

 Agenzia Spaziale Italiana	<p align="center"><u>TRACCE ESTRATTE</u></p> <p align="center"><u>PROVA COLLOQUIO</u></p>	<p align="center"><b>Pag. 1 di 1</b></p>
<p>Oggetto: Bando n. 10/2022– Selezione pubblica, per titoli ed esame colloquio, per la copertura di n. 1 posto a tempo pieno e indeterminato nell’Agenzia Spaziale Italiana, nel profilo di Primo Tecnologo, II livello professionale, 1^ fascia stipendiale – Area Ispettore Generale.</p>		

Busta n. 3

- 1) Il candidato esponga le principali esperienze professionali dichiarate nel proprio c.v. che meglio rappresentino le competenze professionali maturate attinenti all’oggetto della selezione.
- 2) Il candidato esponga la valenza del PTA nella programmazione dell’ASI
- 3) Definizione di pubblico ufficiale e di persona incaricata di pubblico servizio agli effetti della legge penale

Prova informatica

Presentare in un documento Power Point un organigramma di progetto con almeno tre livelli gerarchici, evidenziandone i ruoli chiave

# → BELGIUM



## Organisation of Space Activities

Belgium has been involved in the European space policy since the 60's, having played a major role in the creation of the European Space Agency (ESA) during the European Ministerial Space Conference in Brussels in 1973. At the same time it has entered into bilateral cooperation in the field of space with France (earth observation satellites programmes SPOT, Pleiades), with Argentina (SAOCOM) and with Russia (MIRAS and SPICAM). Belgium is one of the founding members of the European Space Agency.

One of the main features of Belgium, compared to most of its European counterparts in space, is the present absence of a national space agency. Indeed, when Belgium decided to back-up the efforts of its scientists and industry to find a place in space research and applications, it opted for a total integration into an European framework: mostly within ESA, but also increasingly with the European Commission. The present government decided to establish an Interfederal Space Agency of Belgium, but this has not materialised so far. Fostering international cooperation is one of Belgium's strongest points.

Management of the participation of Belgium in Space activities is entrusted to the government department responsible for national science policy. The authority for space activities in Belgium is concentrated in the Belgian Science Policy Office (BELSPO). The Department of Space Research and Applications of BELSPO has staff with a wide range of skills:

- Administrative
- Programmatic
- Engineering
- Science

## Space Strategy and Major Programmes

Strong emphasis is placed on programmes with recurring possibilities where both direct and indirect return on investment is a strategic aspect of Belgium's space policy. Innovation activities (sustaining innovation and disruptive innovation) are of high interest for Belgium.

The space sector in Belgium involves around 70 teams in federal, regional scientific establishments or research centres of excellence, as well as approximately 40 companies and almost 2.000 direct jobs for highly qualified people.

### CONTACT POINT ON SPACE TECHNOLOGY R&D



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- Economics
- Legal.

Where there is a lack of expertise, consultancy can be sought at other public authorities directly or indirectly involved in space as well as private Belgian entities. BELSPO is also active in increasing public awareness on space activities.

The Department of Space Research and Applications is in charge of managing the Belgian (public) participation in R&D activities and commercial activities carried out by the Belgian industry and scientists in space-related matters. These activities are conducted, primarily in the frame of international organisations (EC, ESA, EUMETSAT, ECMWF, ESO), or in the frame of bilateral agreements (e.g. with France, on SPOT and Pleiades).

Space activities in Belgium cover in particular the areas of powerconditioning and management, telecommunications, structures and actuators (mainly for launchers), heat pipes, CMOS image sensors, ground and flight software, microgravity instruments, small satellites (through the PROBA platform) and highly innovative technologies, e.g. additive manufacturing.

Belgium has also a strong interest in Earth Observation, which is translated in recurrent EO missions (PROBA1

Busta n. 5

- 1) Il candidato esponga le principali esperienze professionali dichiarate nel proprio c.v. che meglio rappresentino le competenze professionali maturate attinenti all'oggetto della selezione.
- 2) Il candidato descriva gli strumenti di vigilanza e controllo dell'ASI
- 3) Le fasi del procedimento amministrativo

#### PROVA INFORMATICA

Preparare un documento Word, da consegnare in formato .pdf, includendo l'indice dei contenuti e strutturando i seguenti elementi: titolo, introduzione, descrizione delle attività, pianificazione e conclusioni



# DENMARK



## Organisation of Space Activities

In Denmark, the Danish Ministry of Higher Education and Science is the primary responsible authority for matters related to the regulation of space activities. The ministry is tasked to propose and implement space strategies and to maintain and develop bilateral and multilateral cooperation at the international level, in coordination with relevant Danish ministries and public institutions.

Two formal committees currently service the Space Division at the Ministry of Higher Education and Science in carrying out its duties; The Inter-Ministerial Space Committee (Det Tvaerministerielle Rumudvalg) and the Advisory Committee on Space Research (Rumforskningsudvalget).

- The Inter-Ministerial Space Committee established in 2016 and comprised of representatives from eight ministries with tasks related to the space sector is responsible for coordinating the implementation of the initiatives of the Danish Space Strategy. It is chaired by the Ministry of Higher Education and Science.
- The Advisory Committee on Space Research established in 2018 and comprised of both members of Danish research institutions, authorities and industry is responsible for advising the The Agency for Science and Higher Education on relevant matters relating to the space sector, including how space best contributes to the solution of societal and economic challenges, and clarifying Danish interests at the international level, including ESA.

The Danish Space industry is primarily organized under the umbrella of Aerospace in the Confederation of Danish Industries' Defence and Security Industries Association

## Space Strategy and Major Programmes

Denmark's National Space Strategy – the first of its kind – was published in 2016 by the Danish Government and introduced overarching principles and initiatives to address the increasing importance, potential and challenges of the space sector in Denmark. Whilst a formal institutional framework was put in place through the Outer Space Act 2016 and structure of cooperation between relevant Danish ministries, the space strategy has introduced a structured approach to strengthening the cooperation between Danish national authorities, companies, organizations and researchers.

The strategic elements of the space strategy include the goal to 1) increase in growth in the private sector based on space technology, 2) increase of the share of EU's Horizon2020 funding to Danish researchers, and finally 3) improve the quality and efficiency in the public sector based on space systems.

The National Space Strategy is highly geared towards cooperation, at the national-, regional- and global levels – predominantly internationally through the European Space Agency and the European Union, with possibilities globally

### CONTACT POINT ON SPACE TECHNOLOGY R&D



Ministry of Higher Education  
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(FAD), which is a member organization of the Confederation of Danish Industry (DI). FAD provides the industry with support through networking, cooperation and coordination.

Higher education and space technology research is centered at the large Danish universities. The Technical University of Denmark (DTU) and its department DTU Space - the largest space research institution in Denmark employing around 160 staff - mainly provides research and education aimed at creating and expanding knowledge about Earth, space physics and related space technologies. Aalborg University (AAU), the University of Copenhagen (KU), the University of Southern Denmark (SDU) and Aarhus University (AU) are all involved in space research and education activities – of which the student Cubesat programme (AAUsat), Dark Cosmology Centre (KU), Centre for Cosmology and Particle Physics Phenomenology (SDU) and Mars Simulation Laboratory (AU) all are examples of Danish excellence within the field.

#### Busta n. 6

- 1) Il candidato esponga le principali esperienze professionali dichiarate nel proprio c.v. che meglio rappresentino le competenze professionali maturate attinenti all'oggetto della selezione.
- 2) Il candidato descriva le caratteristiche e l'applicabilità del diagramma di GANNT in un progetto spaziale
- 3) I vizi di annullabilità di un provvedimento

#### Prova informatica

Costruire una tabella in formato Word contenente un piano di pagamenti di un contratto. Trasferire la tabella in una presentazione PowerPoint includendo del testo descrittivo e introducendo degli effetti di transizione.



Bush 6

# → LUXEMBOURG



## Organisation of Space Activities

Luxembourg hosts one of the world largest satellite operators in the world, SES. Thirty years after the successful launch of ASTRA 1A, industrial capabilities and competencies have grown and many companies offer products and services in the area of satellite telecommunications. In 2000, the strong activity in the area led Luxembourg to join the ESA ARTES programme. Luxembourg became a full member of the Agency in June 2005.

Willing to reproduce the success story of SES, the SpaceResources.lu initiative was launched in February 2016 in the government's continued efforts to further develop the national space sector. This initiative defines an overall framework to promote and support the exploration and commercial utilisation of resources from 'celestial bodies' such as asteroids or from the Moon.

The Ministry of the Economy's Directorate of Space Affairs is in charge of the coordination with ESA, manages the interface between industry, the public research sector and

### CONTACT POINT ON SPACE TECHNOLOGY R&D



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ESA. One key objective is to promote the integration of research and development actors in international scientific and technology cooperation networks.

The meteorological service, department of the Ministry for Sustainable Development and Infrastructure, represents Luxembourg in the EUMETSAT Council.

## Space Strategy and Major Programmes

Since the mid of the 1980s, space became more and more important for Luxembourg. The huge investments made during the last decades have now placed industry in the forefront of satellite telecommunication services development. It is essential to continue these efforts and to find new opportunities in space related applications. In this context, Luxembourg set up a national action plan for science and technology in space. The goal is to define priority lines and identify ESA programmes in which Luxembourg should participate. This includes also measures to stimulate both public and private sectors at national level.

Until today, Luxembourg has focused its investments on satellite telecommunications. The participation to the ARTES programme has enabled its industry and research centres to develop new applications and acquire new competences in this field. Luxembourg is convinced that these capabilities can also contribute to Navigation and Earth Observation programmes.

With the recent launch of the SpaceResources.lu initiative, Luxembourg also aims at developing new competences in space exploration and activities linked to the utilization of Space Resources (Planets and Asteroids).

Since Luxembourg's adhesion to ESA, its annual budget has significantly increased from about €3.3 million in

2005 to €22,6 million in 2017, with about 90% dedicated to optional programs.

Since its participation to ARTES in 2000, Luxembourg has already committed up to €130 million in the telecommunication programme over the period 2000-2017. Luxembourg subscribed to the GalileoSat Development and Validation phase with an amount of €6 million. Luxembourg has also committed about €13.78 million to Earth Observation programmes (GMES and EOEP) and about €7.5 million to the technology programme GSTP. In addition, an annual budget of about €1.6 million will contribute to mandatory programmes. A total contribution to ESA exceeding €1 billion per year is expected in the future.

For 2017, Luxembourg's budget to ESA is partitioned as follows:

Priority line	2017	%
Telecommunications	16.59 M€	74.40%
Security	0.51 M€	2.31%
Mandatory	1.5 M€	6.86%
Earth Observation	1.15 M€	5.18%
Technology	2.5 M€	11.25%

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Busta n. 7

- 1) Il candidato esponga le principali esperienze professionali dichiarate nel proprio c.v. che meglio rappresentino le competenze professionali maturate attinenti all'oggetto della selezione.
- 2) Il candidato esponga una metodologia logica, a sua scelta, per svolgere una attività ispettiva
- 3) La responsabilità disciplinare dei dipendenti degli EPR

Prova informatica

Presentare una tabella contenente un piano di pagamenti di un contratto tipo in una presentazione PowerPoint e inserirla in un documento Word completandola con un testo descrittivo.



# HUNGARY



## Organisation of Space Activities

Hungary became full member of the Agency's PRODEX Programme in 1998. It was a European Cooperating State of ESA between 2003 and 2015. Hungary first notified ESA on its intention to accede to the Agency's Convention in 2006, the accession negotiations began in 2007. On 24 February 2015 Hungary signed the Accession Agreement to ESA and became a full Member State of the Agency on 4 November 2015. As of 2017 Hungary participates in ESA's GSTP optional programme.

The Hungarian Space Office (HSO) manages and coordinates the Hungarian space activities, representing members of both the scientific community and industry. It was established as government office in 1992. In 2010, HSO became a department of the newly established Ministry of National Development. It is still in charge of conducting and coordinating national and international space activities of Hungary. These include relations with international and intergovernmental organisations: ESA, the United Nations, the European Union, the Intersputnik, EURISY, etc. and bilateral cooperations.

### CONTACT POINT ON SPACE TECHNOLOGY R&D



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In addition to the relations with ESA, Hungary has signed government-level cooperation agreements with the Russian Federation, and it cooperates at Agency level with Ukrainian, Indian, Polish and Romanian space organisations.

Being a cooperating member of EUMETSAT since 1999 Hungary joined the organisation as a full member in January 2009. The implementation of the Accession Agreement to EUMETSAT is a responsibility of the Hungarian Meteorological Service.

## Space Strategy and Major Programmes

Current collaboration with ESA addresses activities in earth observation, science, human spaceflight and general technology development programmes. From the 2015 accession onwards Hungary makes constant efforts to better adapt the capabilities and structure of its space industry to ESA needs in order to benefit further from the strengthened cooperation possibilities of full membership in the Agency.

Hungary currently pursues activities in the fields of microgravity (different ISS projects), life sciences, space science (Solar-terrestrial relations, Aeronomy, Magnetosphere physics, Whistler and Trimpi research, Very Long Baseline Interferometry), Earth observation (remote sensing, yield estimation), terrestrial applications of the GNSS in navigation, geodesy and geodynamics, space telecommunications (on-board and ground based). Hungary participated in many scientific experiments of the ESA Rosetta mission, as well as provided on-board computer and power subsystems to the probe's lander, Philae.

Hungary's first satellite, named MaSat-1 (a cubesat) was successfully launched in 2012 on the maiden flight of the

European Vega launcher. The 1 kg satellite was designed and built by the students and educators of the Budapest University of Technology and Economics. The production of the satellite was an educational and technological project. MaSat-1 concluded its mission in January 2015, after functioning flawlessly for almost three years. Meanwhile, Hungary began to develop a space weather research satellite called RadCube in cooperation with ESA.

Among the Hungarian projects onboard ISS to date you can find: Pille and TriTel dosimeters, Neurospat experiment in the framework of the ESA-EU SURE programme, MICAST (Microstructure formation in casting of technical alloys), Microwave High Power Telecommunications Amplifier. The Russian lead Obstanovka experiment (delivered to ISS, installed successfully) includes the Hungarian Signal Analyzer and Sampler instrument as well as Hungarian onboard computers and data management units.

Hungary participated in equipment delivery for remote sensing satellites (Sentinel-2/MSI instrument) of the EU-ESA Copernicus (former GMES) programme.

European Space Agency | 125



Busta n. 8

- 1) Il candidato esponga le principali esperienze professionali dichiarate nel proprio c.v. che meglio rappresentino le competenze professionali maturate attinenti all'oggetto della selezione.
- 2) Il candidato esponga quali a suo parere sono le principali caratteristiche di una attività ispettiva
- 3) I principi e i diritti richiamati nel CCNL EPR 2016-2018 volti a delineare il ruolo e tutelare la professionalità dei ricercatori e tecnologi

#### Prova informatica

Elencare due liste descrittive di 5 voci di spesa relative a due distinti bilanci annuali in un documento Excel e riportare per entrambi i casi il valore totale ed il valore medio. Trasferire la tabella ottenuta in un documento Word che contenga un testo di introduzione ai dati analizzati.

# → PORTUGAL



## Organisation of Space Activities

Portugal is a full member of ESA since November 2000.

The management and coordination of space activities in Portugal is carried out by FCT (Foundation for Science and Technology), mainly through its Space Office. FCT is the national funding agency for scientific and technological projects acting under the responsibility of the Portuguese Ministry of Science, Technology and Higher Education. The Ministry of Science is coordinating the Portuguese membership to ESA and is also providing the funding to ESA's mandatory activities and several optional programmes, namely Technology, Exploration, Launchers and Earth Observation. Different Ministries provide financial support to other Agency optional programmes, namely ARTES, GSTP and satellite navigation programmes. In order to fulfil its mission the Space Office is set to:

- Promoting the participation of Portuguese academia and industry in European and international space programmes while providing recommendations relevant to the implementation of national scientific and technological initiatives and programmes.
- Contribute to the strengthening of the level of national contribution to ESA and to other international organizations commensurate with the ambitions and capacities of the scientific and industrial communities

### CONTACT POINT ON SPACE TECHNOLOGY R&D



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in line with the policies established for the space domain.

- Explore the synergies established with other international organizations of which Portugal is a member and, simultaneously, promote bidirectional technology transfer to other economic activity sectors
- Promote the visibility and competitiveness of the Portuguese space sector alongside the main European and international partners.
- Act as the Industrial Liaison Office, promoting the participation of the national industry in the technological activities of the major International Scientific Organizations of which Portugal is a member state (such as ESA, CERN, ESO and ESRF).

## Space Strategy and Major Programmes

The Portuguese space strategy was revised and approved at the Ministerial level in the first semester of 2018, opening the way for the creation of a dedicated Portuguese Space Agency and a Space Law. The strategy, Portugal Space 2030 - A research, innovation and growth strategy for Portugal, sets new guidelines for the development of the sector, which can be found in the following website - <https://www.fct.pt/ptspace2030/index.phtml.en>. It is structured around three segments: A – Strategic Objectives, B- Strategic Axes and C- Framework Programme for Action for Space. The new Strategic Objectives are as follows:

- Promote economic growth and the creation of skilled jobs in Portugal by promoting space-related markets, namely through market uptake and exploitation of satellite data and signals cutting across multiple activity sectors and addressing societal challenges, including in agriculture, fisheries; in monitoring infrastructures, in urban development, in defence and home security, and in the public health sector;

- Foster the generation of satellite data through new space technologies and space-related infrastructure in Portugal, leveraging international scientific and technological cooperation and turning Portugal into a stronger player in the space sector, with emphasis on new space industries (i.e., "New Space").
- Contribute to the development of the country and to the strengthening of diplomatic relations and international scientific cooperation, taking into account the advantages of Portugal's geo-strategic position for the Space sector, and also with a view to sharing the return of space activities with countries and not yet developed capacities in the space domain with emphasis on Portuguese-speaking countries;
- Ensure the development and evolution of the legal, financial, institutional, cultural/education internationalization frameworks capable of boosting the development of the Space sector in Portugal through national initiatives and international cooperation for the next decade

Busta n. 9

- 1) Il candidato esponga le principali esperienze professionali dichiarate nel proprio c.v. che meglio rappresentino le competenze professionali maturate attinenti all'oggetto della selezione.
- 2) Il candidato esponga cosa prevede l'obbligo di riservatezza previsto dal Codice di Comportamento dell'ASI
- 3) Il principio della separazione tra l'attività di indirizzo e l'attività di gestione: compiti e responsabilità di organi di governo e dirigenza dell'ASI

PROVA INFORMATICA

Ripartire su 5 voci di spesa il budget complessivo di due distinti bilanci annuali e creare un grafico a torta, completo di titolo e legenda, per ciascuno dei casi analizzati. Trasferire il grafico ottenuto in un documento Word che contenga un testo di introduzione all'analisi effettuata.





## Organisation of Space Activities

Poland became the 20th full member of ESA on the 19th of November 2012. At the beginning of November 2012 both chambers of Polish Parliament accepted unanimously the ratification act of Polish accession to ESA. Nowadays, Poland is able to participate in almost all ESA programmes and missions. Since July 2009 Poland is a full member of EUMETSAT. In 2015 Poland joined also European Southern Observatory (ESO).

Polish space activities are under the leading responsibility of the Ministry of Entrepreneurship and Technology, in cooperation with the Ministry of Science and Higher Education, the Ministry of National Defence, the Ministry of Foreign Affairs, the Ministry of Environment and other appropriate ministries. The Ministry of Entrepreneurship and Technology represents Poland in the European Space Agency and in the European Union institutions dealing with issues related to space sector.

In addition, the following consultative bodies support the space activities:

- Inter-Ministerial Board for Space Policy, responsible for overall political coordination and effective implementation of the Polish space policy on the national and international level. It coordinates the actions of governmental administration and makes key decisions, including financial ones.
- Task Force Poland - ESA, aiming at strengthening cooperation and Polish involvement in ESA activities during the transitional period in the framework of "Polish Industry Incentive Scheme".
- Polish Space Agency; its main activities are among others:
  1. To support and strengthen the competitiveness of Polish space industry,
  2. To provide technical expertise and support for Polish representatives in ESA and EU structures,
  3. To foster space research and industry cooperation,
  4. To increase Polish defence and security capacity for defence requirements,
  5. To support international activity of the Polish space sector (participation in ESA, EU, EUMETSAT, EDA programmes and bilateral cooperation),
  6. To conduct information and educational activities in the field of the use of outer space.

### CONTACT POINT ON SPACE TECHNOLOGY R&D



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Moreover, the Agency is responsible for the preparation and the implementation of the National Space Program, which is an executive instrument of Polish Space Strategy from 2017.

Other important actors are:

- Industrial Development Agency, which fosters the development of human resources for space (internships for M. Sc graduates and PhD students), offers financing as well as promotes the space sector in Poland,
- The Committee for Space and Satellite Research of the Polish Academy of Sciences, established in 1966, contributing to the development of national space research policy. The Committee represents Poland together with the Ministry of Foreign Affairs and the Ministry of Entrepreneurship and Technology as appropriate, in international forums such as COPUOS and COSPAR.
- Polish Space Industry Employers Association established in autumn 2012, with 64 entities from both scientific and business sectors.
- Space Research Centre established in 1977 as a part of the Polish Academy of Sciences. The SRC is, today, the principal national space institute. Its main objectives are to undertake space research and develop space technologies and applications.

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