

Stakeholder's meeting on NASRDA strategic Vision for
Communications Satellite in Nigeria & Africa
Abuja, 08 March 2011

Astrium Communications Satellites

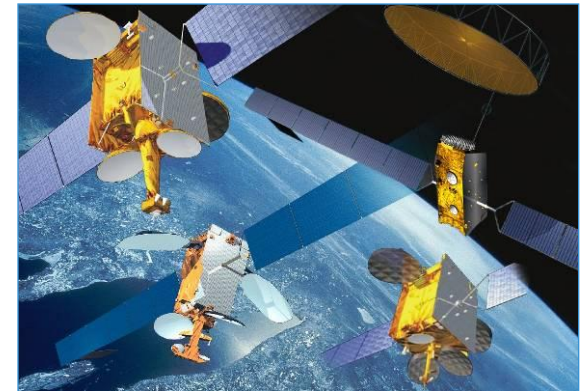


All the space you need



Telecommunications Satellites

- Complete satellite communications system capability
 - Spacecraft and payload design, manufacture, test, launch and operations
 - End-to-end communications system infrastructures
 - Civil and military telecom systems
- A partner of confidence for major operators worldwide
 - 45-year experience in satellite manufacturing
 - Prime for over 90 GEO communications satellites
 - Product range covering all mission needs
 - Efficient industrial organisation
- A market leader
 - Established on challenging commercial market, ca. 25% market share
 - Eurostar E3000 best selling
 - At the forefront of innovation



Serving major operators with leading position on the full range of applications



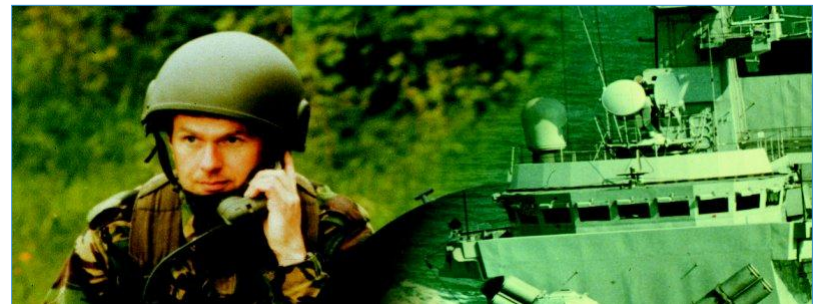
Fixed services and broadcast



Mobile



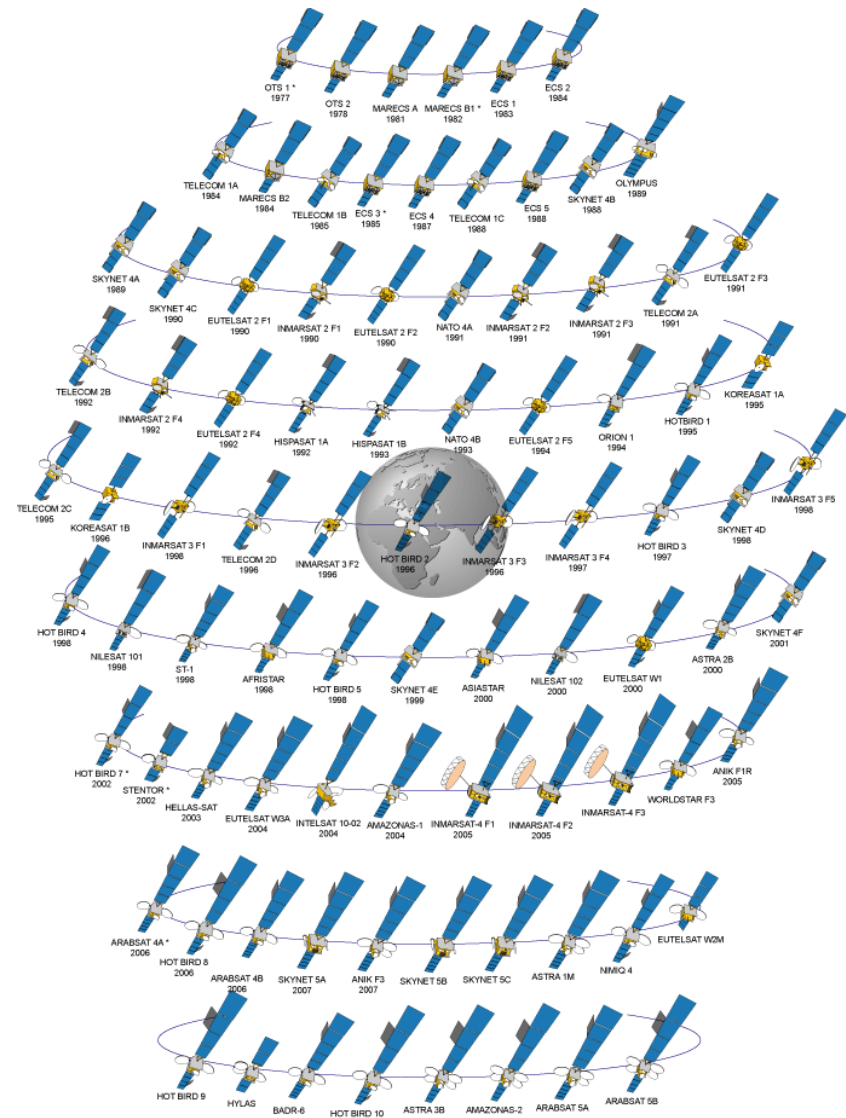
Interactive broadband



Secure communications

Reference customers

- Arabsat
 - Avanti
 - Eutelsat
 - Hellas-Sat
 - Hispasat
 - Inmarsat
 - Intelsat
 - Nilesat
 - Orion
 - RSCC
 - SES
 - SingTel & CHT
 - Telesat
 - Worldspace
 - Yahsat
- Bundeswehr
 - CNES
 - Deutsche Telekom
 - ESA
 - France Telecom
 - NATO
 - Paradigm
 - UK MoD



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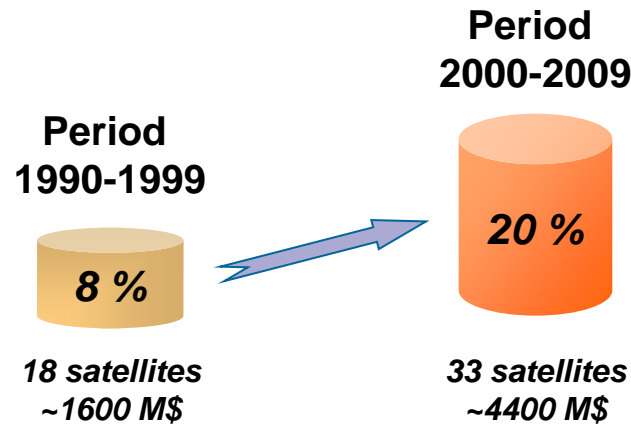
Market shares

- Commercial GEO communications satellite prime

Evolution of Astrium order intake

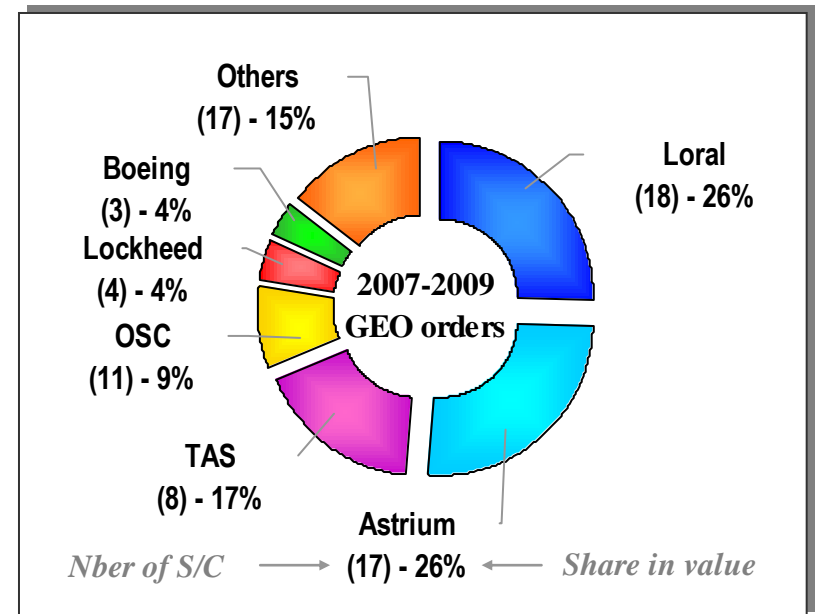
Market share % in value

Significant increase thanks to Eurostar E3000



Worldwide order intake 2007-2009

(number of units) – Market shares % in value



Ground segment for satellite systems

Space segment control



User segment
Civil and military



Infrastructure - Hubs and Gateways

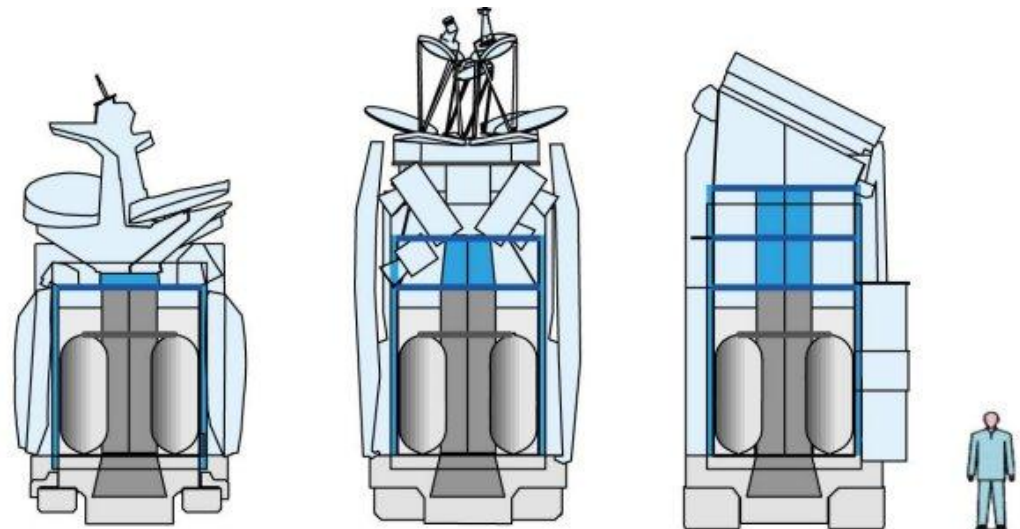
Military communications

- Astrium is a major provider of military space systems: from spacecraft, to payloads and ground networks
 - Complete end-to-end military communications systems
 - from design to in-orbit delivery
 - flexibility, interoperability and survivability
 - Military communications satellites
 - Dedicated payloads
 - Satellite and network control centres
 - Secure tactical terminals



E3000 modularity and scalability

- A large level of modularity with generic elements
 - A Common Service Module design
 - Communications Module with one, two or three floors
- Propulsion
 - Chemical only or Chemical + Electric (Plasma)
 - Several tank capacities
- Power
 - Scalable solar array
 - Scalable Li-Ion batteries



21 Eurostar E3000 satellites in orbit



Eutelsat W3A
15 March 2004



Intelsat 10-02
16 June 2004



Amazonas 1
4 Aug. 2004



Inmarsat-4 F1
11 March 2005



Anik F1R
8 Sept. 2005



Inmarsat-4 F2
8 Nov. 2005



Hot Bird 8
4 Aug. 2006



Skynet 5A
11 March 2007



Anik F3
9 Apr. 2007



Skynet 5B
14 Nov. 2007



Skynet 5C
12 June 2008



Inmarsat-4 F3
18 August 2008



Nimiq 4
19 Sept. 2008



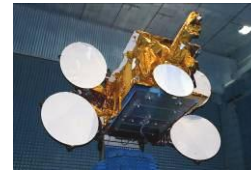
Astra 1M
5 Nov. 2008



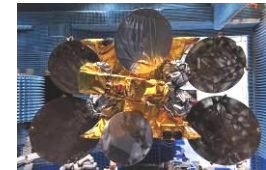
Hot Bird 9
20 Dec. 2008



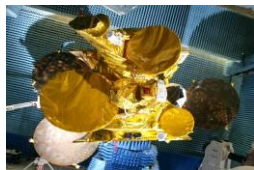
Hot Bird 10
12 Feb. 2009



Amazonas 2
1 Oct. 2009



Astra 3B
21 May 2010



Badr-5
3 June 2010



Arabsat 5A
26 June 2010



Ka-Sat
26 December 2010

E3000 range



W3A

- First E3000, one-floor version
- First Li-Ion batteries in orbit since March 2004



Hot Bird 8/9/10

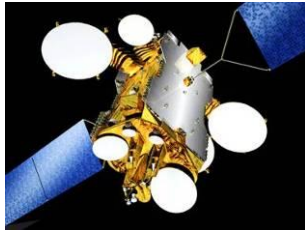
- Two-floor version operating in orbit at a payload power of 12 kW since 2006
- Three satellites in orbit



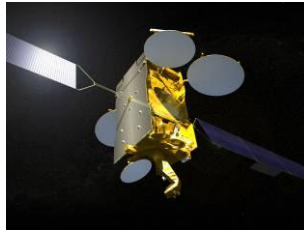
Inmarsat 4

- Most sophisticated geomobile satellites ever built
- Three satellites in orbit
- Broadband Global Area Network

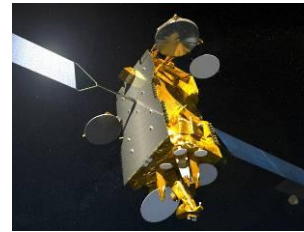
14 Eurostar E3000 satellites under construction



Yahsat 1A



Astra 1N



Yahsat 1B



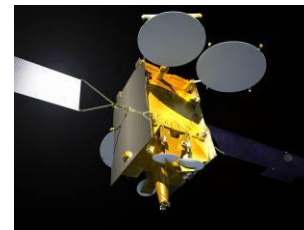
Express AM4



Arabsat 5C



Arabsat 6B



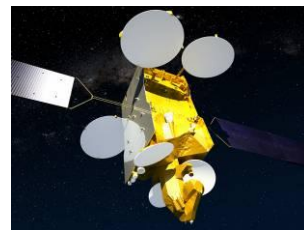
Atlantic Bird 7



Astra 2E / 2F / 2G / 5B



Skynet 5D



SES-6



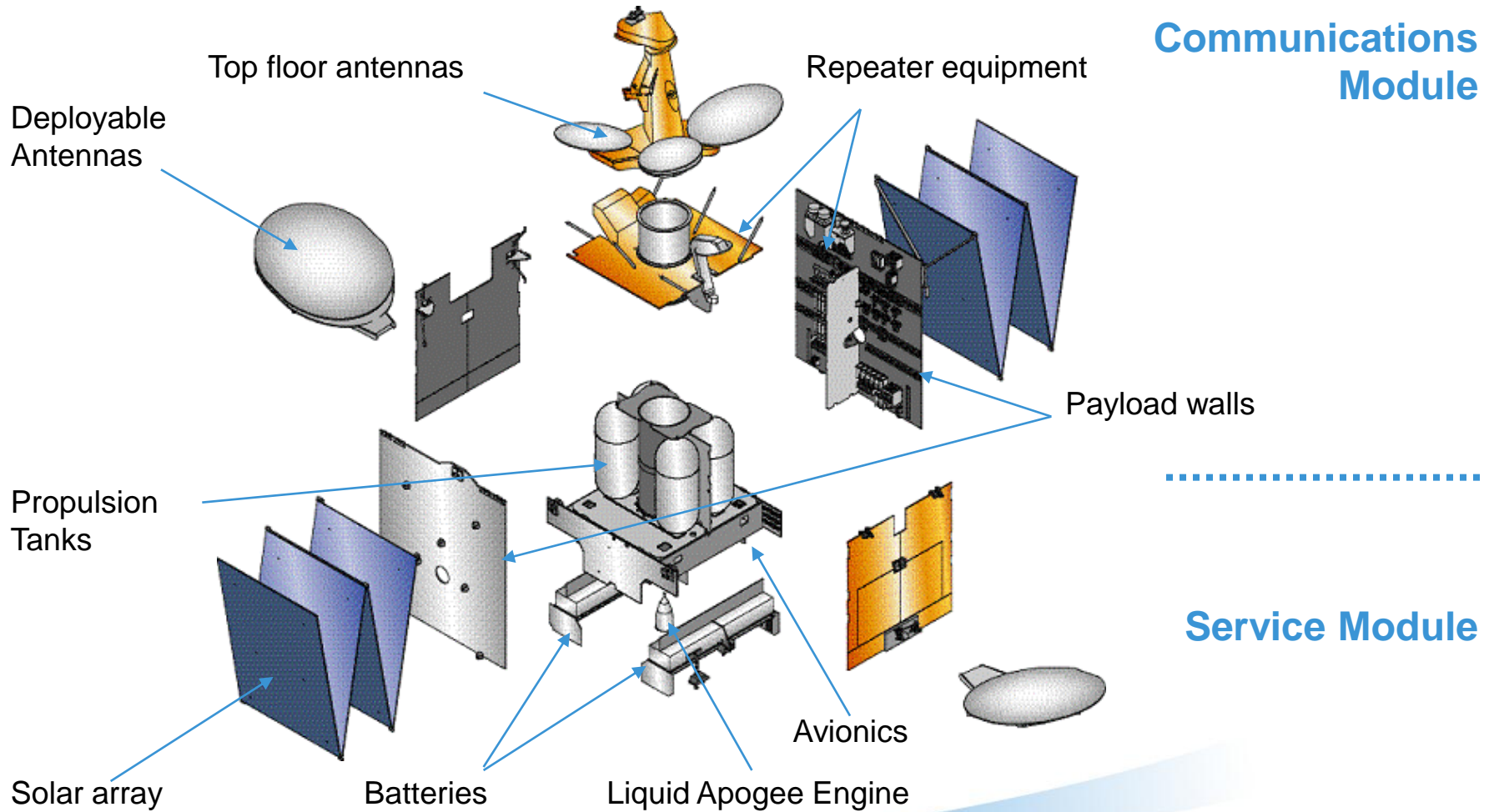
Eutelsat W5A

Eurostar statistics

| Model | E1000 | E2000 | E2000+ | E3000 | Total |
|------------------------------|----------|----------|-----------|-----------|-----------|
| Total ordered | 4 | 9 | 15 | 35 | 63 |
| - In production | 0 | 0 | 0 | 14 | 14 |
| - In storage/ready to launch | 0 | 0 | 1 | 0 | 1 |
| - Delivered | 4 | 9 | 14 | 21 | 48 |
| . Lost at launch | 0 | 0 | 2 | 0 | 2 |
| . In-orbit testing | 0 | 0 | 0 | 1 | 1 |
| . Operational in orbit | 3 | 3 | 12 | 20 | 38 |
| . Retired | 1 | 6 | 0 | 0 | 7 |
| . Lost in orbit | 0 | 0 | 0 | 0 | 0 |

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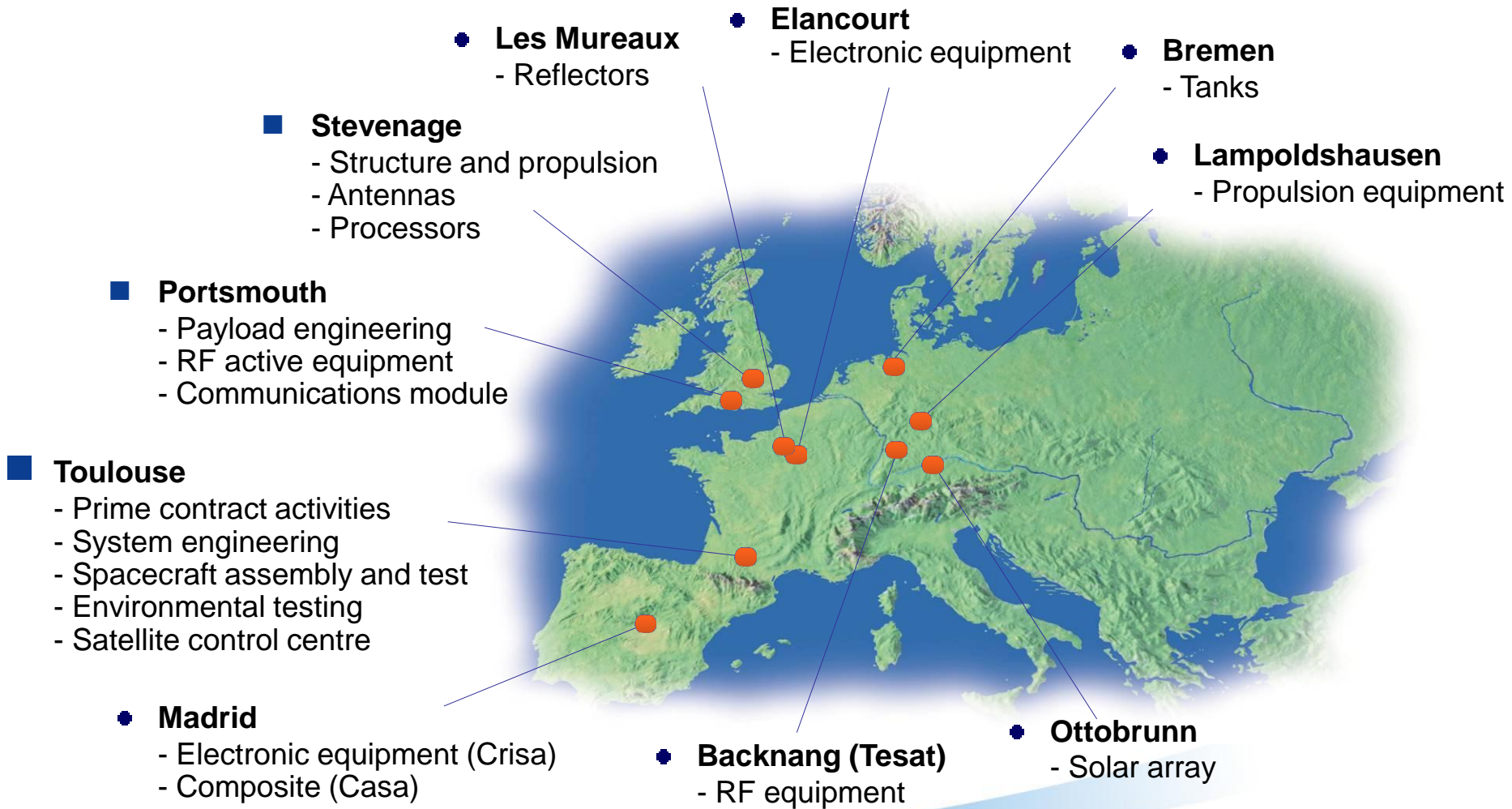
Spacecraft simplified layout



**Communications
Module**

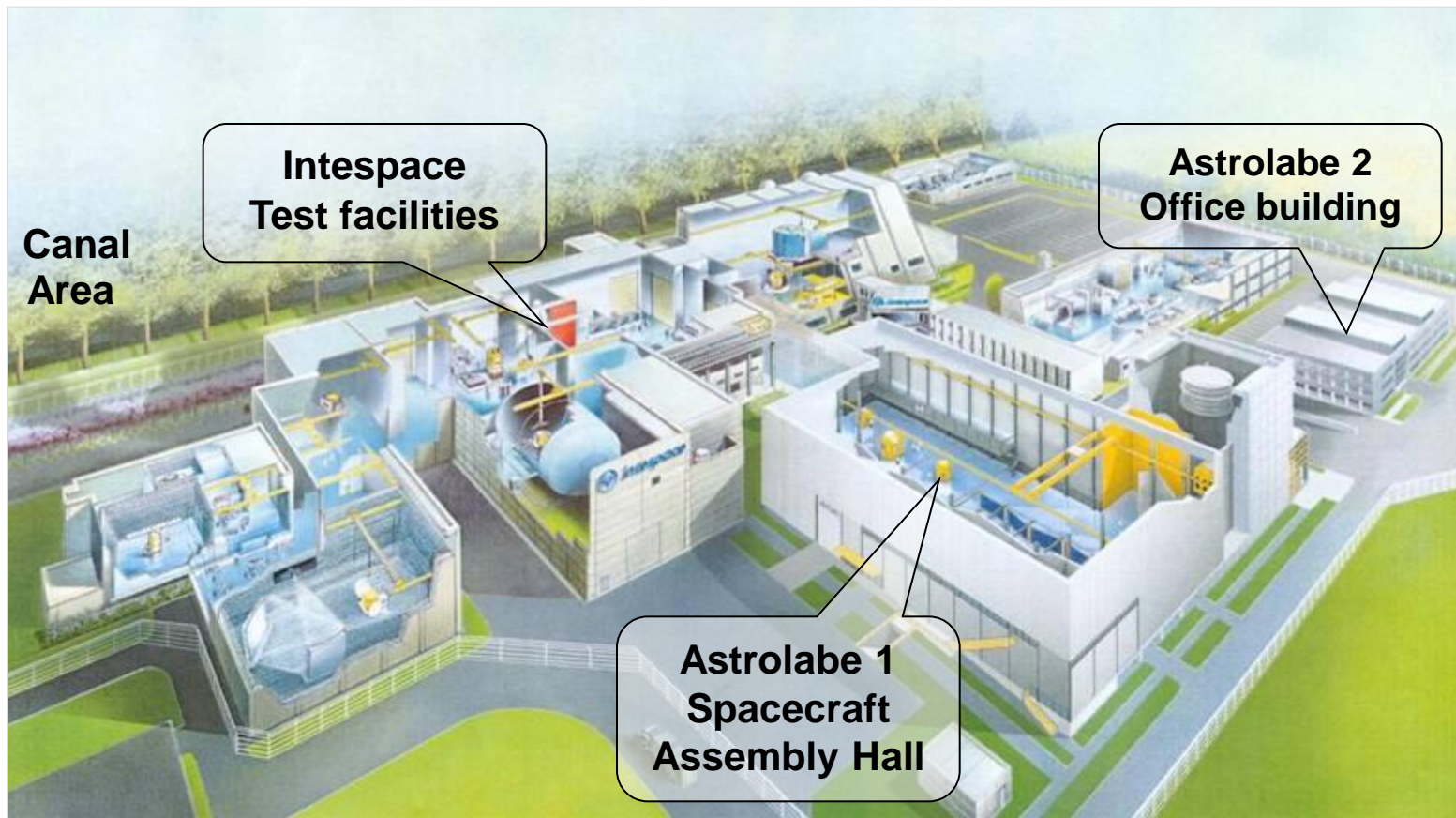
Service Module

Sites supporting telecom satellite operations



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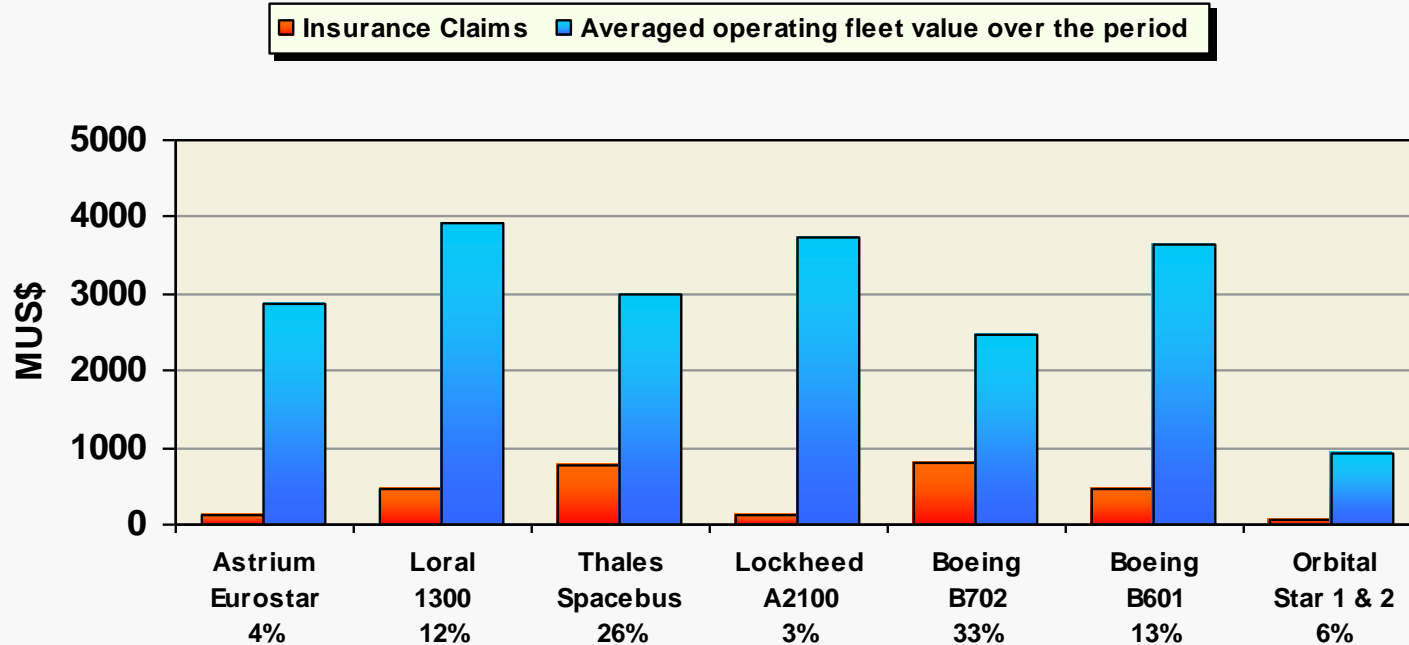
Communications satellites integration and test complex – Astrium Toulouse



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Astrium Eurostar Platform: a most reliable product

**Insurance Claims* vs est. Spacecraft Manufacturing Value
Last 10 years (2001 - 2010)**



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Astrium, a dependable satellite contractor

- Customer focus, listen, learn and apply
- Tailored satellites offering high value to our customers
- Highly skilled, motivated staff
- Sound product base
- Proven quality and reliability achievements
- Innovation and technical excellence
- Transparency and openness
- A long term commitment to our customers

'What we promise, we deliver'

