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#ayudascdti  
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# Spanish Participation in Earth Observation

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Department of Space

Directorate of Space, Large Research Infrastructures and Dual  
Programmes



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# CDTI – Center for the Development of Industrial Technology

Objective: to foster the technological development and innovation of Spanish companies

- ✓ Founded in 1977
- ✓ Public Business Entity, answering to the Ministry of Science and Innovation
- ✓ Channels the funding and support applications for national and international R&D&i projects of Spanish companies
- ✓ ***CDTI is focal point of Space activities in Spain***



# CDTI is focal point for Space Activities in Spain

**ESA**



CDTI – Spanish Delegation to ESA  
5th contributor to EOP  
4th contributor to Copernicus

**UE**



CDTI – Spanish Representatives  
at Space Programme - Copernicus  
Configuration

**Bilateral**

**programmes**



**EUMETSAT**



AEMET – Spanish Delegation  
CDTI – advisor on industrial  
aspects

**PNOTS - National EO  
programme**

Radar/optical system

**Main investments in Earth Observation**



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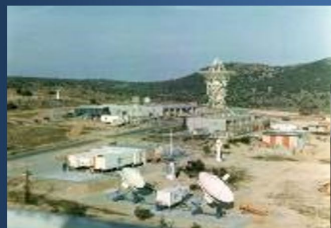
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# The history of Spain in Space

The current position of Spain in Space is the result of a collective and sustained effort during 50 years



ESAC  
Establishment



Spain-NASA  
agreement  
First Space  
Facilities in Spain



Minisat  
National  
Programme



Hispasat  
incorporation



1st Spanish  
astronaut

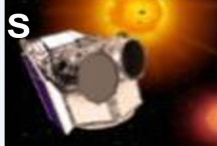


Spanish EO satellites



Ingénio

CHEOP



PAZ



Space19+

SST/S3T



LSTM Copernicus



Mars

Ariane



Proba-3



The beginning

Consolidatin

Growing

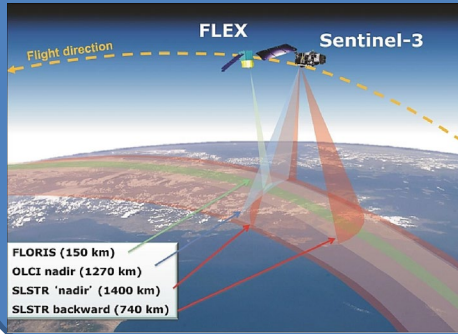
Looking to the Future



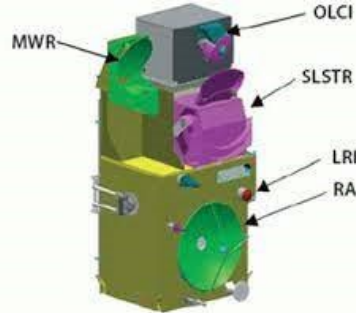
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# Main Milestones in Earth Observation

## FLEX: IP of the mission



## S-3 – MWI



instrument prime

## Copernicus expansion:



LSTM – Land Surface Temperature Mission

Mission prime

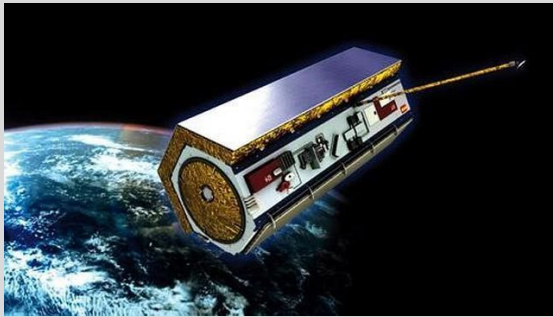
## MetOp-SG - ICI instrument prime



E.P.I

# Main Milestones in Earth Observation

**PAZ:** radar (X band)  
Launch Feb 2018.  
In operations  
(Hisdesat).

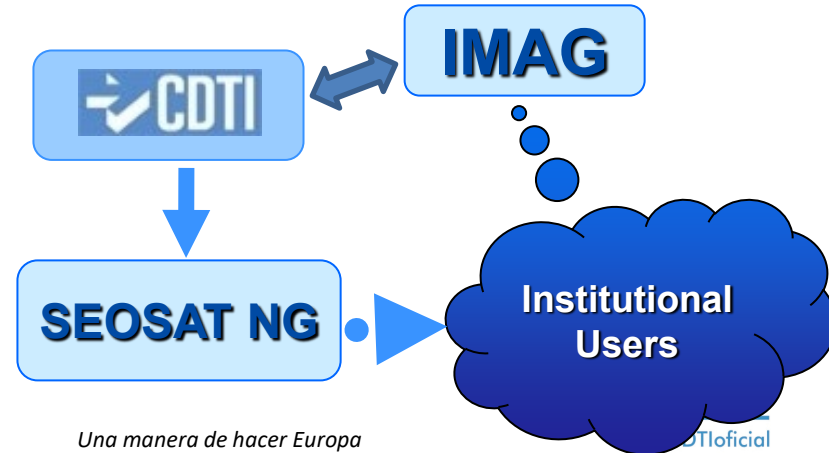


**SEOSAT:** optical.  
10 m VISNIR;  
5 m PAN.



*Lost during launch (2020)*

- ✓ PNOTS: National Earth Observation Programme
- ✓ Dual use
- ✓ Continuation: next generation under study
- ✓ National consultation user at Ministry level



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# Main Milestones in Earth Observation – GS

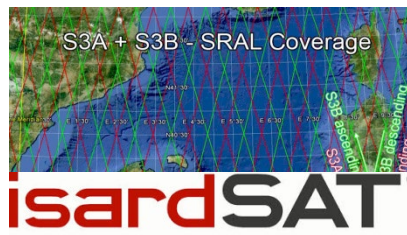
Sent-1 /-2 G/S



POD



Sent-2 PAC



Sent-3 MPC



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# User Uptake Activities Strategy

- ✓ Identification and definition of mission requirements and needs for future missions and programmes in close relationship with final users through:
  - ✓ Institutional User Group at Ministry level (CDTI)
  - ✓ Copernicus User Forum (IGN, AEMET) -> national representatives of Copernicus services
- ✓ User Uptake activities in the frame of:
  - ✓ FPCUP - Framework Partnership Agreement on Copernicus User Uptake
    - ✓ Leadership of coordination action in LATAM
  - ✓ Relay (11 entities) and Academy (17 entities) Spanish network
- ✓ Yearly meetings among the main stakeholders to join efforts at national level





+info sobre programas y ayudas CDTI  
para  
proyectos de I+D empresarial e innovación



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