

FCT

Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR



Emir Sirage (ILO) and FCT Space programme

26th February 2018 – Building a Big Science Market

Supporting Space: Member-State in Key International Organizations



EUMETSAT - 1986
PORTUGAL joined in 1989



ESA - 1975
PORTUGAL joined in 2000
15th MS

ESA facts and figures



- Over 50 years of experience
- 22 Member States
- Eight sites/facilities in Europe, about 2200 staff
- 5.2 billion Euro budget (2016)
- Over 80 satellites designed, tested and operated in flight

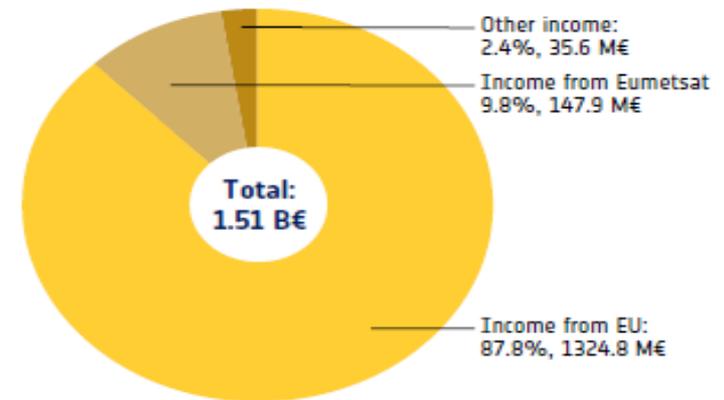
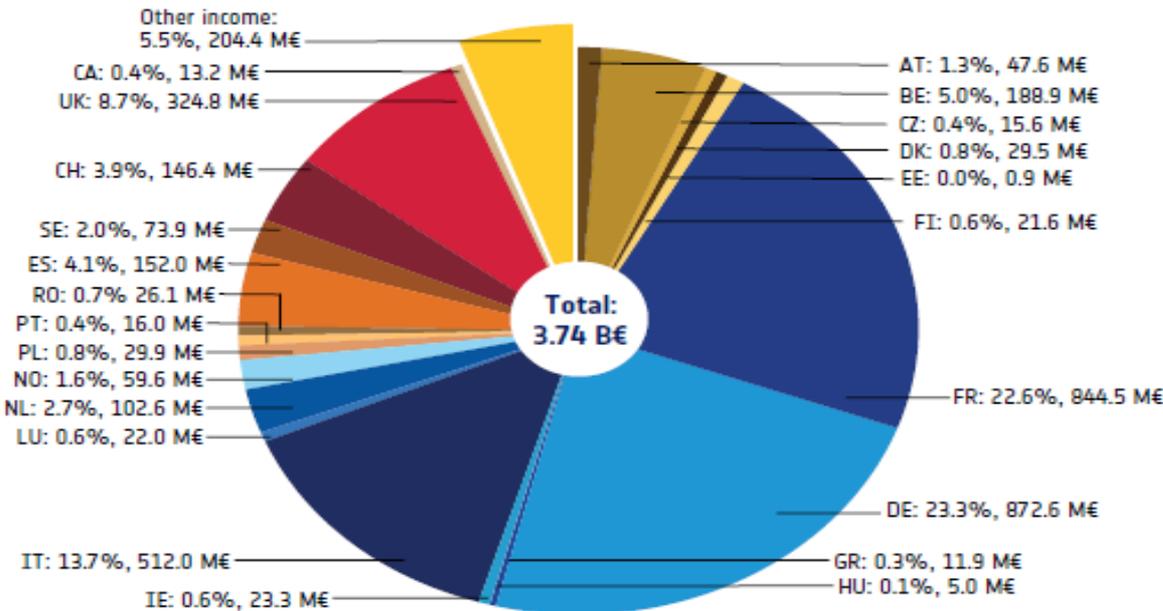


ESA budget for 2016



ESA Activities and Programmes

Programmes implemented for other Institutional Partners



B€: Billion Euro

Total ESA budget for 2016: 5.25 B€

ESA: almost all areas of space activity

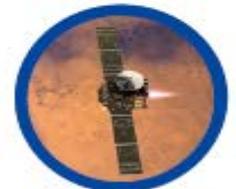
Activities



space science



human spaceflight



exploration



earth observation



launchers



navigation



operations



technology



telecommunications

ESA is one of the few space agencies in the world to combine responsibility in nearly all areas of space activity.

* Space science is a Mandatory programme, all Member States contribute to it according to GNP. All other programmes are Optional, funded 'a la carte' by Participating States.

Portugal space community : the main players

13 Large Industry

AMORIM Amorim Cork Composites

Critical software

deimos ENGENHARIA

EDISOFT DEFENCE & AEROSPACE TECHNOLOGIES A THALES Group Company

FISIPE YOUR CREATIVE PARTNER IN ACRYLIC FIBERS

ALTRAN

efacec

gmv INNOVATING SOLUTIONS

ISQ

The Capacitance Company KEMET CHARGED!

logica be brilliant together

Indra

NO

18 SME

activespace technologies making space a global endeavour

activeaerogels

Lusospace

omnidea

eixoDIGITAL

HPS High Performance Structures Gestão e Engenharia Lda. PORTUGAL

FiberSensing

spin.works

PRESENT TECHNOLOGIES

Bluecover Location Based Technology

uavision AERONAUTICS

takever SPACE

EVOLEO TECHNOLOGIES We evolve for you.

YDREAMS

Zeugma

glexyz

HIDROMOD

U-ORBIT Clean and Safe Access to Space

VISIONSPACE TECHNOLOGIES

24 Research

Fundação da Faculdade de Ciências da Universidade de Lisboa

ICT Instituto de Investigação Científica Tropical

IGOT Instituto de Geografia e Ordenamento do Território

INSTITUTO GEOGRÁFICO PORTUGUÊS

ipema instituto português do mar e da atmosfera

SIM

inovov inesc + inovação

Centimfe

piep inovação em engenharia de polímeros

LIP

CITEUC CENTRO DE INVESTIGAÇÃO DA TERRA E DO ESPAÇO UNIVERSIDADE DE COIMBRA

hidrográfica marinha-portuga

ipfn INSTITUTO DE PLASMAS E FUSÃO NUCLEAR

INESCPORTO LABORATÓRIO ASSOCIADO

ineqi driving science & innovation

CA Computational Intelligence Research Group

CEGOT Centro de Estudos de Geografia e Ordenamento do Território

Maretec

Centro de Astrofísica da Universidade do Porto

U. PORTO

it instituto de telecomunicações ;

Strategic axis 1: **Boosting the exploitation of space data and signals**

Short term

Strategic axis 2: **Fostering the development, construction and operation of space infrastructure and space data generation services**

Medium term

Strategic axis 3: **Continuing to build national capacity and skills, through scientific research, innovation and education**

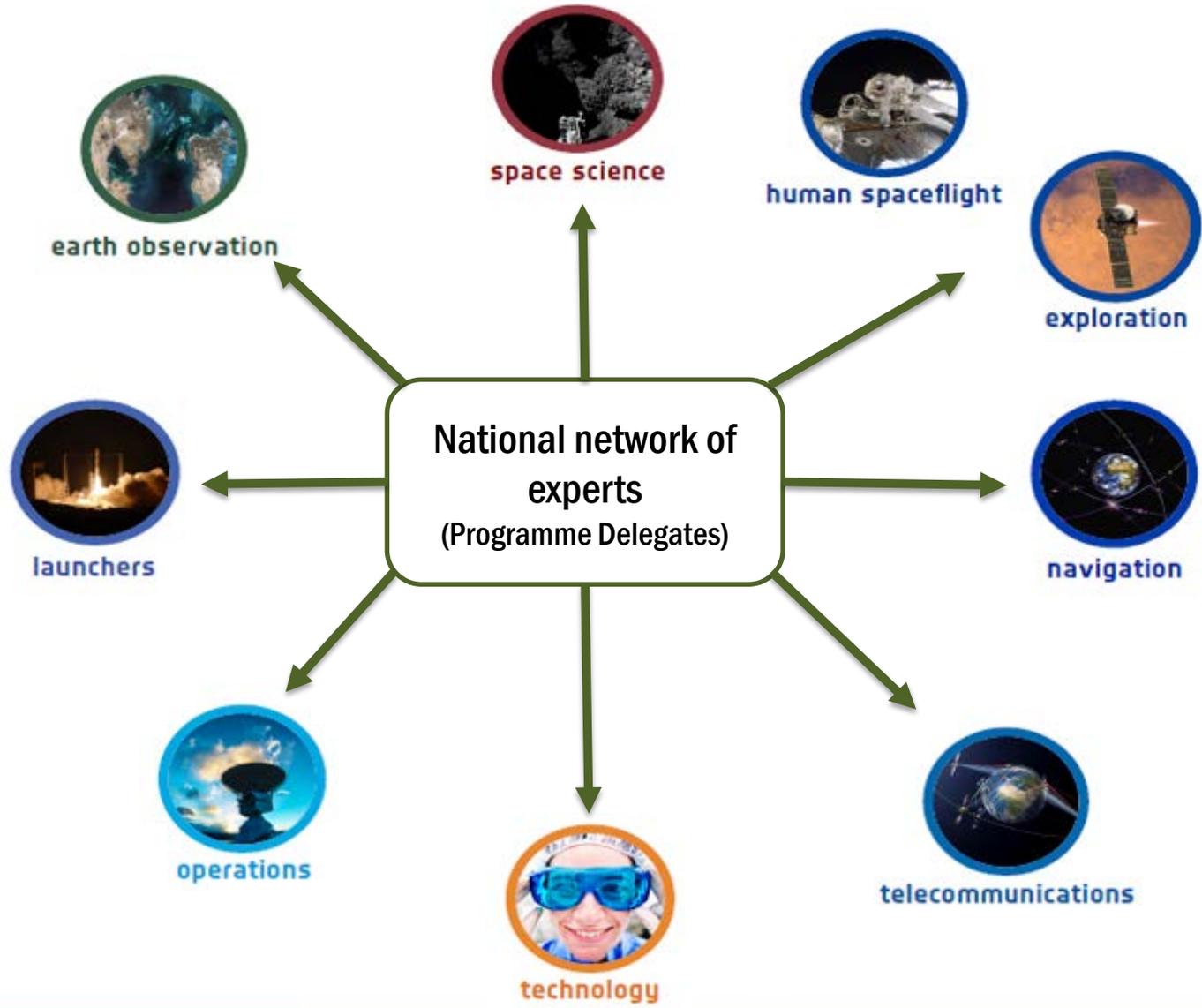
Long term

Horizontal elements:
Space business and technology transfer
International cooperation

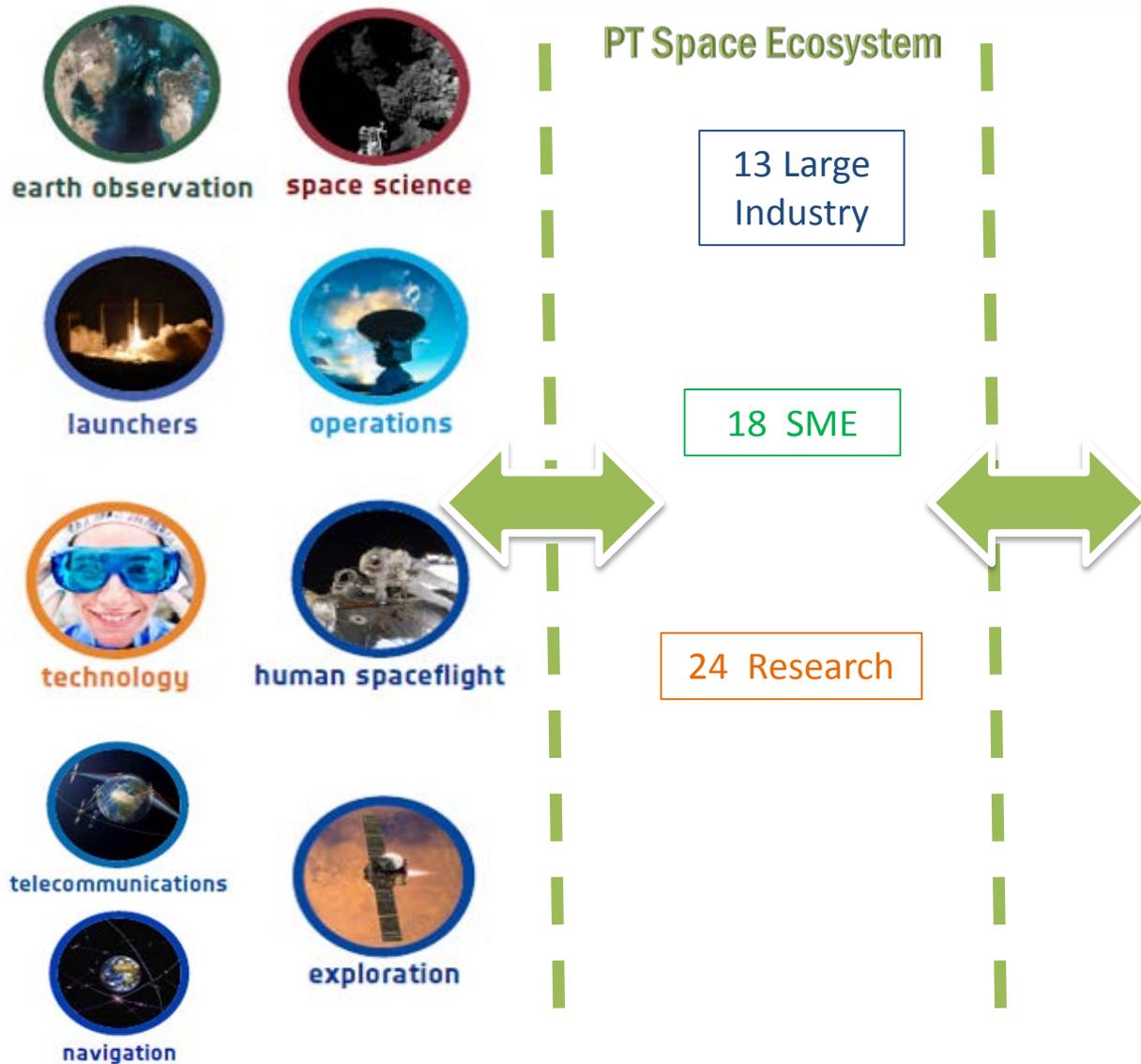
IPC delegate towards ESA?

- **Regular meetings@ESA = 5 IPC meetings a year to approve ESA contracts for European industry**
 - IPC chairman is a rotating position among the MS
 - Responsible to manage agenda and meeting with ESA and report to ESA Council
 - For subject matters outside industrial policy there are dedicated meetings before or after the IPC meetings (e.g. about Space economy impact studies)
 - ESA Directors, Heads of programme, Reps. from the European commission usually participate
- **Regular meetings@ESA = 4 Technology Harmonization meetings to agree on technical/technological roadmaps that are key for the Space value chain**
- **IPC delegates usually organize bilateral meetings@ their HQ to exchange best-practices and/or promote future consortium opportunities among Space companies**

From Portugal space ecosystem towards ESA?



From Portugal space ecosystem towards ESA?



Best Practices

- **Regular meetings w/ companies/academia** about programmatic interests
- **Organize and participate** in meetings organized by ESA and European industry Primes in Portugal (w/ space ecosystem)
- **Coordinate investment decisions** with ESA for the PT space ecosystem entities
- **Organize national, international and ESA space events** in PT
- **Invite ESA Directors and Heads of programmes** to bilateral meetings in Portugal (w/ Gov. & ecosystem)
- **Publish national space catalogue** (describing companies/academia and their supplies) (*renew after 2-3 years*)

AED Cluster ⇔ Eurospace + SME4Space

Portugal in space: some results with strong potential for growth

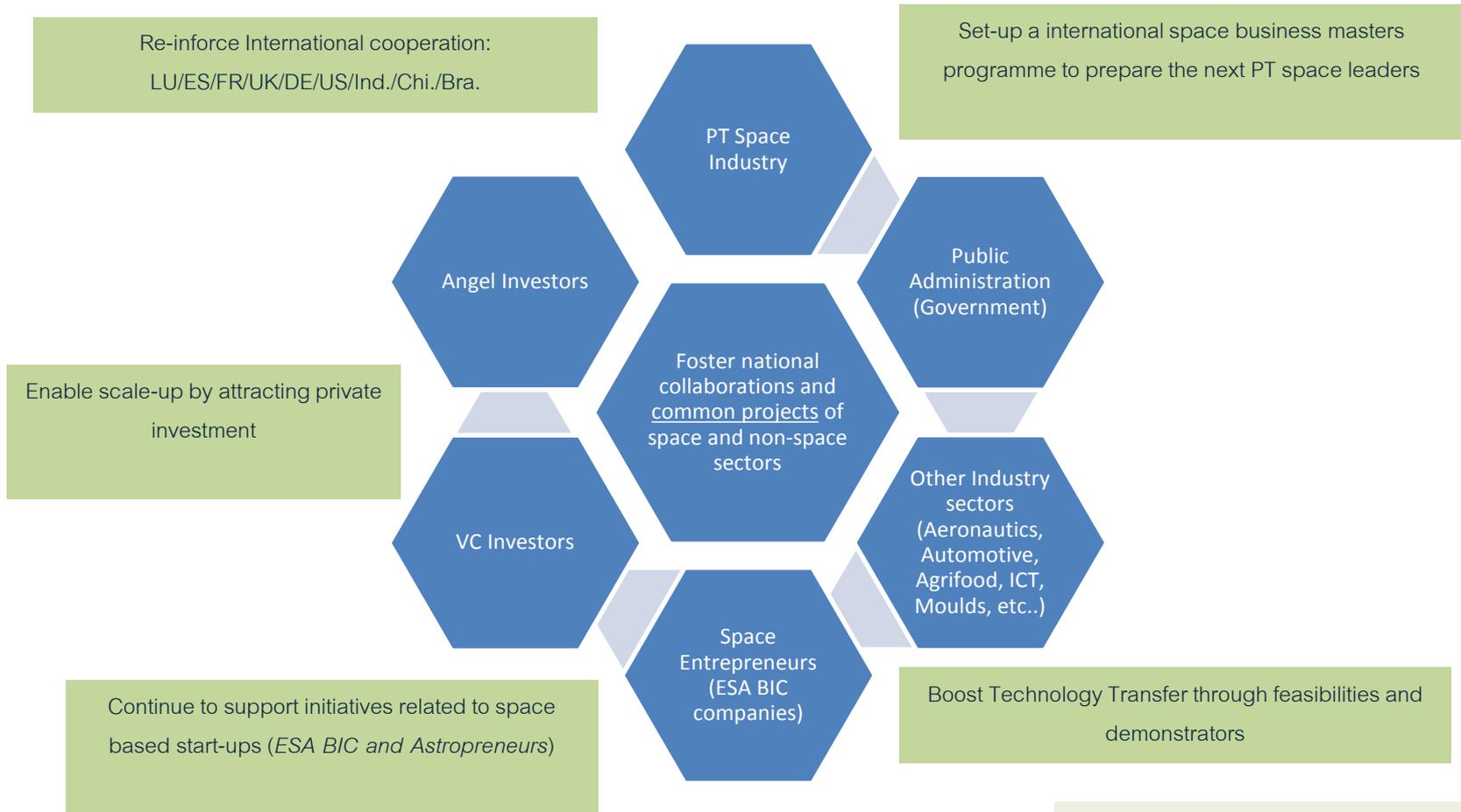
- Portugal became an ESA Member State in 2000, since then the Portuguese space sector grew in size and over **100 national entities** make up a scientific and industrial space ecosystem with a diverse set of skills and competences
 - A global turnover of the Portuguese space companies worth around **890M€** (2006-2015)
- Portugal is intended to contribute to the **“New Space”** Strategy for Europe, which aims at making the most of space for our society and economy, fostering a competitive and innovative European space sector and maintaining Europe's strategic autonomy in space

Thanks for your attention,

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“Way-forward” Short-term



More ideas to come!