

Spanish strategy for ESA and EU space programmes

“HISNORSAT: encuentro de la industria espacial Hispano-Noruega”

Jorge Lomba

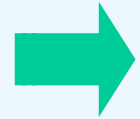
Jefe del Departamento de industria de la ciencia y el espacio

3 de mayo de 2011



Centro para el Desarrollo
Tecnológico Industrial

AGENDA



- Space in Europe
- Space in Spain
- Strategy for the future

SPACE IN EUROPE (1/3)

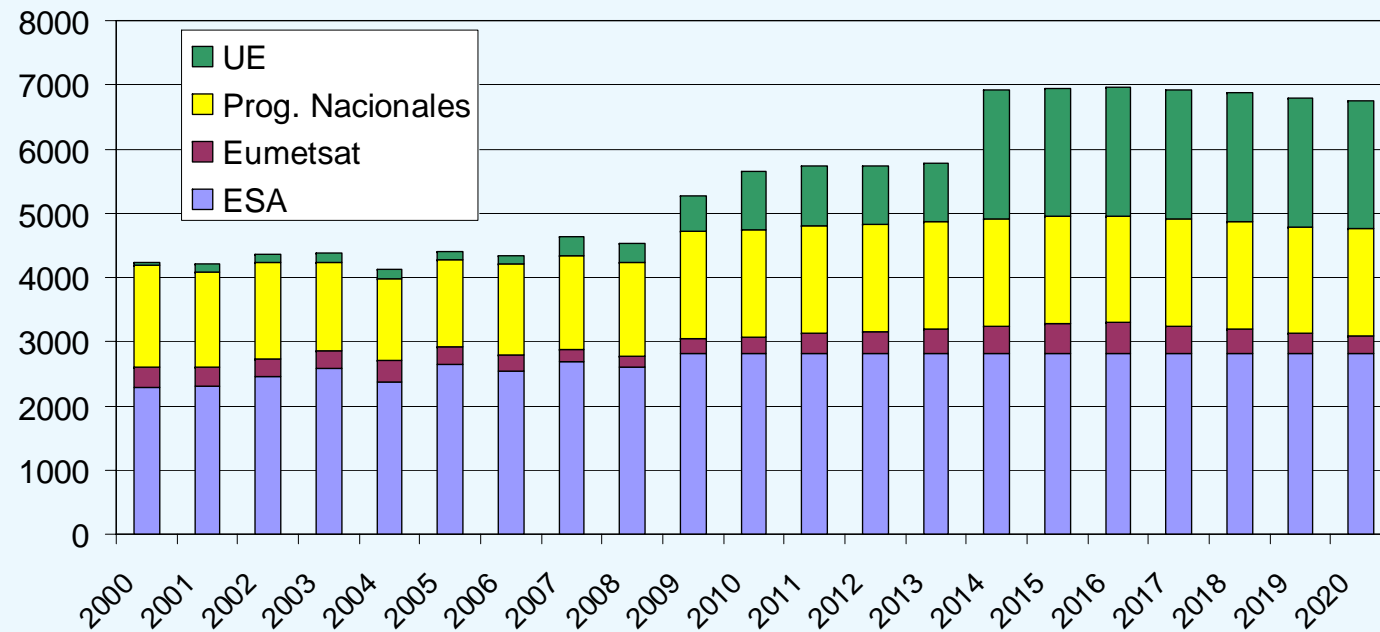
Europe is a global actor in Space
ESA is currently the main public investor

- Turnover: 6bn€ in equipment (satellites and ground segment)
- Public sector is highly relevant accounting for 60% of investments
- ESA is the main public investor:
 - MS contributions account for around 3 bn€
 - Total budget sums up to around 4bn€
- Capacity and demand concentrated in 5 countries: F, D, IT, UK, S.

SPACE IN EUROPE (2/3)

National programmes represent the second main source of investment
EU is progressively increasing its role

INVERSIÓN PÚBLICA EUROPEA EN ESPACIO

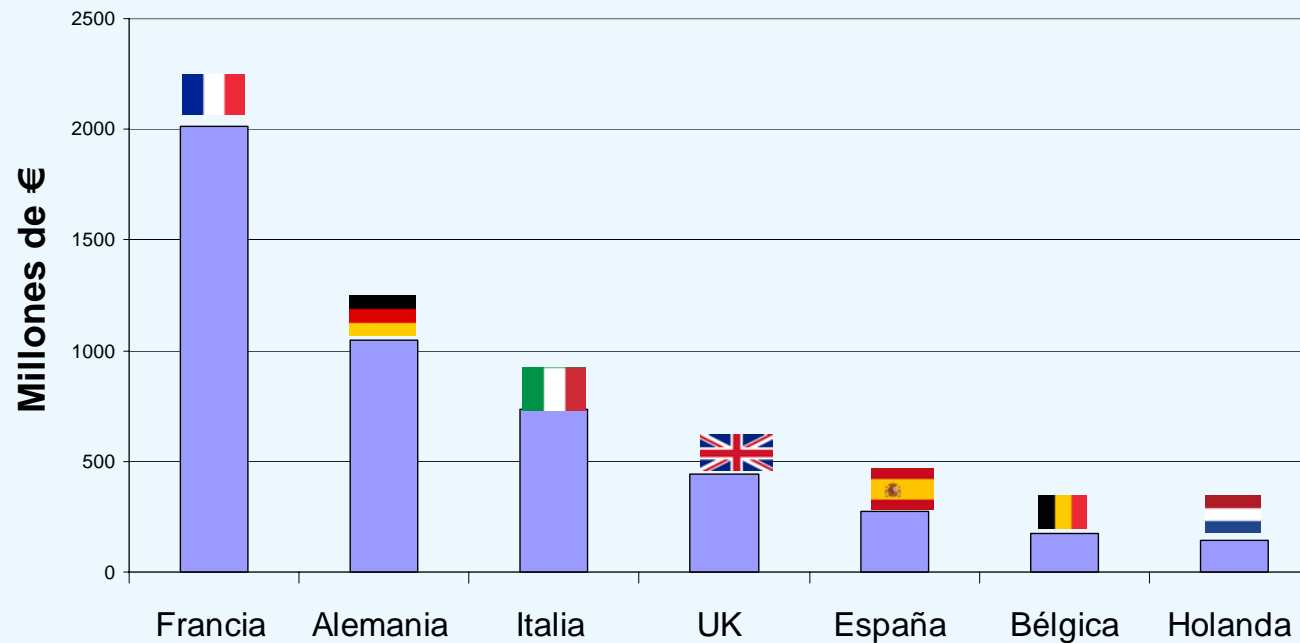


SPACE IN EUROPE (3/3)

Spain is 5th in public investment in Space

Inversión pública europea civil y militar en espacio (2009).

Fuente: Euroconsult



AGENDA

- Space in Europe
-  • Space in Spain
- Strategy for the future

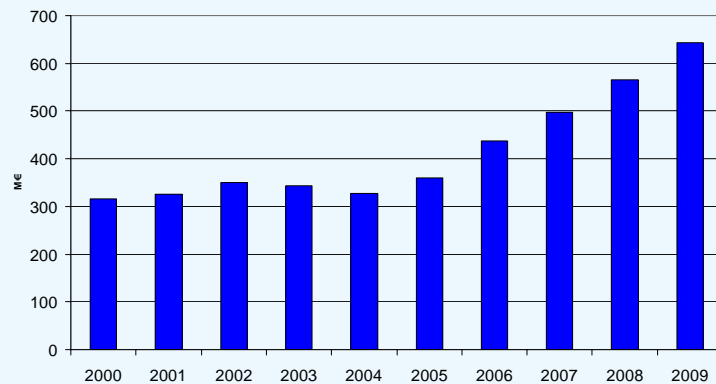
SPACE IN SPAIN

Historic evolution

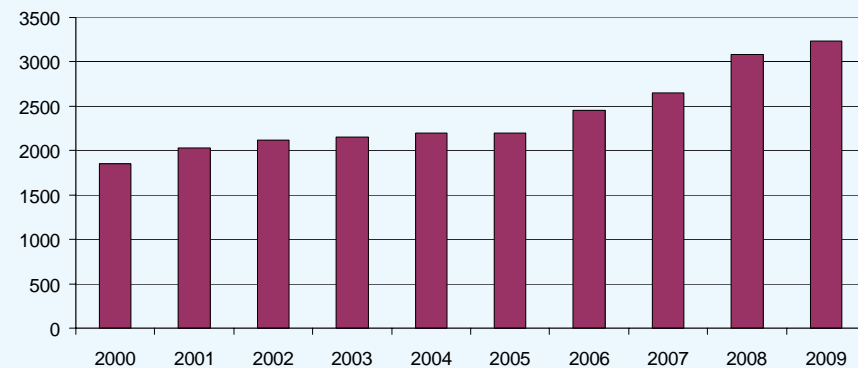
Modest role until 2004: industrial capacities underdeveloped
Annual growth above regional average in 2005 -2011but still beyond relative GNP
Aiming at a position according to relative GNP in 2012-2020.

Until 1986	Very small sector. Reduced scientific community, Total turnover of 120 Mpta (7 M€) in 1986.
1986-2003	Rapid growth and consolidation. Building of a solid industrial and scientific base. Turnover in 2000 > 300 M€
2004-2011	Solid growth. Strategic plan 2007-2011. Launch of a EO National programme: Ingenio and Paz satellites. Turnover in 2009: 644 M€(100% growth in 5 years).

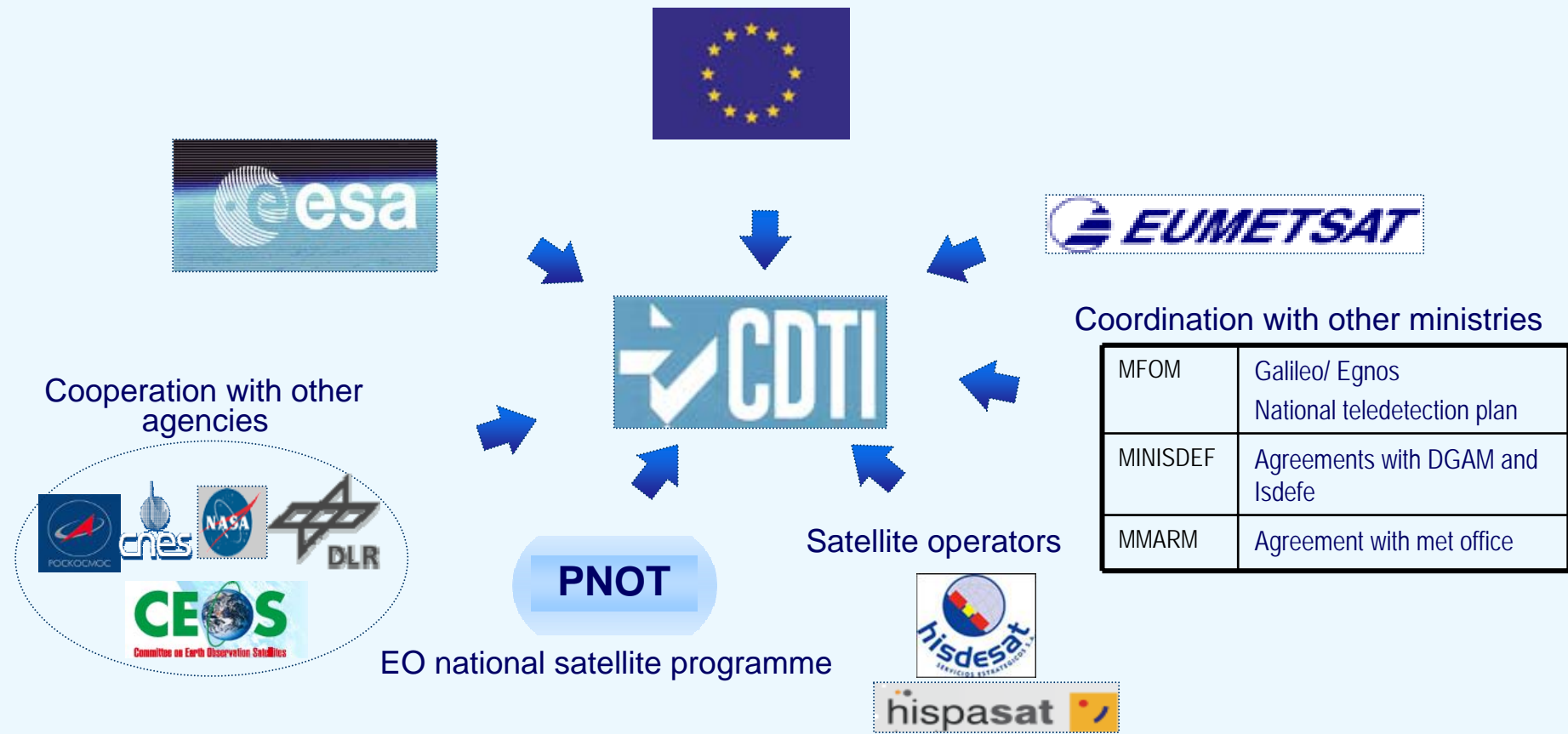
FACTURACION SECTOR ESPACIAL ESPAÑOL



Empleo en el sector espacial



CDTI manages, either directly or in collaboration with other entities, most of Spain's technical, scientific and industrial interests in European and national Space initiatives and programmes



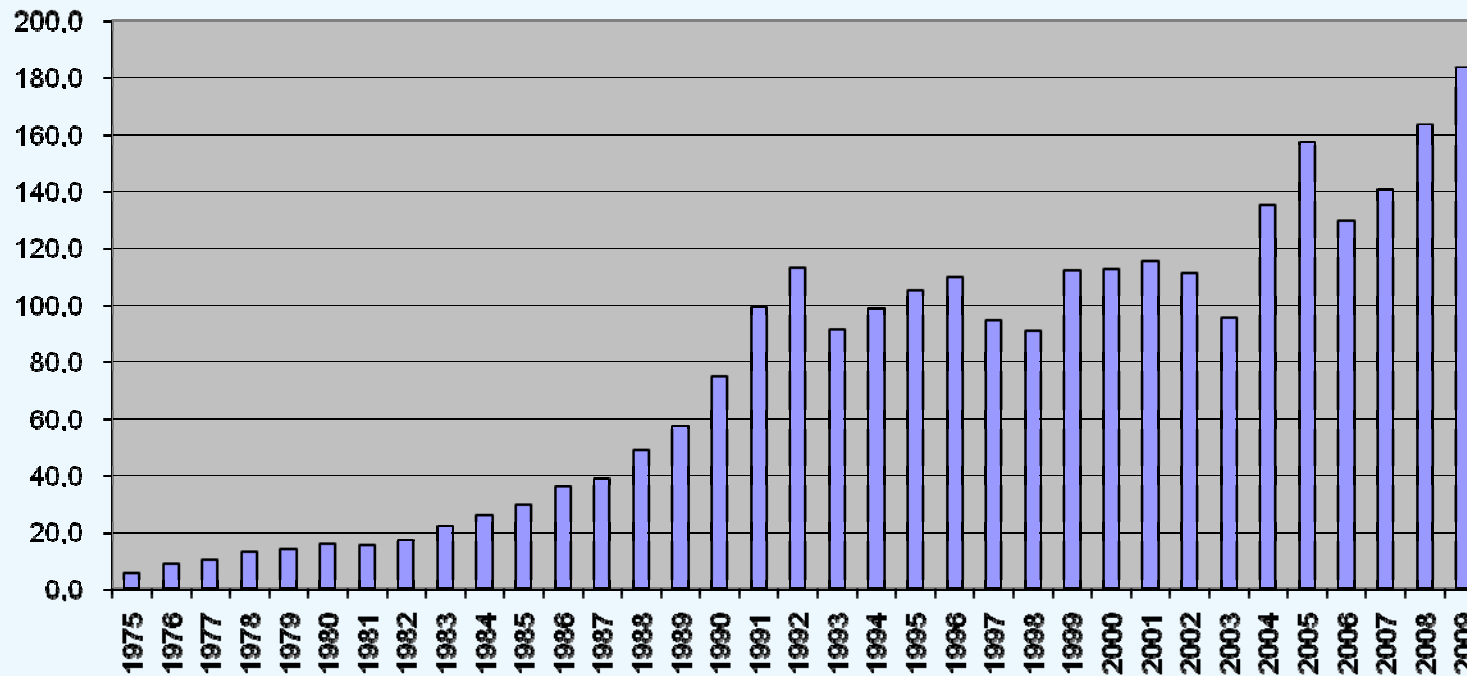
SPACE IN SPAIN

ESA as main area of investment

Spanish contribution to ESA in the last 7 years has raised an average of 60%

Industrial return has been kept over 100 %

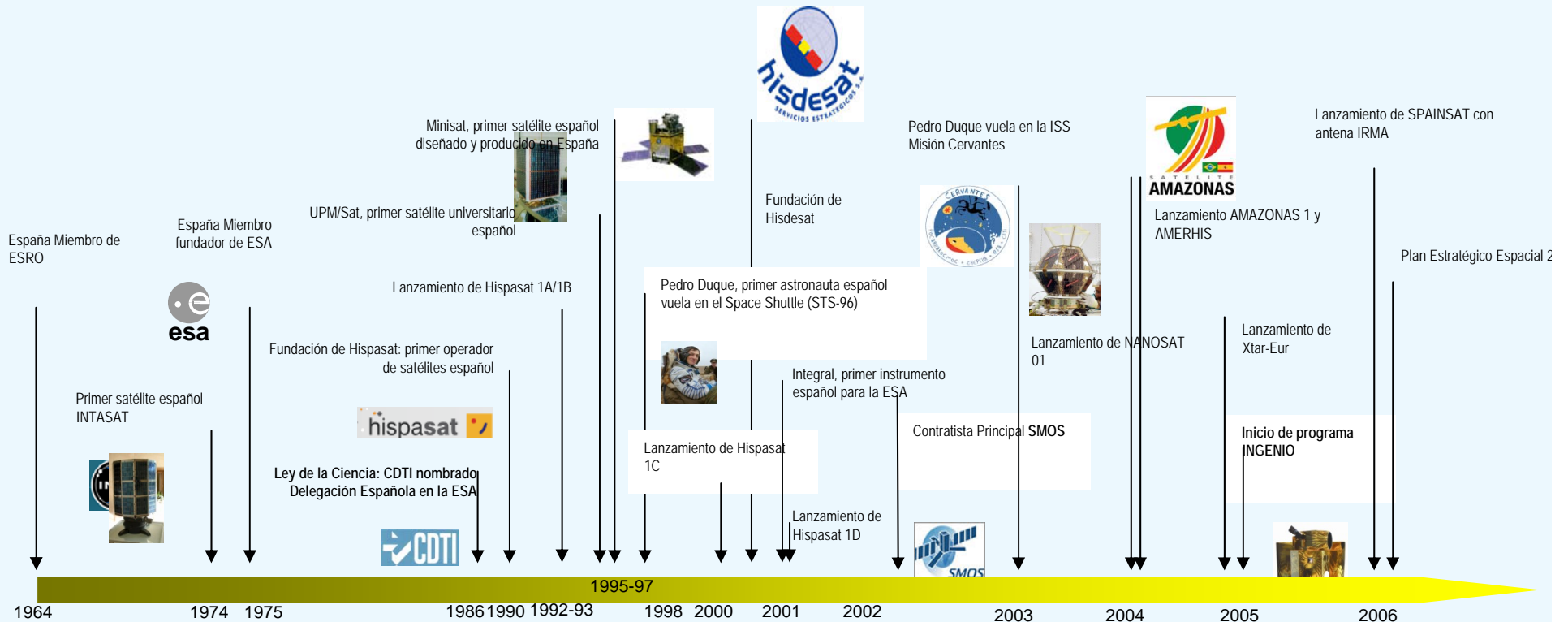
Spanish contribution to ESA programmes



SPACE IN SPAIN

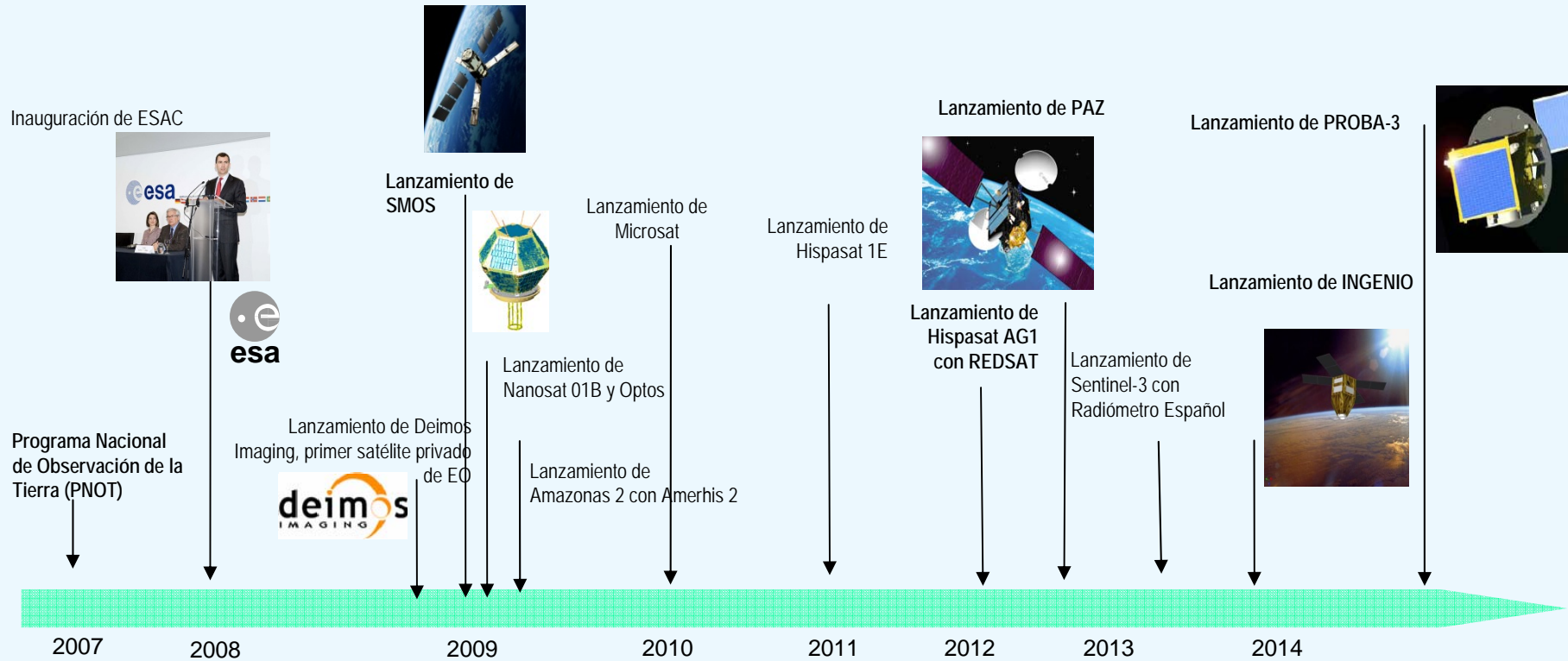
Main milestones (1/2)

Spain has progressively increased its capacities in the course of the last 50 years



Centro para el Desarrollo Tecnológico Industrial

Spain has already led several space projects and new programmes will provide continuity for the next years



Three Spanish owned satellite operators Industrial capacities covering all the value chain

- Total orientative turnover 2009 >644 M€ (Source: Proespacio)
- Two big telecom satellite operators and small EO operator
- HW and SW companies in a wide range of technologies.
- Numerous companies in the field of applications in navigation, telecom and Earth observation.



**National programmes will boost national technological capabilities
ESA centre in Spain (ESAC) has increased in size and status
SSA and GMES offer good opportunities for EUSC (UE Satellite Centre in Madrid)**

1. Wide range of infrastructures for EO, telecom and navigation (INTA, AENA, Hispasat) to be developed through the different programmes
2. ESAC growth through its role as a reference centre for science and exploration and SSA
3. EUSC roles for GMES and SSA in EU.

Substantial public support coherently with its relevance as most important commercial space activity

- **ARTES**: Investment in the last ESA CM'08 over relative GNP: 48,45 M€
- **Industrial Return Programmes with Hispasat and Hisdesat**: 35-40 M€ per year
- **Flagship programmes with substantial national investment:**
 - **Small-GEO**: Aimed at developing a new medium size platform for GEO satellites. Operator: Hispasat. Payload: CASA Espacio and Thales Alenia Space España.
 - **Amheris**: Onboard reprocessing system for satcom satellites. Prime: Thales Alenia Space España
 - **Spainsat and XTAR.**
- **Future**: Further increase of national capabilities. Placing Spanish companies as primes or payload system integrators aiming at:
 - Increased technological independence.
 - Promoting the participation of the Spanish industry in bigger consortia.

AGENDA

- Space in Europe
- Space in Spain
-  • Strategy for the future

STRATEGY FOR THE FUTURE

Prepare the Spanish space sector for the new challenges in times of budgetary restrictions

- **New scenario in Europe after the Lisbon Treaty**
 - EU to become a new important actor from 2014 onwards with a potentially increased budget. Spain will contribute 9% without georeturn.
- **Finalization of main running programmes:**
 - Launch of Ingenio (2014)
 - SMALL-GEO, PROBA-3, SSA, MTG
- **Managing of the budgetary difficulties:**
 - ESA: maintain level of investment
 - Further use of other CDTI programmes to support R&D activities
 - Market development
 - Increasing participation to European initiatives : FP7, UE, Eumetsat, etc.