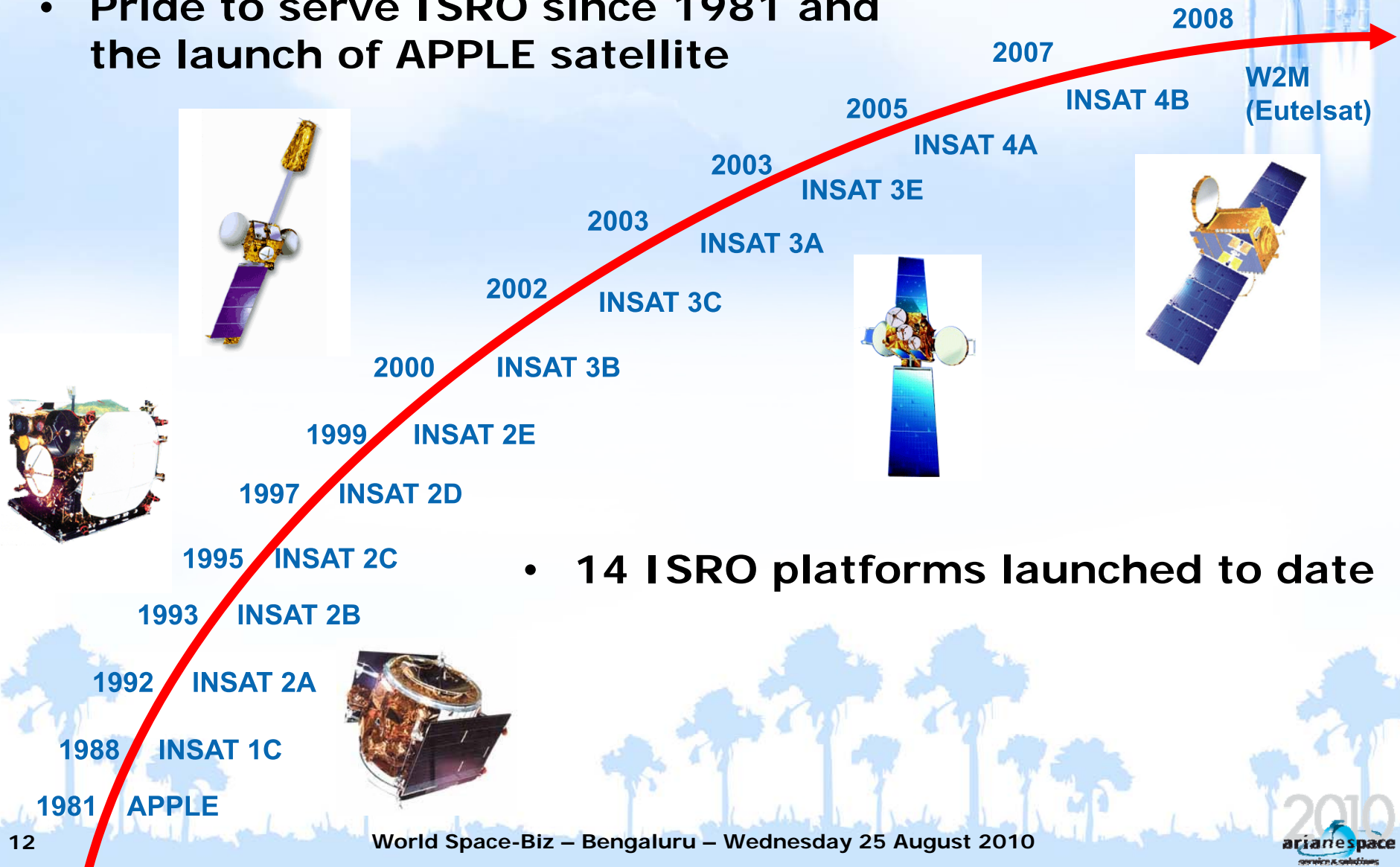
Arianespace 2010

- **In 2010, Arianespace is continuing its development:**
 - Success proven organization
 - Qualified and stabilized launchers configuration
- **Impressive launch tempo:**
 - 6 launches of Ariane 5 are planned, already 3 launches are successful:
 - 21 May: Astra 3B – COMSATBw2
 - 26 June: Arabsat 5A – COMS
 - 04 August: NILESAT 201 – RASCOM-QAF 1R
 - Introduction of Soyuz at CSG and Vega
- **Strengthening of the order book:**
 - 9 new launch contracts for GTO satellites
 - 5 new contracts for dedicated Soyuz launches

Arianespace and India

The Past

- Pride to serve ISRO since 1981 and the launch of APPLE satellite



- 14 ISRO platforms launched to date

Arianespace and India

The Future

- Longstanding and uninterrupted relationship over the last 30 years
- Within the coming years, sustaining the fast growing ISRO activities by launching:
 - HYLAS 1 satellite for Avanti Communications
 - GSAT 8 satellite for ISRO
 - GSAT 10 satellite for ISRO
- Remaining a complementary launch solution for ISRO satellites alongside with Indian GSLV launch vehicle family

2010 arianespace service & solutions

