

STARS*EU workforce and skills survey

Background information

STARS*EU (a project funded by the EU) supports the assessment and evolution of EU policies for space research and innovation, focusing on the activities supporting the sector competitiveness on future space systems ([STARS*EU Website](#)).

An area of investigation of STARS*EU is the situation of the European space industry workforce, its related skills and how it aligns with the training courses available for future space professionals

This survey complements the desktop research performed by the project. It aims at:

1. identifying and assessing the current workforce/skills requirements of the European space industry
2. assess the relevance of the skillset and current curricula identified by the project

A report on skills and curricula for space professionals in Europe can be consulted here ([Skills report](#))

This survey should be filled by persons in charge of defining the job requirements and recruitments in their companies.

Deadline for participation: End of November 2022

The survey can be downloaded by using the following link before the completion: [Survey in pdf](#).

Part 1 - Respondent/entity identification

Entity Name*

Your answer

Respondent first name*

Your answer

Respondent last name*

Your answer

Respondent email*

Your answer

GDPR compliance*

I hereby allow the parties in the STARS*EU project to further process my personal data for the requirements of the STARS*EU survey on workforce and skills.

I also accept to be further contacted in the context of this activity, including for the purpose of making available survey results or for my future involvement in events associated to the activity.

I understand that my email and other personal information will not be transferred to a third party during or after the duration of the STARS*EU project.

Anonymous processing

All of your personal and business information will be clustered and processed in an anonymous manner and will not be further distributed.

Entity position in the value chain* (check your main activity area based on contribution to revenues)

- *Upstream includes system development and manufacturing activities*
- *Downstream considers operations, data distribution and value added*

- Upstream/Spacecraftsegment
- Upstream/Launcher segment
- Upstream/Ground segment
- Downstream/Service or Data provider
- Downstream/Service or Data processing
- Other: (please specify)

Entity size*

- SME (EU definition)
- Midcap (up to 10000 full time employees)
- Large company (>10000 full time employees)

Space business size*

- Small space business (less than 50M€ in space related revenues/year)
- Medium space business (from 50M€ to 500M€ in space related revenues/year)
- Large space business (more than 500M€ in space related revenues/year)

Space employment* (number of full time equivalent - FTE - supported by your space activity/business)

- Small space employer (less than 100 FTE on space activity)
- Medium space employer (between 100 and 500 FTE on space activity)
- Large space employer (more than 500 FTE on space activity)

Main Countries of operations* (check all that apply)

- Austria
- Belgium
- Bulgaria
- Canada
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- the Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- United Kingdom

Part 2 - Space workforce needs

How many new recruitments did your company undertake in the past 3 years* (for space related positions)?

- None
- 1 to 10
- 11 to 50
- 51 to 100
- 101 to 500
- > 500

Type of position* - Recruits in the past 3 years were:

Total should be 100%

	None	up to 25%	25% to 50%	50% to 75%	75% to 100%
Technical and engineering positions (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management and support functions (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Experience level* - Recruits in the past 3 years were

Total should be 100%

	None	up to 25%	25% to 50%	50% to 75%	75% to 100%
Graduates (up to 3 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professionals (3 to 10 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senior positions (>10 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How many open space related positions do you currently have on the market?*

- None
- 1 to 10
- 11 to 50
- 51 to 100
- 101 to 500
- 500 to 1000
- > 1000

Type of position* - Open positions are:

Total should be 100%

	None	up to 25%	25% to 50%	50% to 75%	75% to 100%
Technical and engineering positions (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management and support functions (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Experience level* - Open positions are:

Total should be 100%

	None	up to 25%	25% to 50%	50% to 75%	75% to 100%
Graduates (up to 3 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professionals (3 to 10 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senior positions (>10 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you anticipate to hire more space related positions by end 2024?*

- No
- Yes

If yes, how many space related positions do you expect will need to be filled by end 2024?*

- 1 to 10
- 11 to 50
- 51 to 100
- 101 to 500
- 500 to 1000
- > 1000

Type of position* - Future needs are:

Total should be 100%

	None	up to 25%	25% to 50%	50% to 75%	75% to 100%
Technical and engineering positions (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management and support functions (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Experience level* - Future needs are:

Total should be 100%

	None	up to 25%	25% to 50%	50% to 75%	75% to 100%
Graduates (up to 3 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professionals (3 to 10 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senior positions (>10 years experience) %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 3 - Space workforce skills and gaps - qualitative

Part 3.1 - Opinion survey

Space is an attractive sector for young professionals

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Space jobs are attractive because of their societal impact

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

European young graduates are usually well prepared for space industry jobs

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Young graduates must undertake a professional training after they are hired to become operational

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

It is difficult to fulfil open positions in the space industry

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

There is a shortage of space professionals in Europe

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

It is difficult to retain employees in the space industry

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Employee turnover in space is high

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

The current European landscape of curricula and training programmes for space professionals is good

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Curricula are regularly updated to answer European Space Industry needs

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

There is a shortage of technical skills applicable to space programmes in Europe

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Industry prefers young graduates with a general profile rather than specialists

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Industry considers soft-skills as equally important as technical skills for young graduates

- fully agree
- somewhat agree
- no opinion
- somewhat disagree
- fully disagree

Part 3.2 - STARS*EU skillset assessment

The STARS*EU project has identified the following skillset for the space sector. Please rate each skill from the perspective of your company workforce requirements and expectations.

Science: technology and engineering studies being the majority of the courses.

In particular, courses related to space science, mechanics, dynamics, and material science are well represented. Earth and Space Science, including different knowledge areas like geodesy and planetology

This skill is considered:

- Essential for the company
- Essential only for specific positions/projects in the company
- A nice to have for the company
- A nice to have only for specific positions/projects in the company

This skill is:

- Readily available on the jobs market
- Hard to source on the jobs market

Technology: Technology courses are a significant part of the study programmes and focus on space technology

e.g. spacecraft propulsion, design, aerospace structures, communication, and navigation methods and computer science (information science, software engineering and artificial intelligence)

This skill is considered:

- Essential for the company
- Essential only for specific positions/projects in the company
- A nice to have for the company
- A nice to have only for specific positions/projects in the company

This skill is:

- Readily available on the jobs market
- Hard to source on the jobs market

Engineering: aerospace engineering

e.g. aeronautics, astronautics, electrical and mechanical engineering (spaceflight mechanics and manufacturing), mechatronics, system engineering.

This skill is considered:

- Essential for the company
- Essential only for specific positions/projects in the company
- A nice to have for the company
- A nice to have only for specific positions/projects in the company

This skill is:

- Readily available on the jobs market
- Hard to source on the jobs market

Mathematics:

e.g. statistics, system science, control theory, calculus analysis

This skill is considered:

- Essential for the company
- Essential only for specific positions/projects in the company
- A nice to have for the company
- A nice to have only for specific positions/projects in the company

This skill is:

- Readily available on the jobs market
- Hard to source on the jobs market

Humanities:

e.g law, ethics, arts, ...

This skill is considered:

- Essential for the company
- Essential only for specific positions/projects in the company
- A nice to have for the company
- A nice to have only for specific positions/projects in the company

This skill is:

- Readily available on the jobs market
- Hard to source on the jobs market

Social sciences :

e.g. marketing, communication, ...

This skill is considered:

- Essential for the company
- Essential only for specific positions/projects in the company
- A nice to have for the company
- A nice to have only for specific positions/projects in the company

This skill is:

- Readily available on the jobs market
- Hard to source on the jobs market

Part 4 - Curriculum/programme assessment

Institute's and curriculum cooperation with Industry

Please find below the list of curricula identified by the project.

Select those for which your company has proactive Academic-Industry cooperation activities:

e.g. Your company promotes its vacant internships to the University, your company executives are teaching in this curriculum, R&D activities conducted with Industry-University partnership, ...

The following list is categorised by: COUNTRY_University (Curriculum name)

	Check if applicable
AT_Paris-Lodron University Salzburg (Copernicus Master in Digital Earth)	<input type="checkbox"/>
AT_Technical University of Graz (Space Sciences and Earth from Space)	<input type="checkbox"/>
AT_Technical University of Graz (SpaceTech - Master of Engineering in Space Systems and Business Engineering)	<input type="checkbox"/>
AT_Wiener Neustadt School of Applied Sciences (Aerospace Engineering)	<input type="checkbox"/>
AT_Wiener Neustadt School of Applied Sciences (Mechatronik und Mikrosystemtechnik (German))	<input type="checkbox"/>
BE_KU Leuven (M.Sc. Aero and Space Engineering)	<input type="checkbox"/>
CZ_Czech Technical University in Prague (CTU) (Joint Master Programme in Space Science and Technology - Space Master)	<input type="checkbox"/>
CZ_Palacky University Olomouc (Copernicus Master in Digital Earth)	<input type="checkbox"/>
DE_RWTH Aachen (Aeronautical Engineering and Astronautics M.Sc.)	<input type="checkbox"/>
DE_Technische Universität München (Aerospace)	<input type="checkbox"/>
DE_Technische Universität München (ESPACE - Earth Oriented Space Science and Technology)	<input type="checkbox"/>
DE_TU Berlin (Master of Space Engineering)	<input type="checkbox"/>
DE_University of Bremen (Space Sciences and Technologies)	<input type="checkbox"/>
EE_University of Tartu (Robotics and Computer Engineering)	<input type="checkbox"/>
ES_Polytechnic University Valencia (Aeronautical Engineering)	<input type="checkbox"/>

ES_ Universidad Carlos III de Madrid (Master in Space Engineering)	<input type="checkbox"/>
ES_ Universidad Politecnica de Madrid (Master in Space Systems)	<input type="checkbox"/>
FI_ Aalto University School of Electrical Engineering (Aalto) (Joint Master Programme in Space Science and Technology - Space Master)	<input type="checkbox"/>
FR_ Ecole centrale de Lyon (Aerospace Engineering)	<input type="checkbox"/>
FR_ ENAC Toulouse (Aerospace Systems - Navigation and Telecommunications)	<input type="checkbox"/>
FR_ ENSMA Poitiers (Aeronautics and Space)	<input type="checkbox"/>
FR_ International Space University (Master Of Space Studies)	<input type="checkbox"/>
FR_ Observatoire de Paris - Université PSL (Space Science and Technology)	<input type="checkbox"/>
FR_ TBS education Toulouse (Aerospace Management)	<input type="checkbox"/>
FR_ Université Toulouse III - Paul Sabatier (UT3) (Joint Master Programme in Space Science and Technology - Space Master)	<input type="checkbox"/>
FR_ University of South Brittany (Copernicus Master in Digital Earth)	<input type="checkbox"/>
IT_ Politecnico Milano (Aerospace Engineering)	<input type="checkbox"/>
IT_ Politecnico Milano (Space Engineering)	<input type="checkbox"/>
IT_ Sapienza Università di Roma (Master Course in Space and Astronautical Engineering)	<input type="checkbox"/>
IT_ Università degli Studi di Napoli (B.Sc. Aerospace Engineering)	<input type="checkbox"/>
IT_ Università degli Studi di Napoli (M.Sc. Aerospace Engineering)	<input type="checkbox"/>
IT_ University of Pisa (Physics - Astronomy and Astrophysics)	<input type="checkbox"/>
LT_ Kaunas University of Technology (Aeronautical Engineering)	<input type="checkbox"/>
LU_ Université du Luxembourg (Master in Space, Communication and Media Law (LL.M.))	<input type="checkbox"/>
NL_ Universiteit Leiden (Air and Space Law)	<input type="checkbox"/>
NO_ UiT Norges arktiske universitet (Physics (Specialisation Earth Observation))	<input type="checkbox"/>
PL_ Politechniki Rzeszow (Aviation and Cosmonautics)	<input type="checkbox"/>
PL_ Warsaw University of Technology (B.Sc. Aerospace Engineering)	<input type="checkbox"/>
PL_ Warsaw University of Technology (M.Sc. Aerospace Engineering)	<input type="checkbox"/>
PT_ Técnico Lisboa (Aerospace Engineering)	<input type="checkbox"/>
SE_ KTH Royal Institute of Technology (Electromagnetics, Fusion and Space Engineering)	<input type="checkbox"/>
SE_ Lulea University of Technology (LTU) (Joint Master Programme in Space Science and Technology - Space Master)	<input type="checkbox"/>
SG_ Technische Universität München - Singapore (Aerospace Engineering)	<input type="checkbox"/>
UK_ Cranfield University (Aerospace Vehicle Design)	<input type="checkbox"/>
UK_ Cranfield University (Astronautics and Space Engineering)	<input type="checkbox"/>
UK_ Cranfield University (CU) (Joint Master Programme in Space Science and Technology - Space Master)	<input type="checkbox"/>
UK_ Northumbria University (Law (Space Law) LL.M.)	<input type="checkbox"/>
UK_ Swansea University (Aerospace Engineering)	<input type="checkbox"/>
UK_ University of Bristol (Aerospace Engineering)	<input type="checkbox"/>
UK_ University of Cambridge (Engineering with Specialisation in Aerospace and Aerothermal Engineering)	<input type="checkbox"/>
UK_ University of Edinburgh (Earth Observation and Geoinformation Management)	<input type="checkbox"/>
UK_ University of Glasgow (Autonomous Systems and Connectivity)	<input type="checkbox"/>
US_ Massachusetts Institute of Technology (Aeronautics & Astronautics)	<input type="checkbox"/>
US_ Stanford University (Aeronautics & Astronautics)	<input type="checkbox"/>

Please feel free to add training course(s) - if not present in the list above:

Your answer

Part 5 - Open statements and additional comments

Please use the open text box below, if you want to share any additional thought with us on the subject of workforce and skills issues for the European space sector.

Your answer