

A Survey into the State & Health of the European EO Services Industry 2022

Prepared by EARSC with the support of ESA

EARSC

European Association
of Remote Sensing
Companies



Introduction

Here we present the results of our 7th survey of the European EO services industry. Previous ones were conducted in 2013, 2015, 2017, 2019, 2020 ,2021 and now 2022. In each case, the date refers to the year of the survey with data drawn from the previous year.

The survey is presented in a series of chapters, as indicated to the right, presenting facts and figures concerning the state of the industry. A revised methodology has been adopted 3 years ago in order to optimize the analysis to be performed on an annual basis.

A core set of figures is compiled each year together with some further questions which change each year. The key figures concern the number of companies, employment and revenues which are updated annually.

A detailed description of our methodology is given at the end.

- Introduction**
- Strategic Context**
- Industrial Landscape**
- Employment and skills**
- Revenues**
- Markets**
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- Postscript**
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Strategic Context

The context in which the EO services industry is operating is changing extremely rapidly. Here are a few of the key trends, events etc which are considered relevant in 2022.

- The CoVID pandemic has become less critical but has had a strong impact on the industry in 2021 as customer procurement cycles were interrupted leading to less business and fewer contracts.
- The European Space Summit, organised under the French presidency on February 16th, 2022 was an important milestone to decide on strategic orientations and develop a modernised and agile governance structure of European space. The results of this Summit shall be an essential input for the ESA Council Meeting at Ministerial Level at the end of 2022.
- The Council conclusions on Copernicus set out a vision for 2035 and political guidance for the Copernicus programme based on three key pillars: the Green Deal, the digital transition, and security, together contributing to a more resilient Europe.
- The rate of formation of new companies continues to be high and some companies which are downstream from the EO services sector are entering the market by establishing new capabilities or acquiring existing EO companies (e.g. ICON/Tracsis).

European Industry at a glance

- 7th survey on the state & health of the EO services industry
- 3rd survey in new series of annual updates
- Direct research on over 700 companies; survey sample of 55 EARSC members



746 Companies
up from
713 (+4,6%*)



12085 Employees
up from
11600 (+4,1%*)



€1.61b Revenues
down from
€1.71b (-5,5%*)



7,5%**
Growth rate

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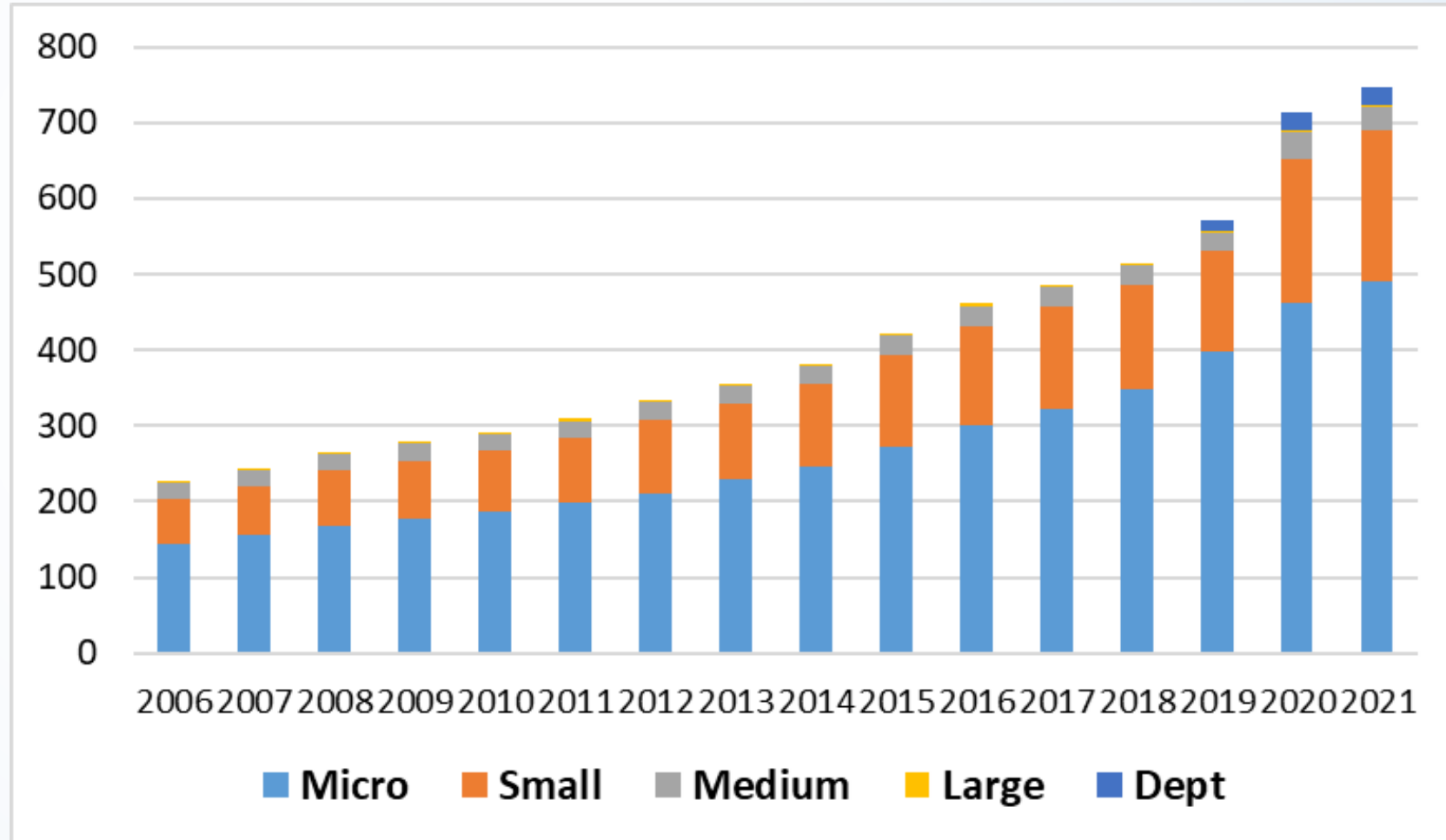
Industrial Landscape (1)

Number of Companies:

In the industrial landscape we are looking at how companies are formed and distributed within the ecosystem. Included are all European countries which are members of either the EU or ESA – 32 countries.

The database includes all companies where EO services are sold as part of their business. It includes companies where EO services is not core but is a minority part of their business. (see Figure 1). “Departments” where a business selling EO services is part of a larger business and “GI” companies that have a business focus outside of selling EO services.

Figure 2 . Evolution of the number of companies per company class



Industrial Landscape (2)

Breakdown of companies in 2021

The percentage of companies which are SME's (<250 employees) is around 96-97%, whilst the proportion of companies with less than 50 employees has stayed roughly fixed at around 92-93% since the survey has been started.

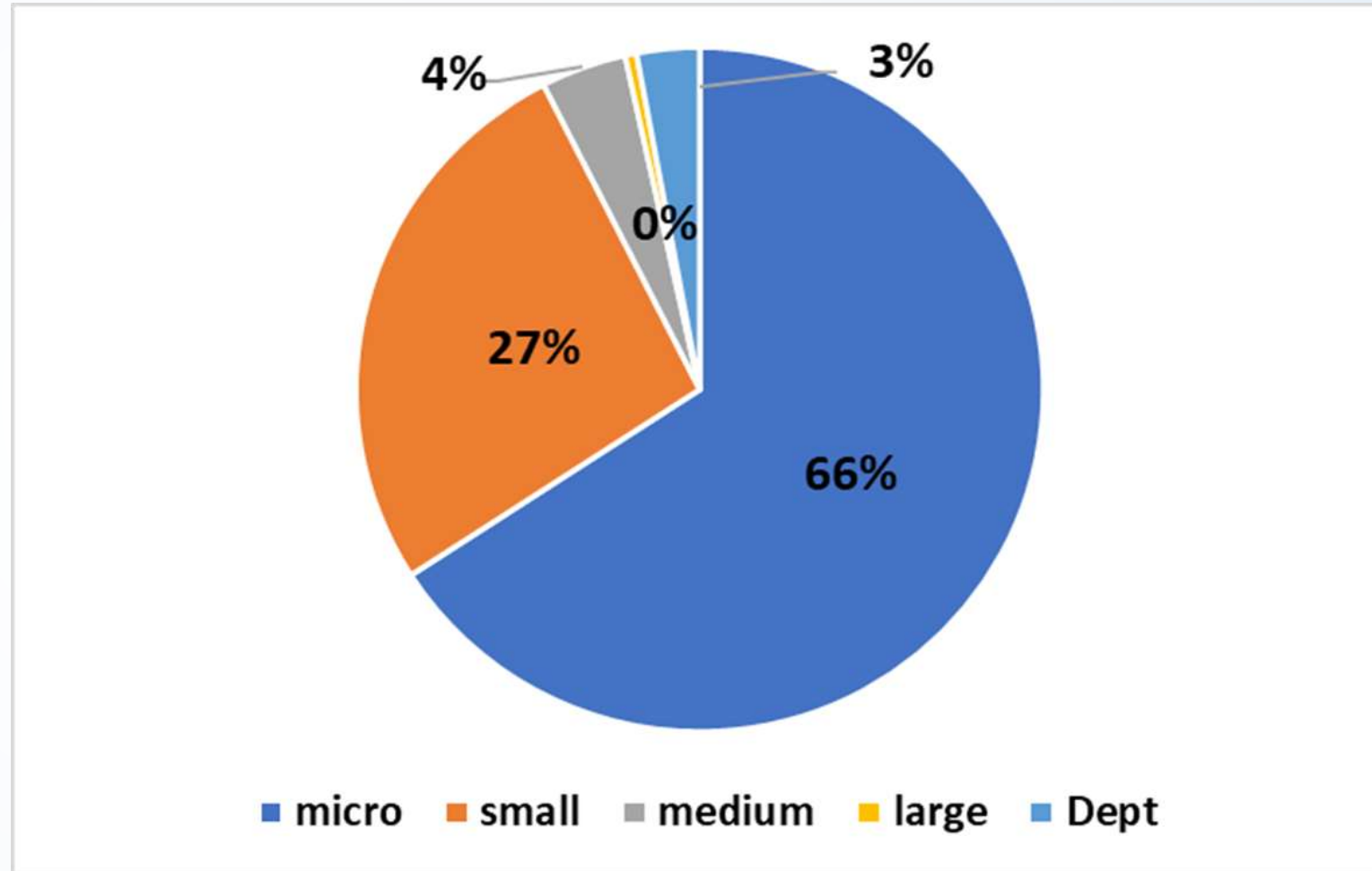


Figure 3. Breakdown of companies per company class in 2021.

Industrial Landscape (3)

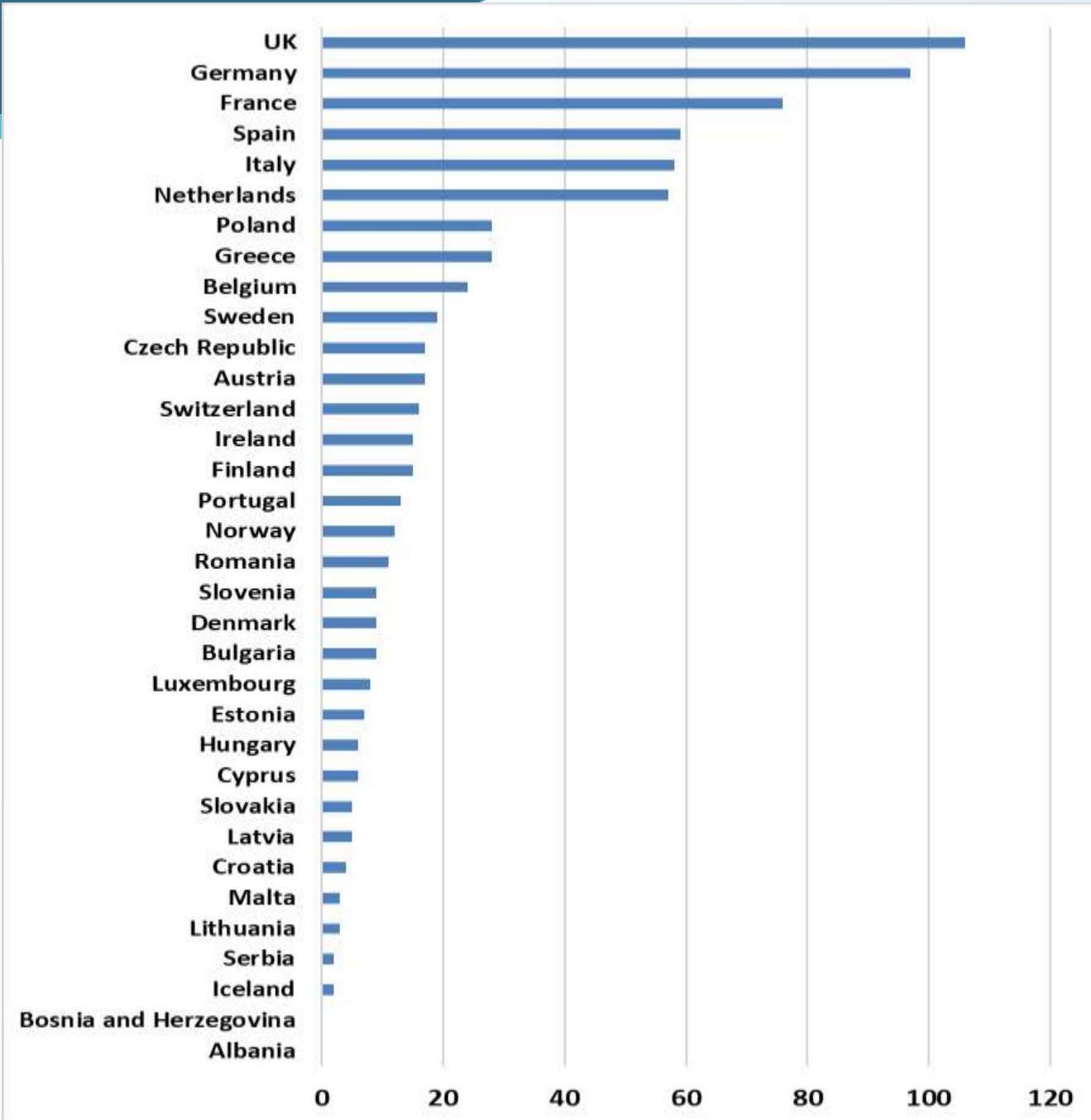
Figure 4. Companies per country

Geographical Landscape:

In the industrial landscape we are looking at how companies are formed and distributed within the European ecosystem. In Figure 4 , we see the total number of companies in each country in 2021.

The country hosting the largest number of EO service companies (106) is the UK followed by Germany (97) and France (76); which is the same ranking as last year.

UK has been the leading country for the number of companies for some years yet has fewer employees than both France and Germany - as is shown in Figure 5 .



Industrial Landscape (4)

Employment Landscape:

The number of employees in each country follows somewhat the number of companies. However, most employees in the sector are found in France (1794), followed by Germany (1265) and Italy (862) – which differs from the geographical landscape ranking.

From this we can say that, the average size of company is larger in France and Germany which is due to the large presence of Airbus. *Note that Airbus has units or subsidiaries in several European countries which are accounted for in the breakdown.*

Figure 5. EO Employees per country

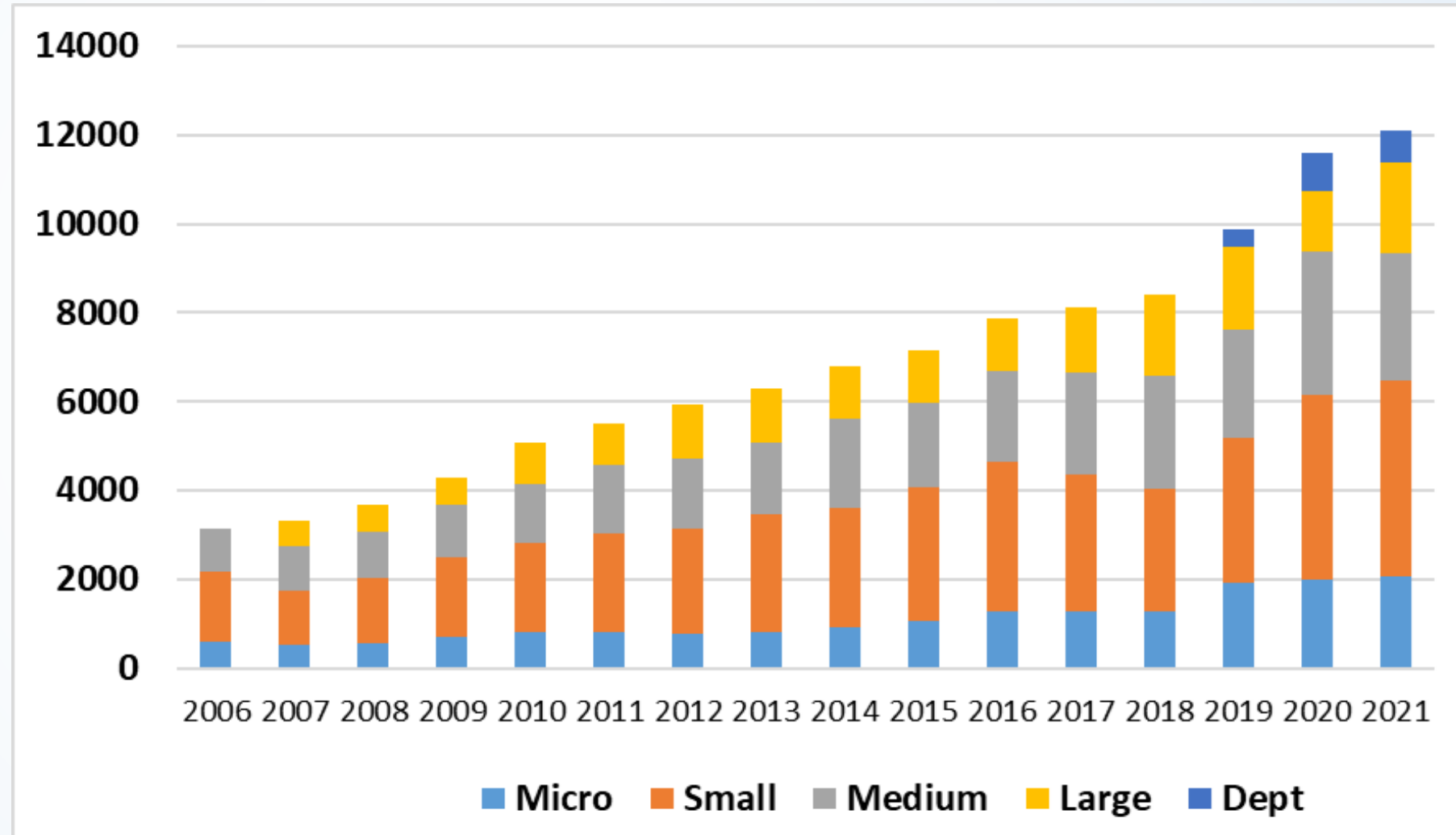


Employment(1)

Employment Evolution:

The total number of employees in the sector in 2022 is 12,085 which represents a growth rate of 4,1% over the last 12 months.

Figure 6. Evolution of EO Employees by company class



Employment (2)

Number of Employees per class of Company:

The largest proportion of employees in the sector are working with small companies (10-50).

Some 53 % of the sector employment is within companies which have less than 50 employees.

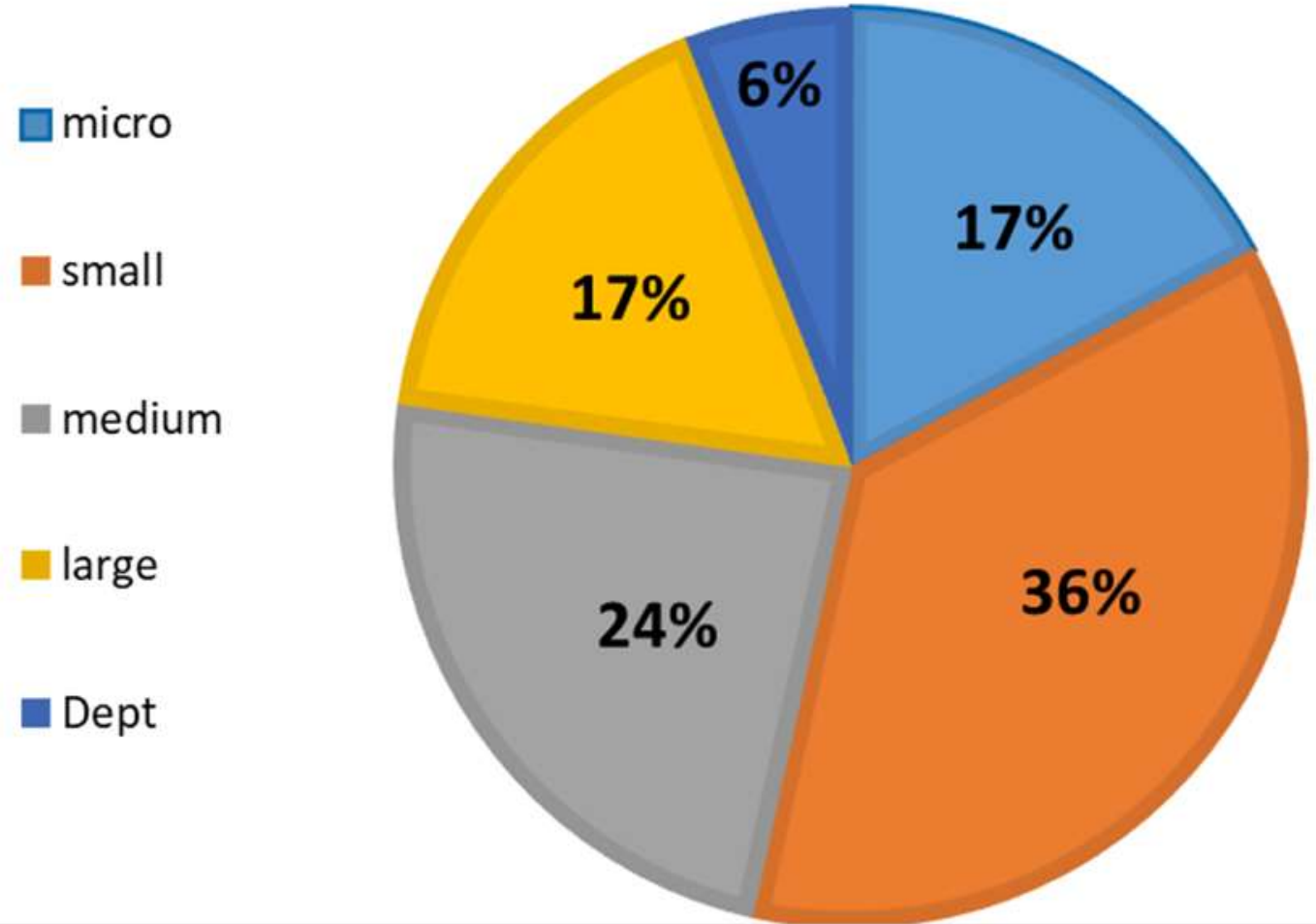


Figure 7. Breakdown of Employees per Company Class in 2022

Employment perspective

We asked companies to estimate their revenue and employment growth over the next 12 months. This is a good indicator of their perspective on the evolution of their business. Here is a comparison for the employment in 2021 and 2022.

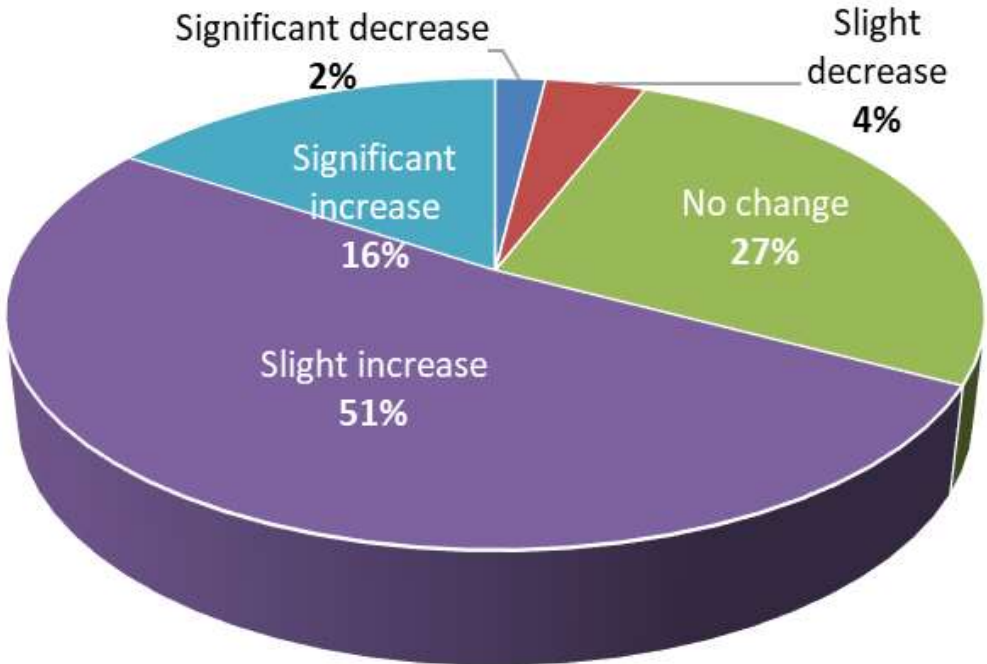


Figure 8. Employment perspective over next 12 months (Industry survey 2021)

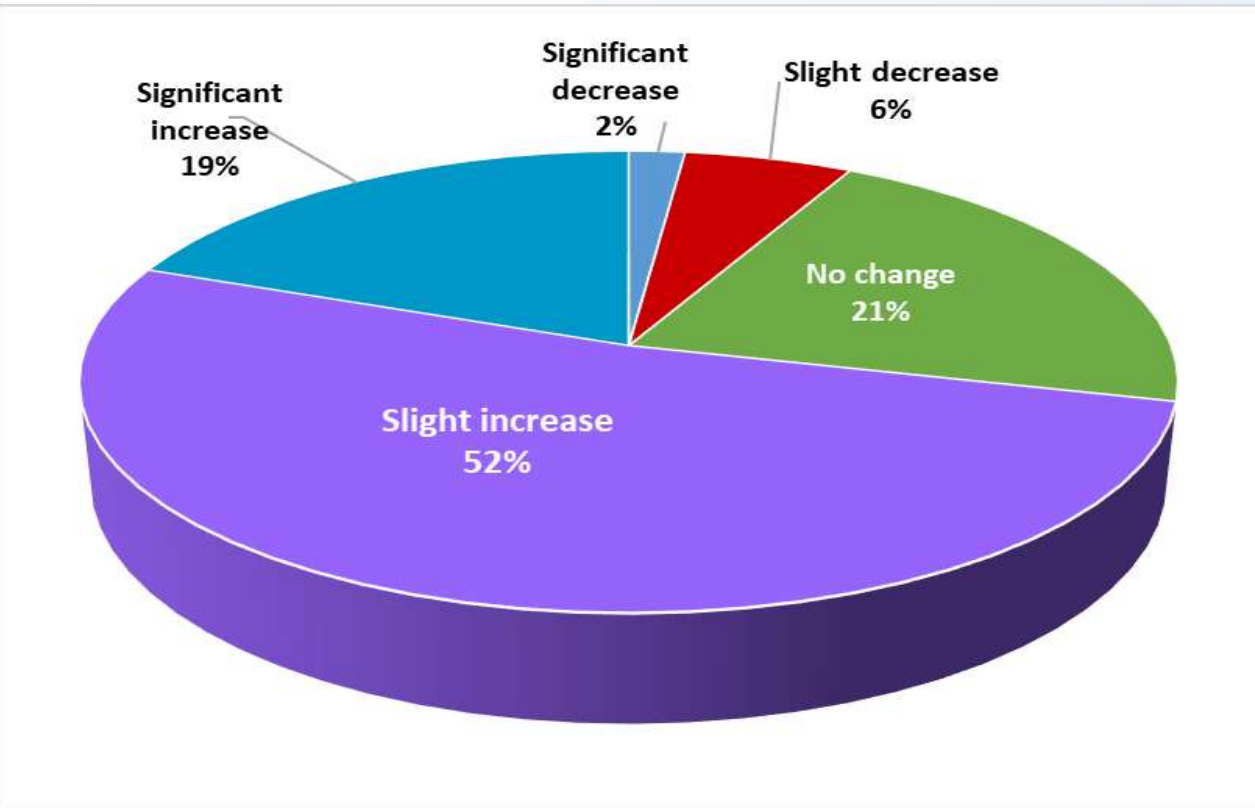


Figure 9. Employment perspective over next 12 months (Industry survey 2022)

Employment - Skills (1)

The results of our survey confirm the importance of skills for the sector.

77% of the companies reported difficulties to find and hire staff. When asked about these difficulties, companies mention several barriers: lack of transversal and business-oriented skills, the competitive market place, difficulty to find an experienced person in the sector of EO, lack of training in EO in certain countries...

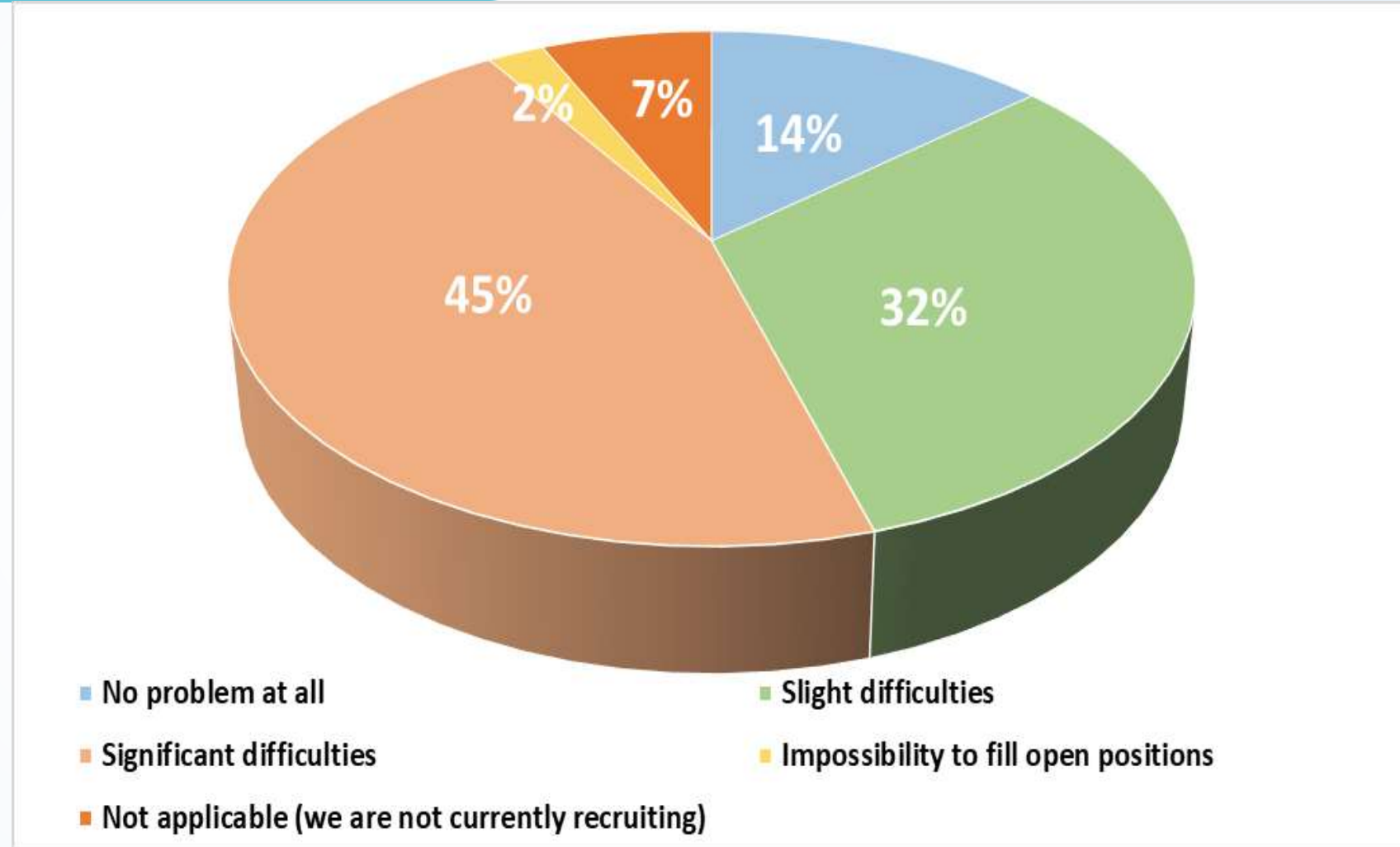
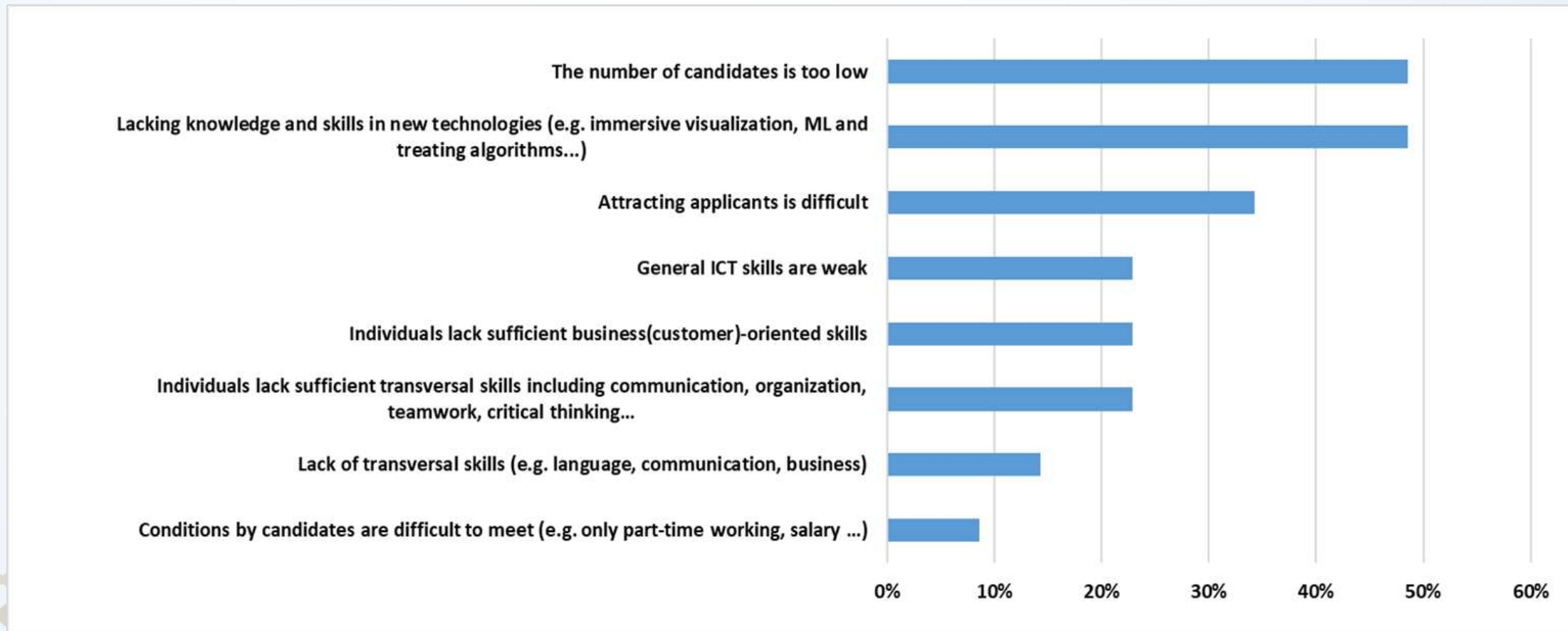


Figure 10. Estimation of how difficult it is to hire qualified employees

EARSC Industry Survey 2022

Employment - Skills (2)

When asked why it is difficult to hire skilled employees, the companies surveyed responded that the number of candidates being too low and the lack of knowledge and skills in new technologies were the biggest obstacles. Also they mentioned that attracting applicants is hard and a set of different skills (general ICT, business-oriented, transversal skills) is difficult to find.



Employment- Skills (3)

Companies were asked to tell us which skills were the most difficult to find and we found out that staff with Programming and Development capability and computing Resources and Platforms skills remain difficult to find. These results are consistent with our previous surveys and reinforce the importance of skills development actions at the employment level but also the necessity of reskilling and upskilling the staff with new technologies such as Artificial Intelligence, Machine Learning but also data analytics methods, in view of the growing volume of EO and other space data to be integrated.

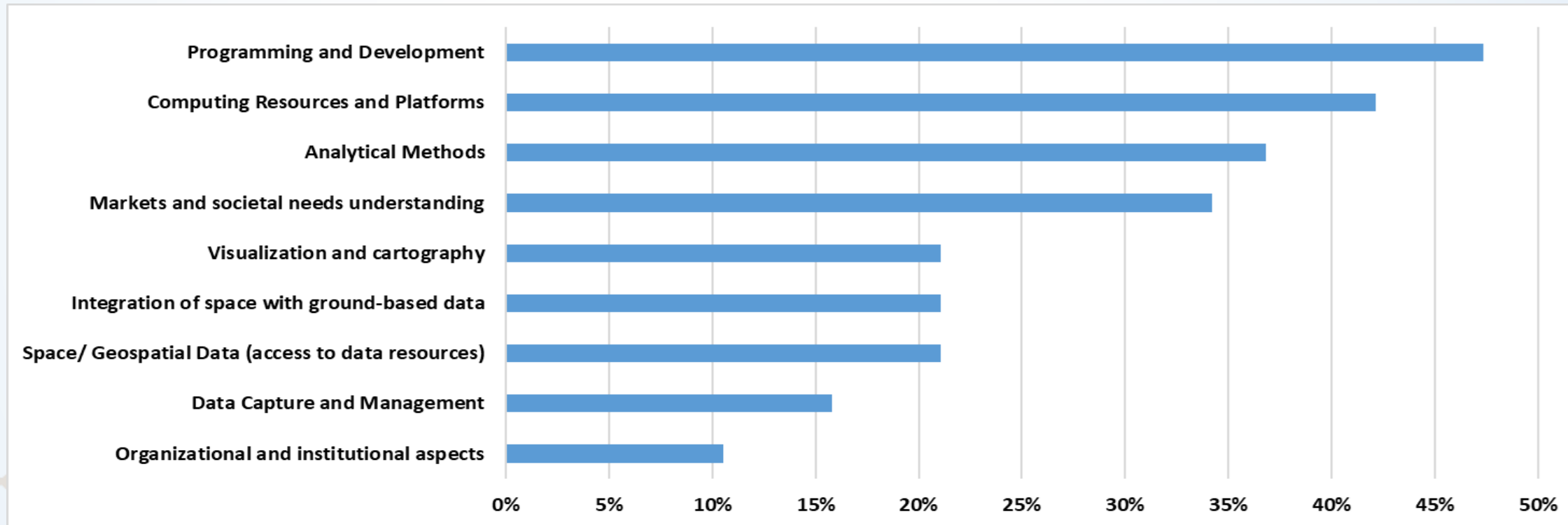


Figure 12. Technical skills lacking in your organisation

Employment- Skills (4)

We are trying to better understand the EO industry's workforce and its dynamic. We asked companies if they anticipate hiring in the upcoming months and the reasons explaining this choice. The three main reasons justifying a hiring process are linked to an increase in business sales (67,5%), the adoption of new technologies (51,3%) or an increase in projects execution (48,5%).

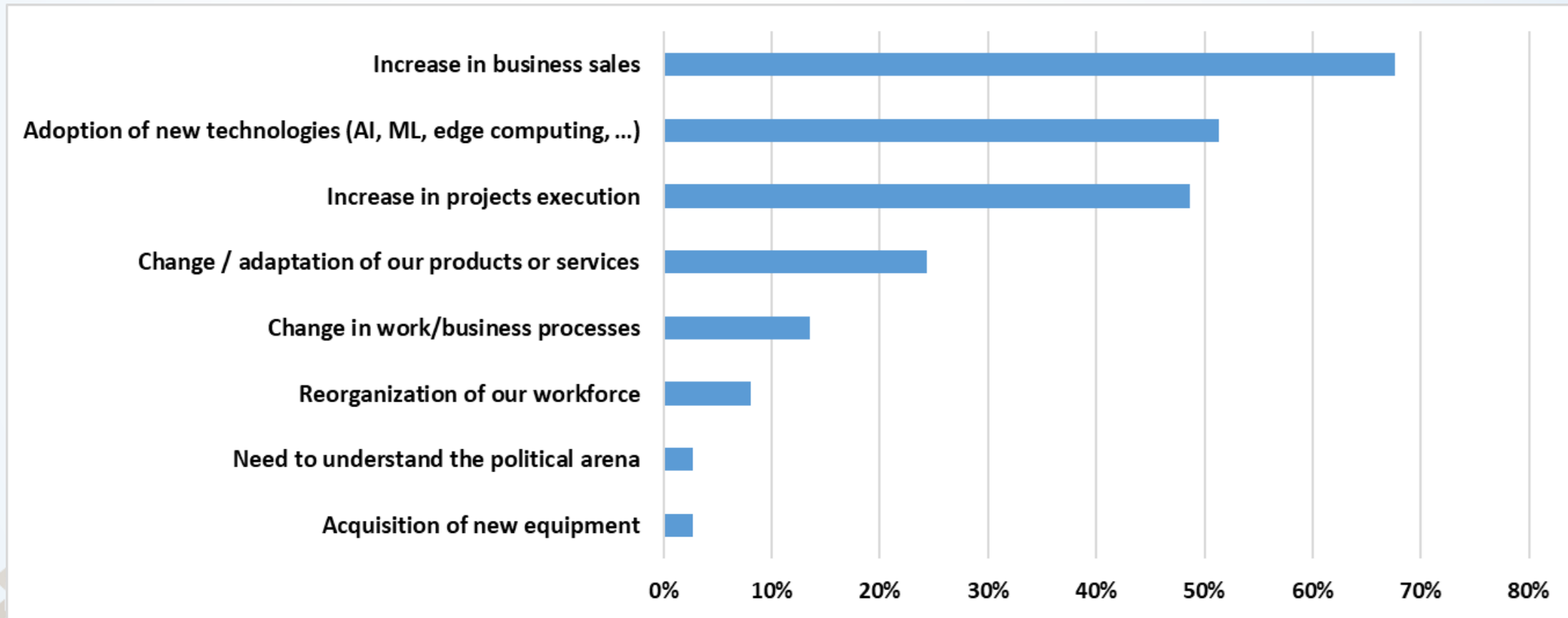


Figure 13. Reasons for hiring

Employment- Skills (5)

Companies were asked about which elements they would consider include in their workforce task in the next months. The results demonstrate that the majority of surveyed would like to focus on developing and launching new services or products. This priority is followed by the necessity to define and implement product promotion strategies and organiser or manage marketing initiatives.

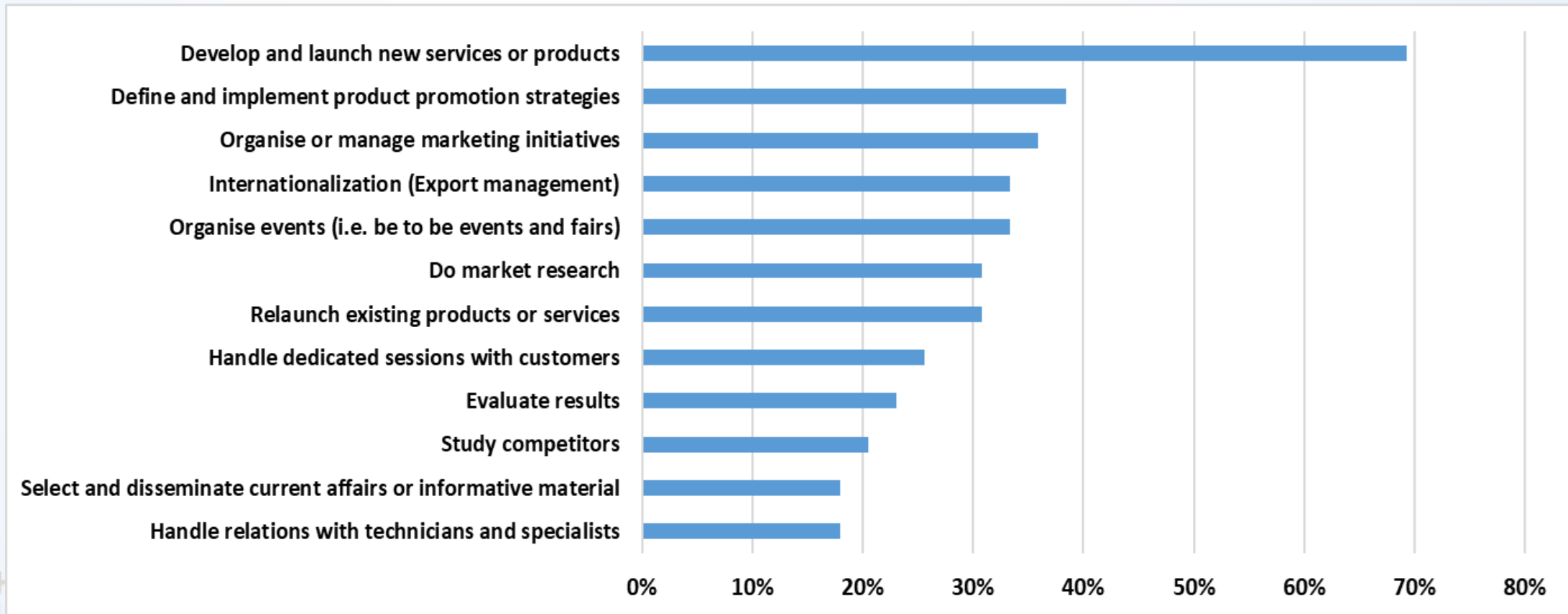


Figure 14. Which elements do you consider including within your workforce task in the next months?

Revenues (1)

The “Department” category is included recognising increasing business coming from larger departments inside even larger companies. Note that for Airbus and Telespazio their direct (national) figures are included in our survey and neither are considered as departments

Revenue Evolution:

The total revenue in the sector in 2021 is €1.61b representing a decrease of 5,5% over the last 12 months.

The fall seems to be due to delays in contracts caused by the COVID pandemic. Customer processes were disrupted in 2020 when the pandemic hit which did not affect contracts already in place but did delay extensions or new contracts.

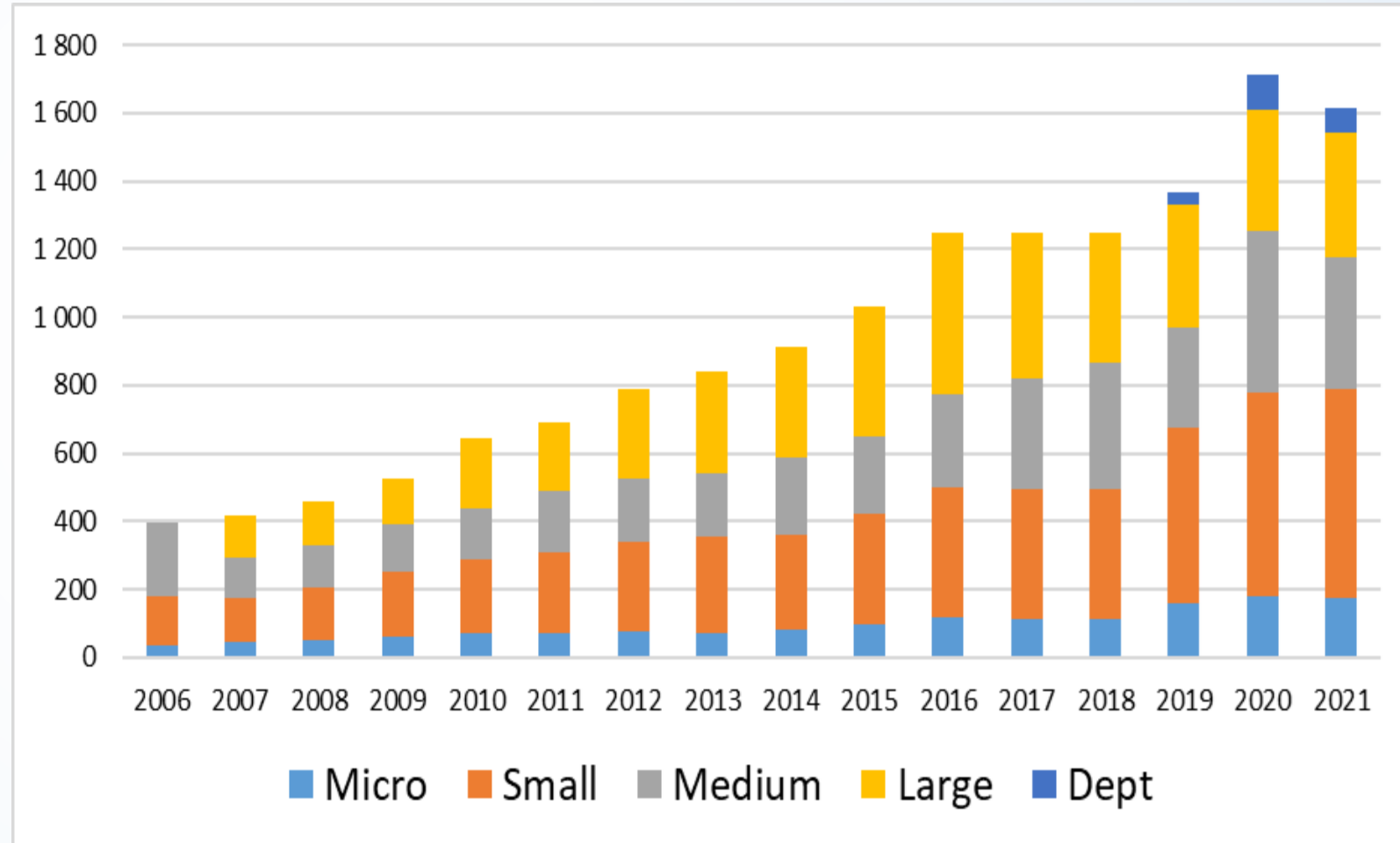


Figure 15. Evolution of revenues per company's class

Revenues (2)

Distribution of revenues across company category:

The breakdown of revenues per company class shows that small sized companies generate the most important part of revenues, followed by medium sized companies and large companies.

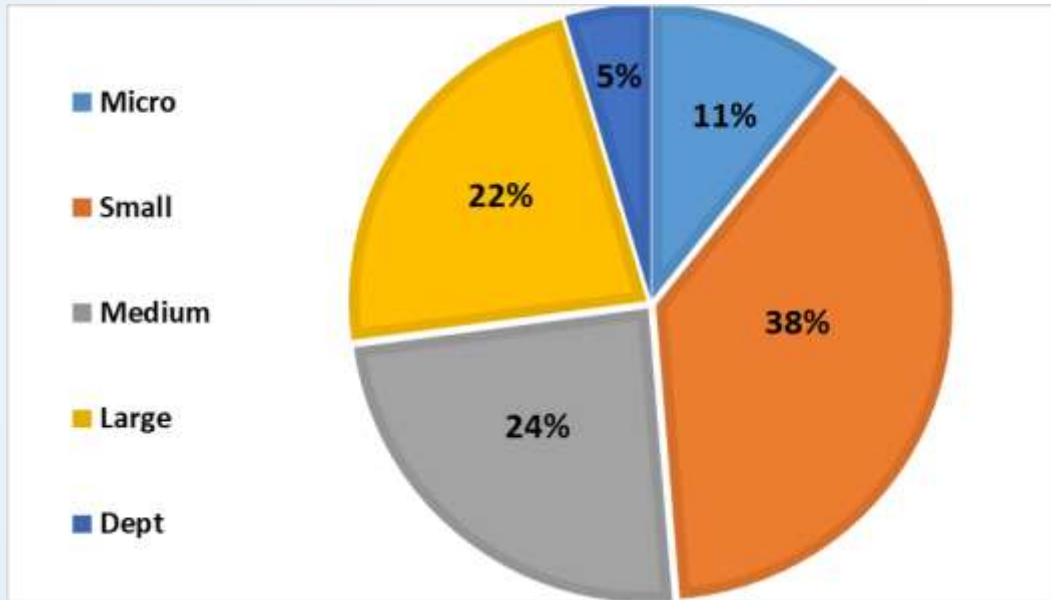


Figure 17. Breakdown of revenues (percentages) per company class for 2021

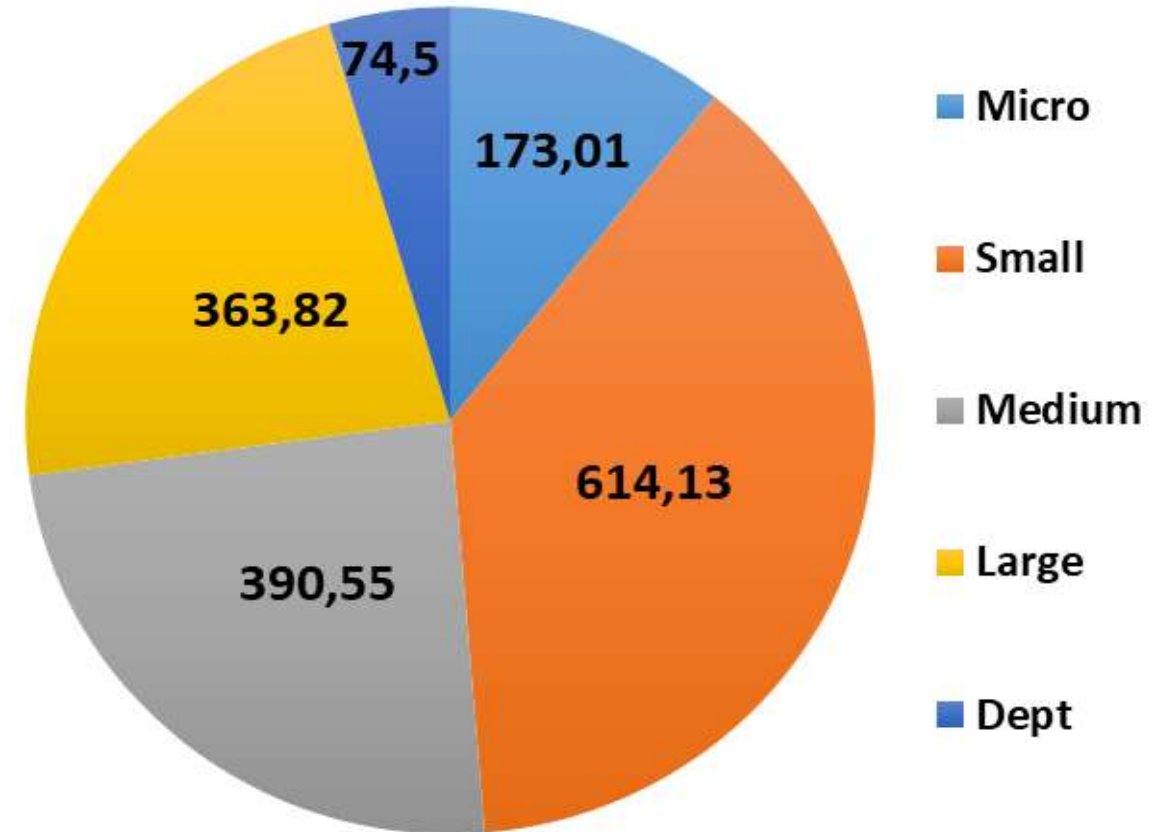


Figure 16. Breakdown of revenues per company class (K€) for 2021

When compared to revenues figures from our previous survey, we can note that the medium-sized company had the biggest decrease in their revenues in 2021.

Revenue perspective - Comparison

These charts show a comparison for the revenues perspective in 2021 and 2022. Figure 19 shows that the majority of the companies surveyed (86%) in 2022 are optimistic about the future as they foresee a slight (50%) or significant (36%) increase in their revenues.

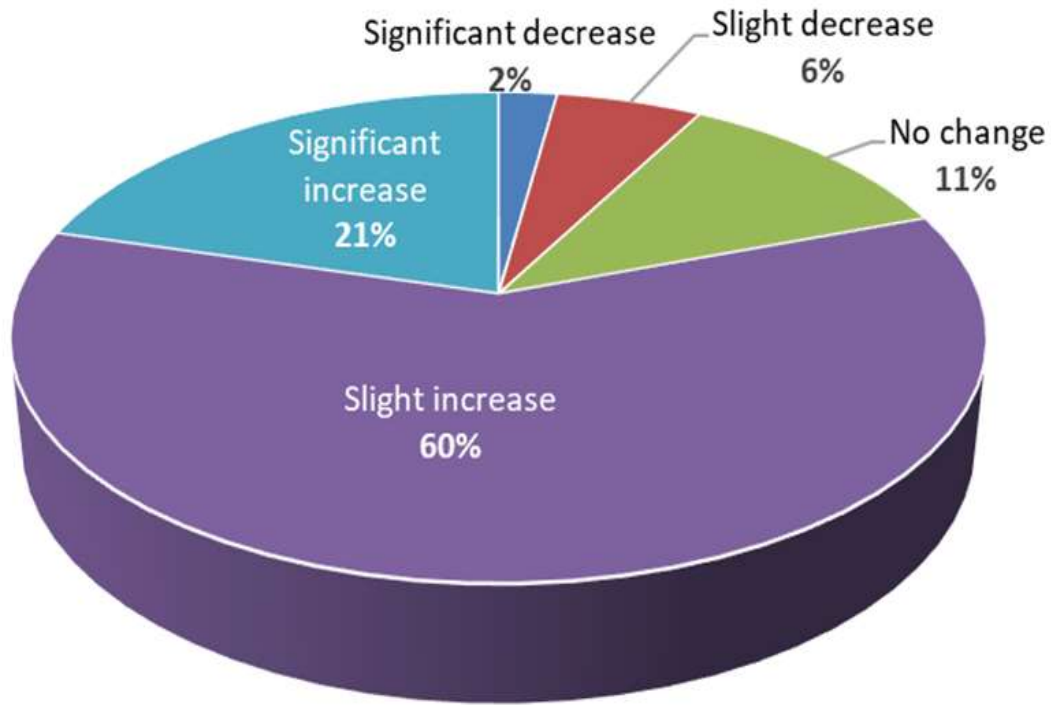


Figure 18. Revenue perspective over next 12 months (industry survey 2021)

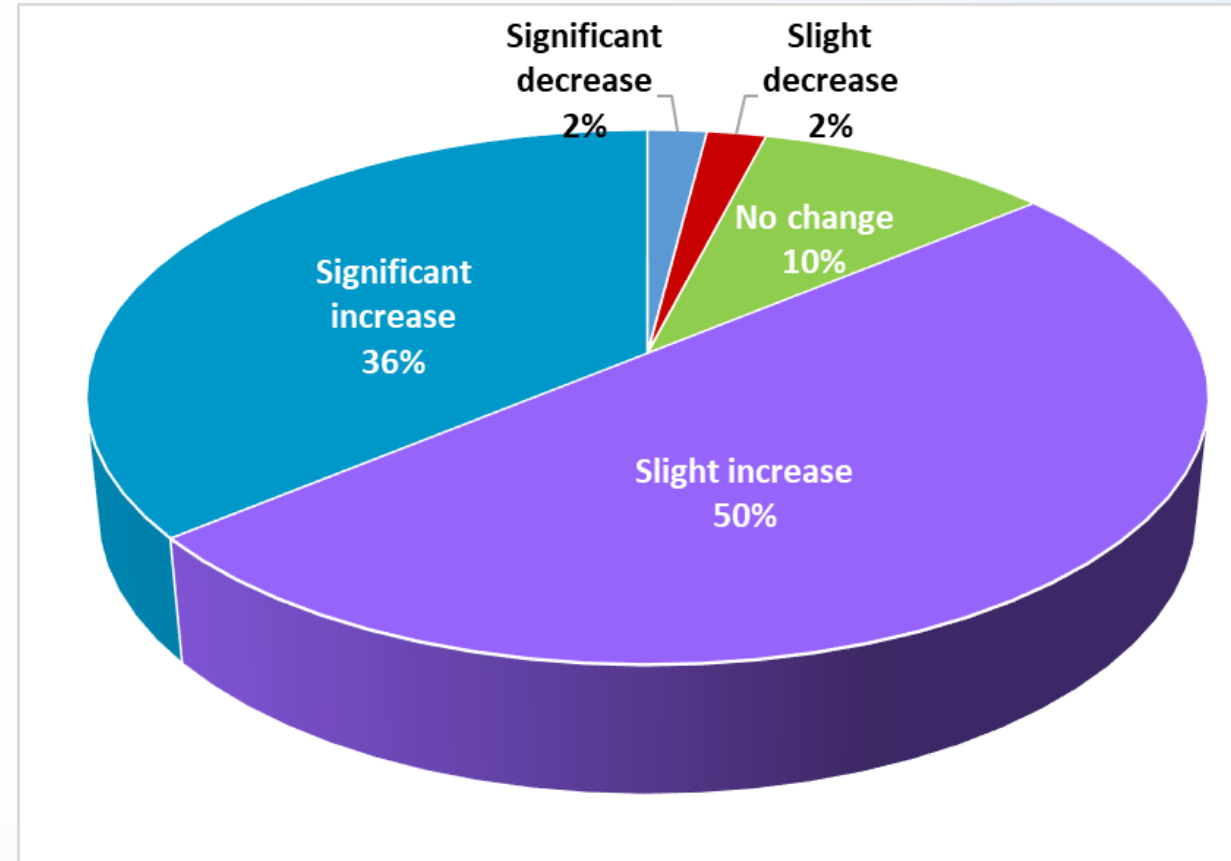


Figure 19. Revenue perspective over next 12 months (industry survey 2022)

Optimism Index

In each survey the degree of optimism of companies is measured with regard to future employment and revenues and created an index accordingly.

The results show that companies have higher expectations for revenues than employment.

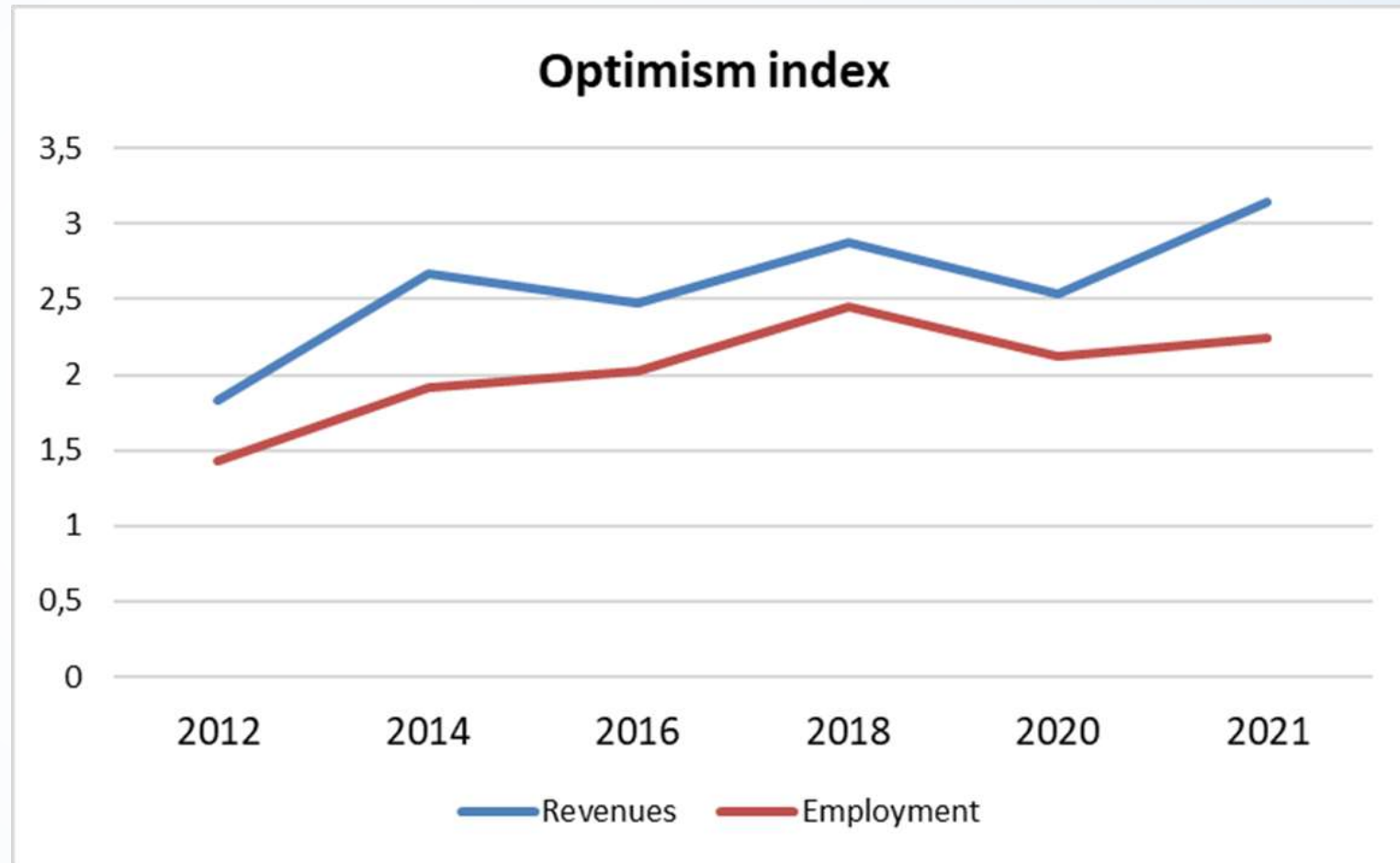


Figure 20. Optimism Index

Market- Geographic distribution

The market geographic distribution is a matter of great importance to EARSC as the association is active in promoting the internationalisation of the EO services companies.

The figures are consistent with our previous surveys, but we can note an increase of activity in the Middle East Region (19%) and Asia (19%).

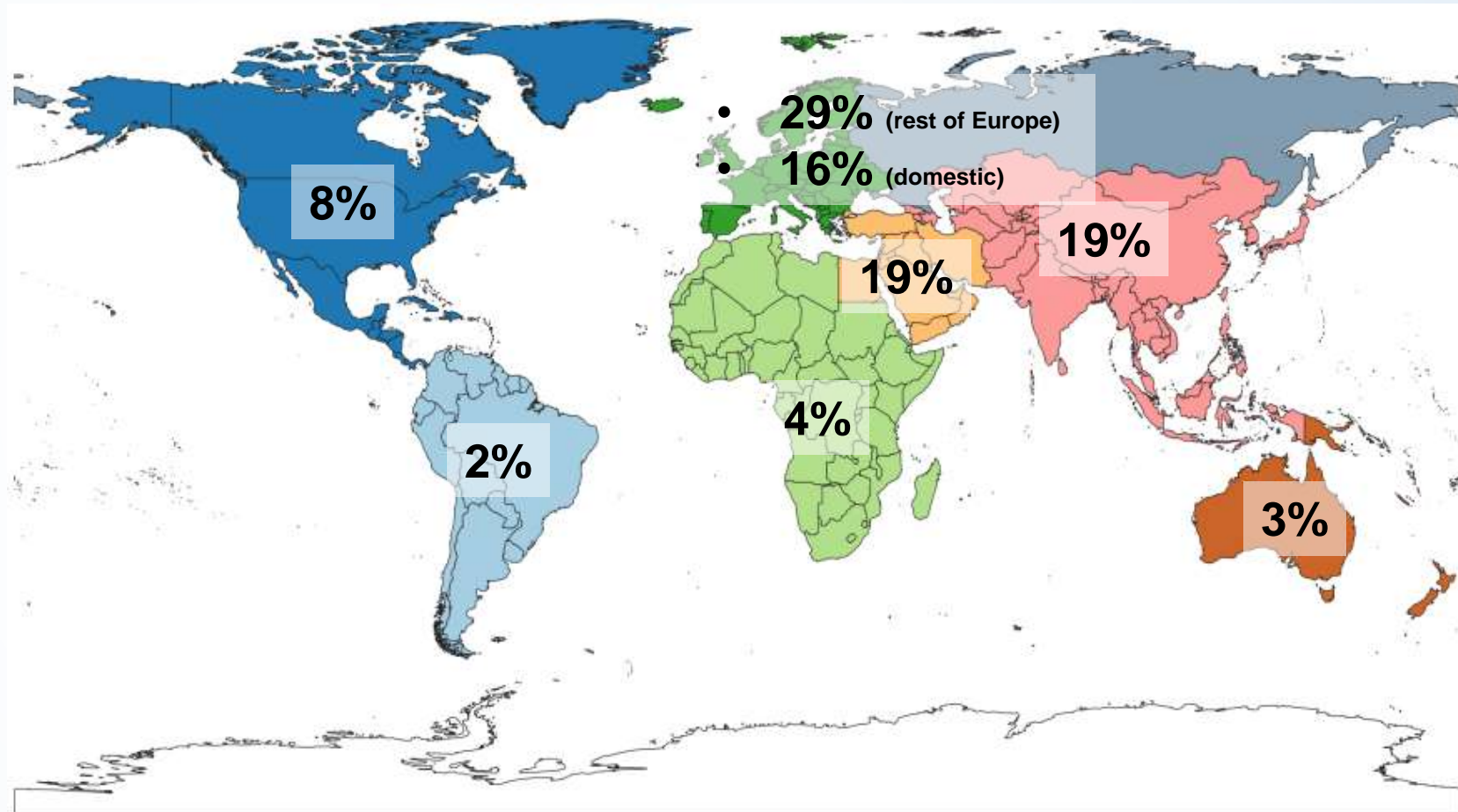
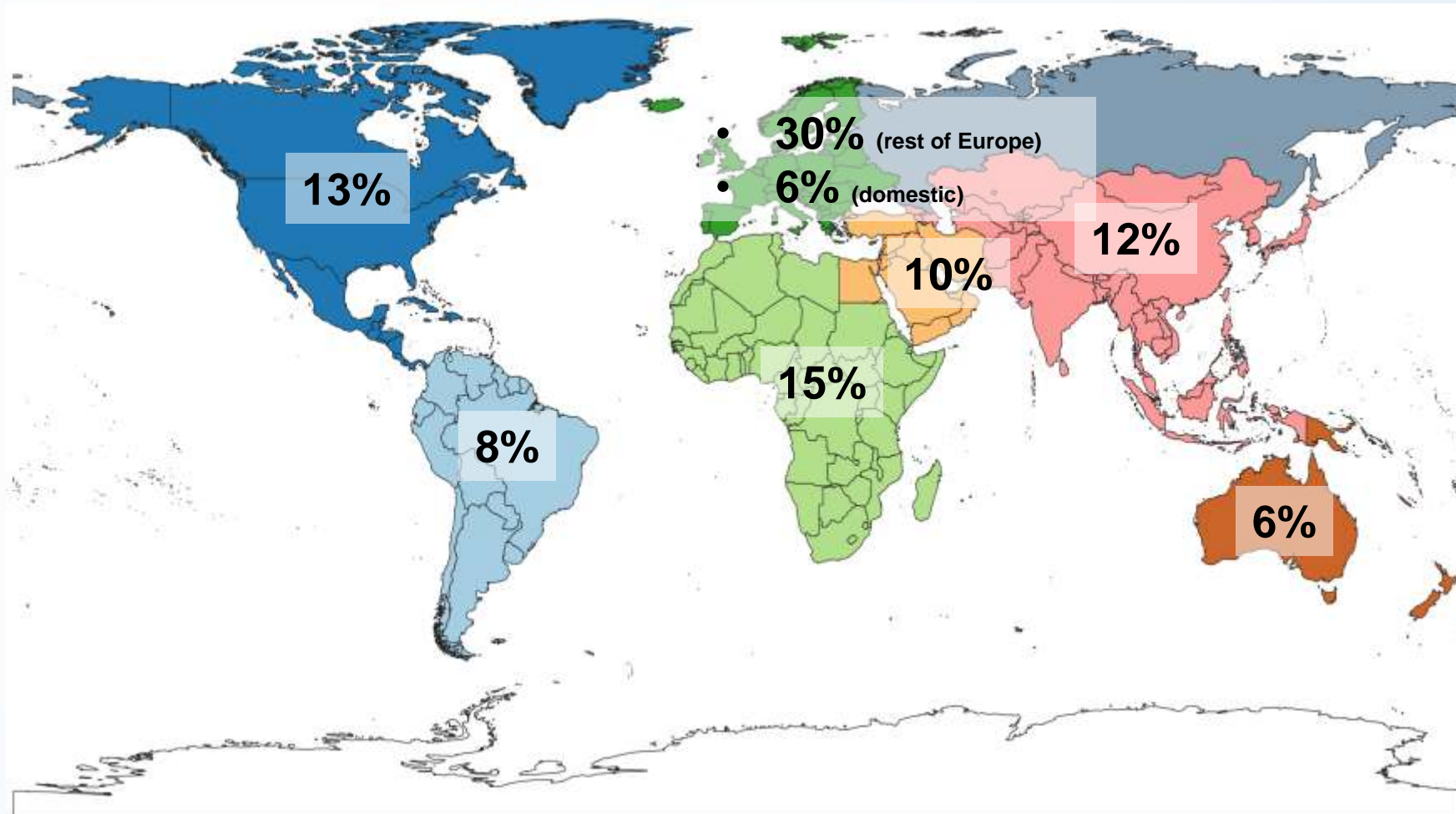


Figure 21. In which geographical areas are you doing business?

Markets – Geographical areas of interest for the future

Looking at the future, we asked the companies surveyed in which geographical areas they are foreseeing business.

The results show that Europe is the most promising area (30%), followed by Africa (15%), North America (13%) and Asia (12%).



Market- Online order entry

EARSC made in 2016 an analysis on the future of the online market leading to the creation of the eoMALL web-platform (<https://eomall.eu>) to promoting EO based solutions delivered online.

40% of the surveyed have responded to our question related to the percentage of their business related to online order entry for data and value added services.

For the respondents, it appears that:

- 8,9% of their business comes from online order entry for data and
- 29,1% for services.

Copernicus – Use of Sentinel data

As the Copernicus programme continues to have a strong influence on the European EO sector, it is interesting to have a better knowledge of the current use of Copernicus data in the companies' businesses.

Figure 23 shows that data coming from Sentinel-1 C-Band SAR and Sentinel-2 MSI are the most used, followed by Sentinel-3 SLSTR and Sentinel 3 OLCI.

This is consistent with our previous results.

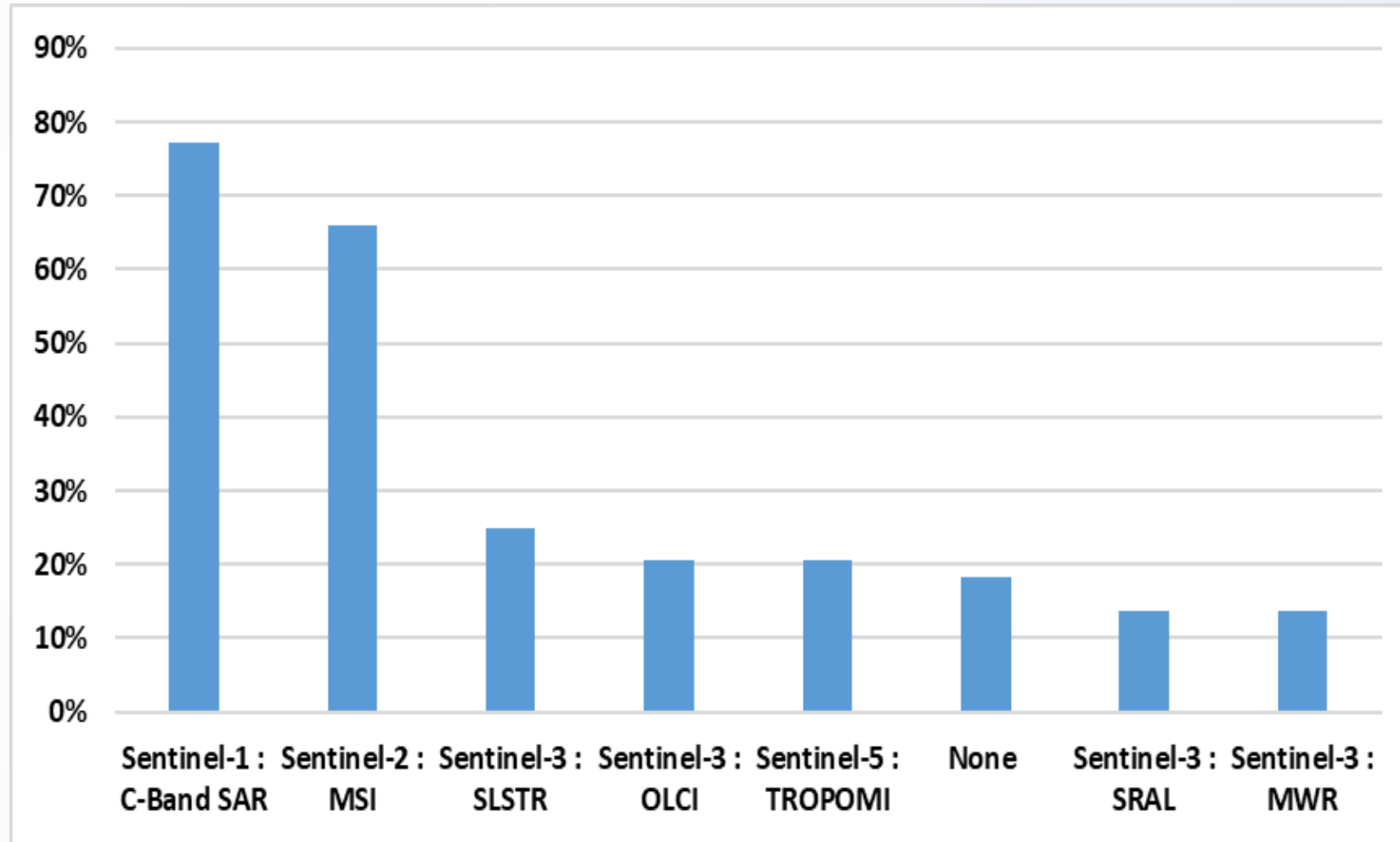


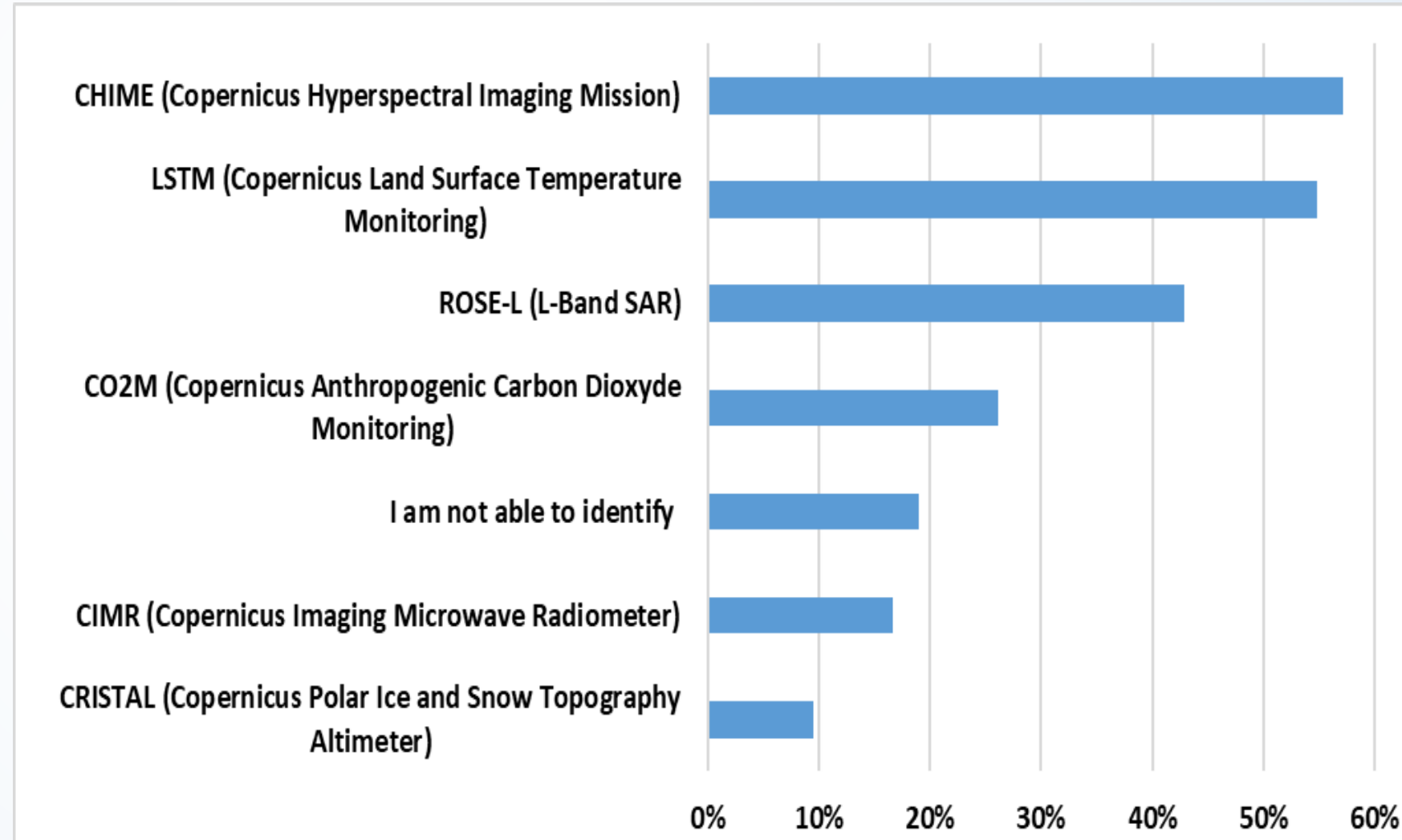
Figure 23. Percentage of companies surveyed currently using Copernicus data

Copernicus – New Sentinel missions

Looking at the future of Copernicus, we asked the companies to evaluate which of the new Sentinel missions are of most interest for their business.

The results show that the Copernicus Hyperspectral Imaging Mission (CHIME) and the Copernicus Land Surface Temperature Monitoring (LSTM) will be the most promising ones followed by the L-Band SAR (ROSE-L) and the Copernicus Anthropogenic Carbon Dioxide Monitoring (CO2M).

Figure 24. New Sentinel Missions of most interest for the business



Copernicus- Participation to the supply of Copernicus services

This chart shows the participation of companies to the supply of Copernicus services. We can see that an important proportion of companies is still contributing to the supply of the Land service (30%) and the Emergency service (28%). This is consistent with our previous results.

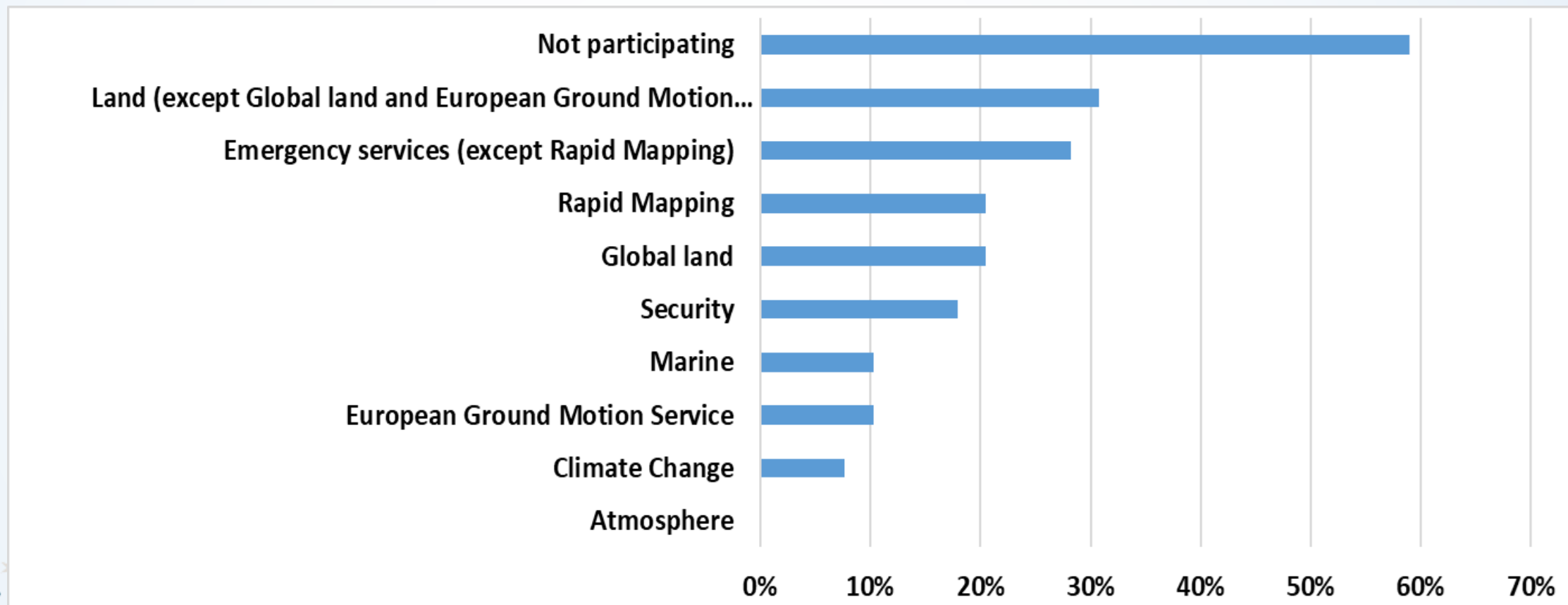


Figure 25. Participation to the supply of Copernicus services

Copernicus – Impact on the business

Companies were asked about the estimation of Copernicus's future impact on their business. This question stems from earlier concerns in a few companies about the impact of the free and open data policy.

Figure 26 confirms our previous results with a high proportion of companies evaluating positively the future impact of Copernicus. Almost 45% of the surveyed foresee a significant increase of Copernicus' impact in their business for the upcoming months/years.

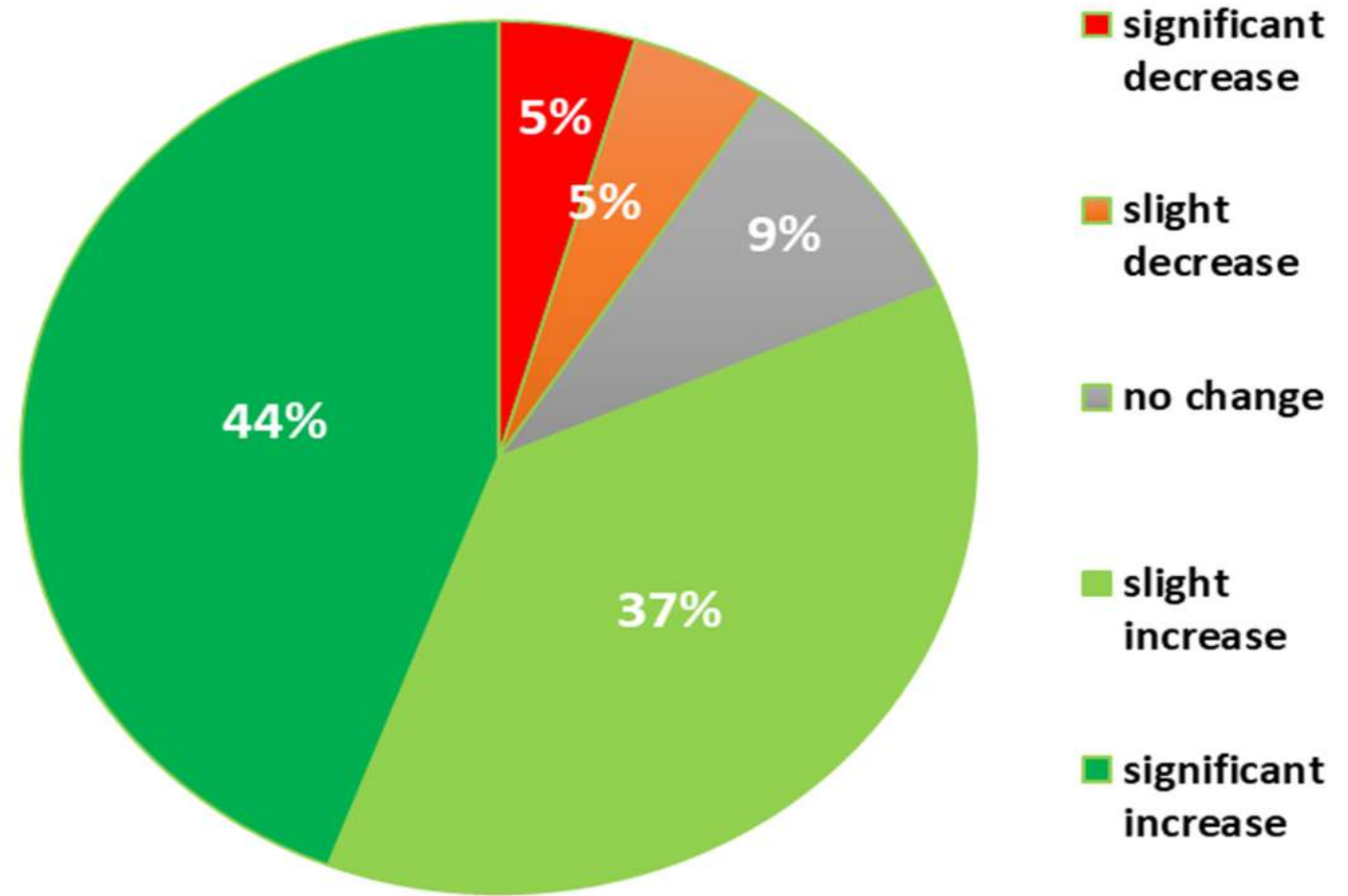


Figure 26. Estimation of Copernicus' future impact on companies' business

Copernicus – Access to Sentinel data (1)

Access to Copernicus data is crucial for EO companies.

We asked companies which platforms they are using to access Sentinel data. The results show that Sentinel Hub and Copernicus Open Access Hub are the most used platforms.

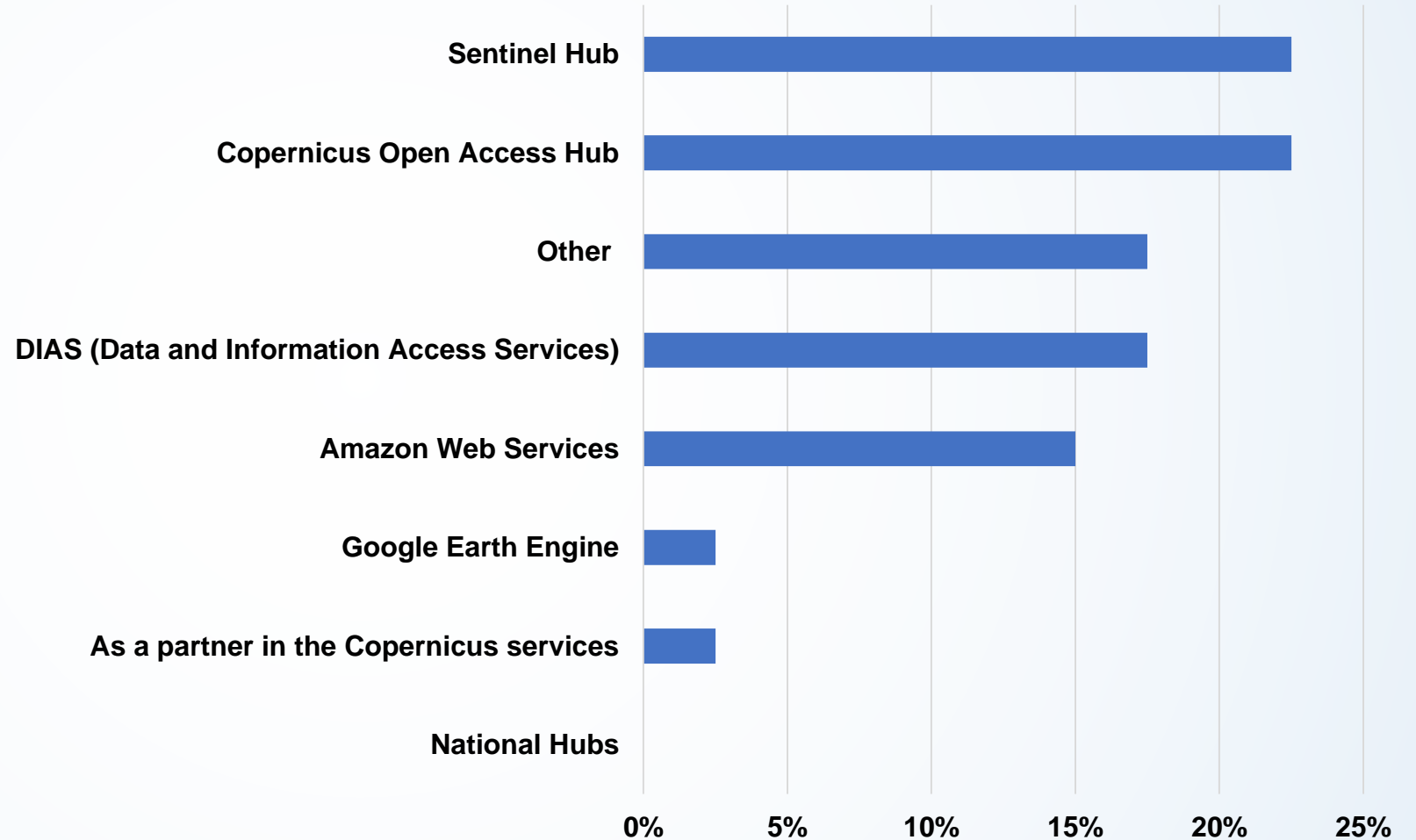


Figure 27. Platforms used by companies to access Sentinel data

Copernicus- Access to Sentinel data (2)

We asked companies why they were using the platforms identified in figure 27.

It seems that the easy access is the most important reason (58%), followed by the technical needs (39%), the convenience of use and user friendliness.

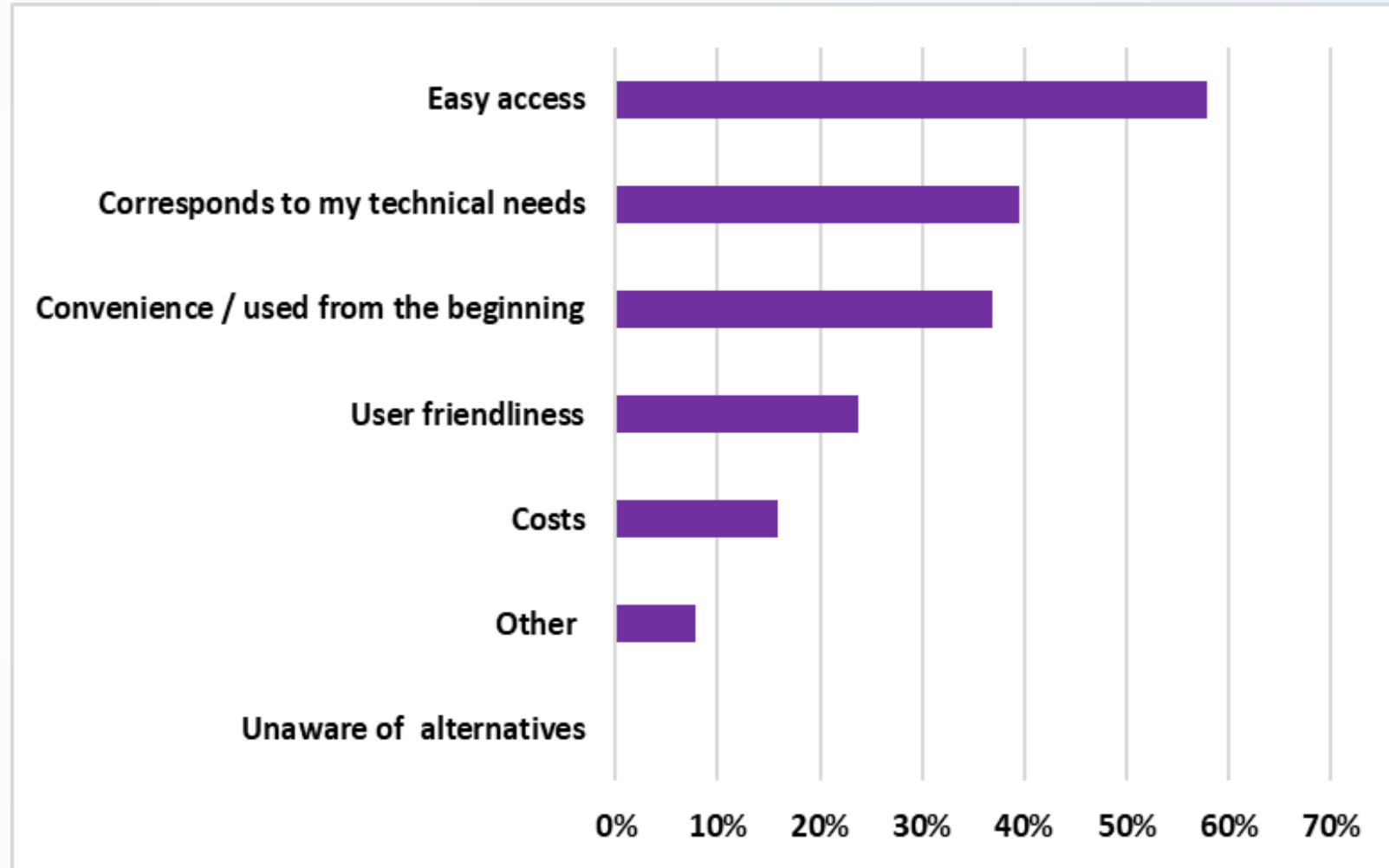


Figure 28. Why are you using this platform?

Copernicus – Access to Sentinel data (3)

This chart shows the percentage of companies surveyed accessing and using the DIAS.

We can see that CreoDias and Mundi Web Services are the most accessed and used DIAS.

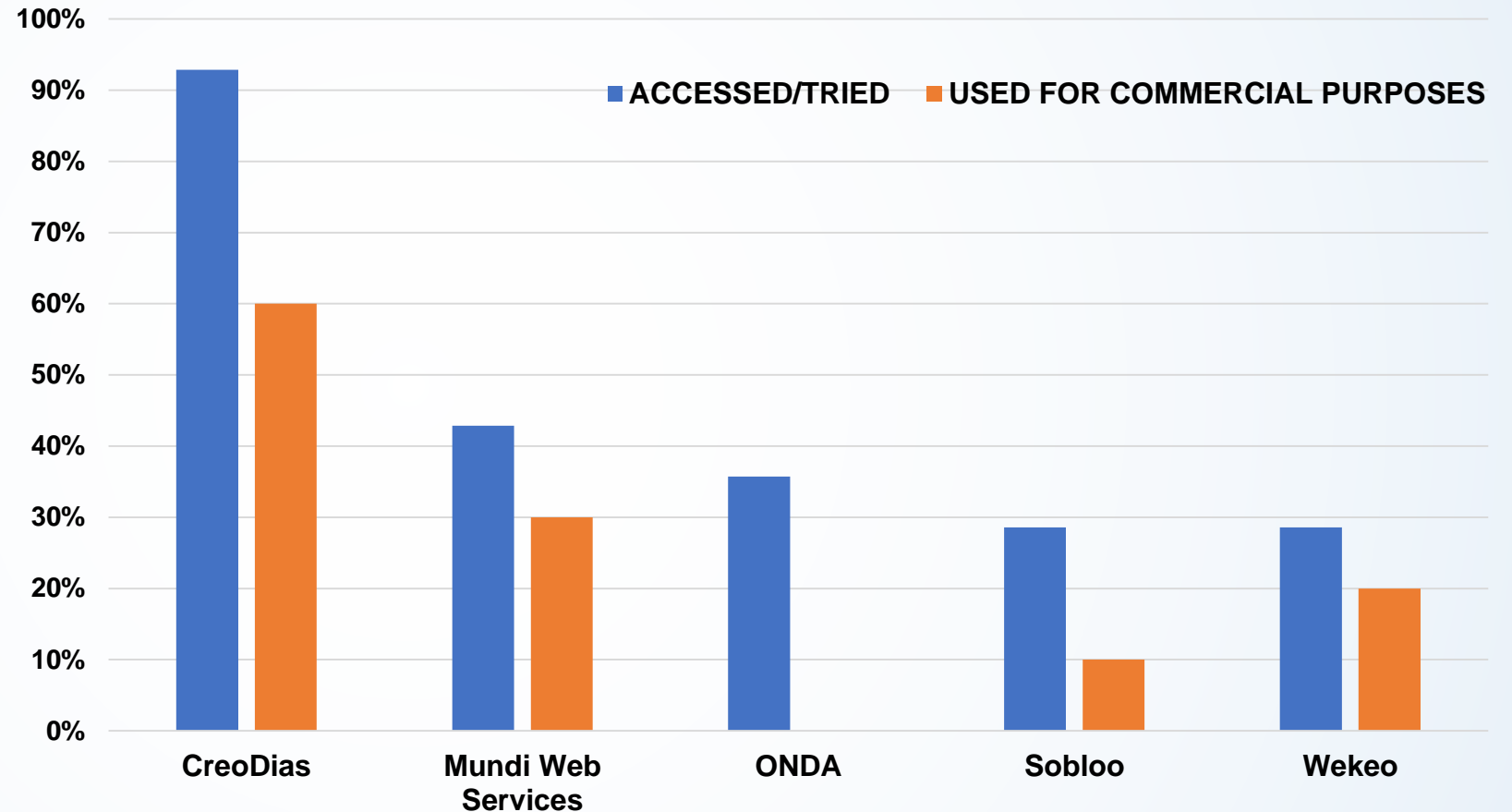


Figure 29. Access and use of the DIAS

Copernicus – Access to Sentinel data (4)

When asked about the access to Copernicus data, 33% of the companies surveyed said that they were using non-European platforms.

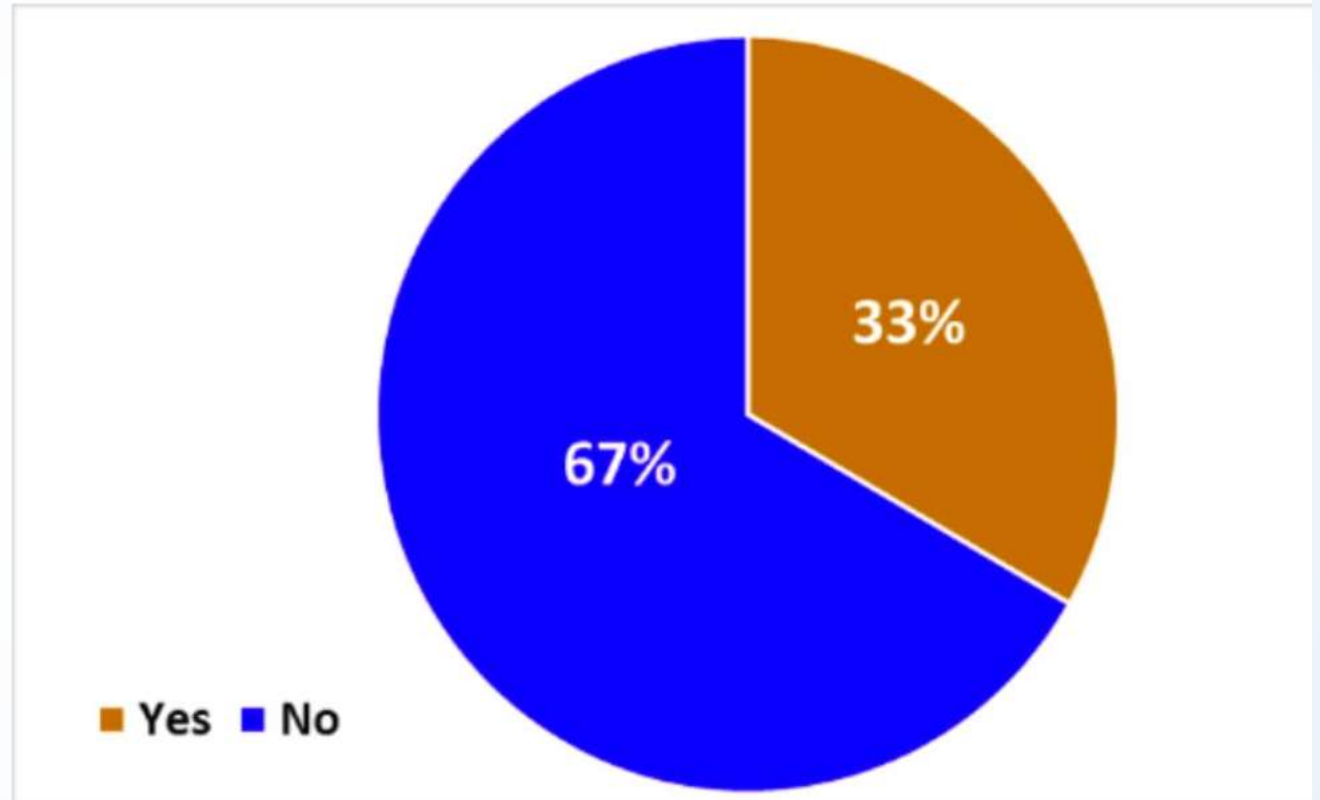


Figure 30. Do you use foreign platforms to access Copernicus data?

EARSC Industry Survey 2022

Postscript

This report covers the results coming from the 3rd survey conducted at an interval of one year from the previous one. It has covered all aspects of our full industry survey.

The more direct method, introduced for the 2019 survey, has shown its value and we are able to develop a better understanding of some of the dynamics of the sector – especially linked to start-ups.

The EO downstream services industry is a very dynamic and rapidly evolving sector. In light of the latest technological developments, we introduced new questions in this survey in order to identify future trends.

We shall start the next survey at the end of 2022 and expect to publish results in Summer 2023.

Any comments or questions relating to this survey please contact us at info@earscl.org

Methodology (1)

Building the database:

- At the heart is our database of companies which is maintained on a constant basis to add new ones as we find them and remove any which disappear through merger or failure.
- Public sources are scanned and monitored for new companies; workshops and conferences, accelerators, ESA BIC's, members news, trade journals etc.
- Companies, with a legal entity in Europe that is selling services based on EO data, are included.
- 32 countries are covered, comprising EU and ESA member states.
- Each company has been validated through the national companies register – which also provides the date of formation.
- The company website is reviewed for confirmation that its business includes the sale of services which are based on the use of EO data. Where companies are involved in various parts of the value-chain, this data is noted where possible.
- Note, we have been seeing a significant number of new companies (around 10% of our database), in other business sectors, starting to use EO data in the service they offer to their companies. These are categorized as GI – Geographic Information – companies in our analysis.

Scope

- Companies offering services or supplying (selling) data or information using satellite (EO) data.
- Private legal-entity in an EU or ESA Member State.
- Survey conducted in 2022 collecting 2021 data.
- Where EO services are only a part of the business model, the proportion of employees linked to this part of the business is determined as far as possible.

Methodology (2)

Data Collection and preparation:

The data is collected by a series of steps. In moving to an annual survey a focused approach has been adopted so that not all companies are asked to fill in data every year.

- For the full survey, all companies in our database, which are more than 5 years old, are contacted and asked to respond. Those less than 5 years old are also contacted but are asked to respond to the separate start-up survey with questions adapted.
- The dedicated survey on start-ups differs from the full survey. A core set of questions is common to both with additional questions adapted to the maturity of the companies, and topics of particular interest.
- This data is compared to the same data from 12 months ago to establish industry-wide trends. The trend data is applied to our full database which contains the data from earlier years.
- Additional data may be sought if there are some key parts missing. This will be either gathered directly or it will be purchased from a commercial supplier. This generally yields revenue data.
- For those companies with no revenue data: using the data collected, we calculate an average revenue per head for the different classes of companies which is then applied to those companies for which we have employee but not revenue data.
- For those companies with no employment nor revenue data, we distribute them according to the distribution in the main dataset over micro and small companies and apply average revenues per head.

Class	No. Employees
OMC	1
Micro1	2-5
Micro2	6-10
Small	11-50
Medium	51-250
Large	>250

All data is examined carefully and any perceived anomalies cross-checked to correct false results.

Value Chain

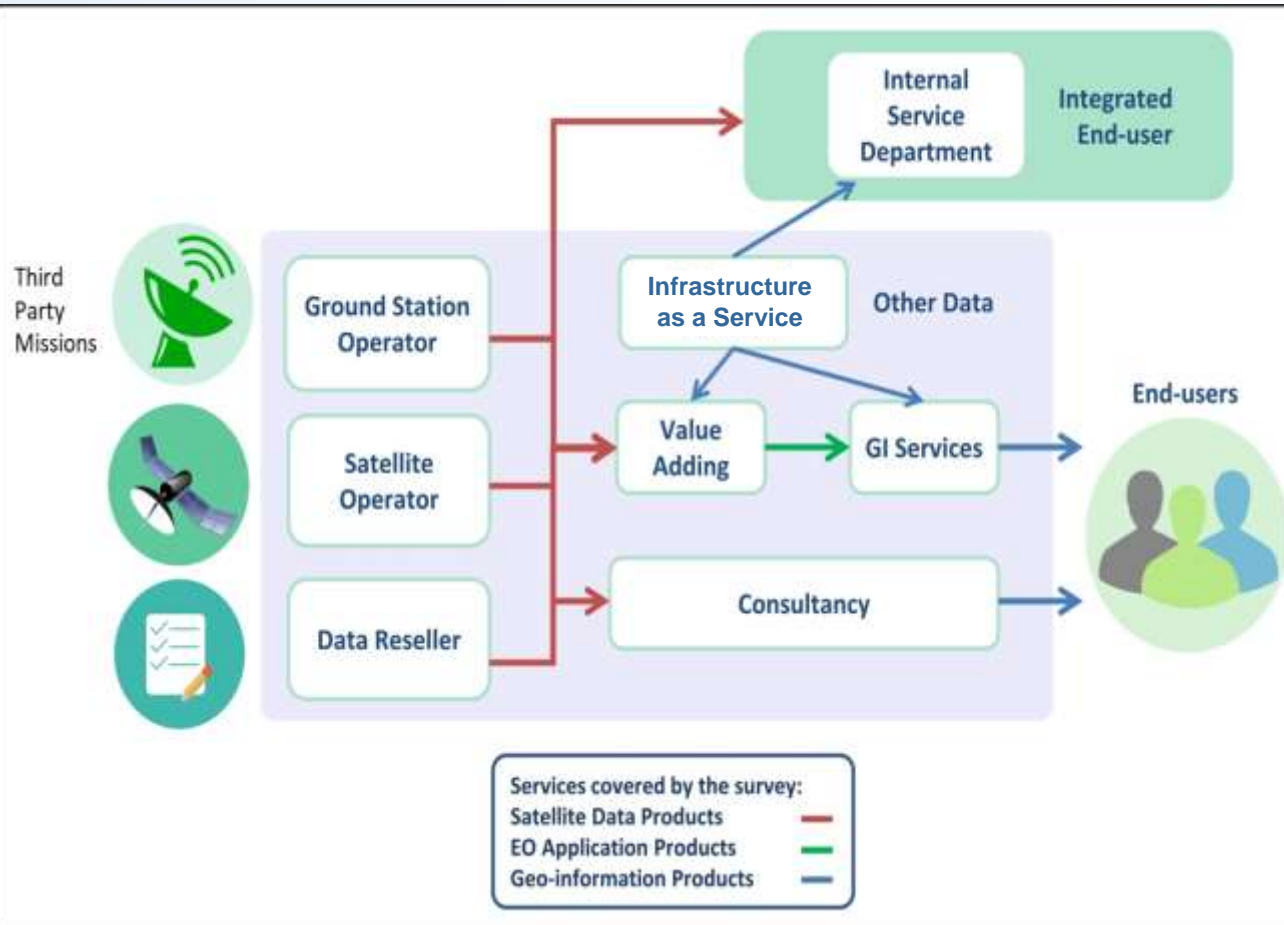


Figure 1. Definition of companies included in the survey (inside the grey box)

The **value-chain** defines the scope of the businesses included in the survey.

- Satellite data provision and value adding services form the core of the value chain.
- GI Services covers companies whose focus is on other sectors but where EO data is used to meet customer needs such as an agriculture services company using EO.
- Software revenues are included in the core value chain where they arise i.e. Value-added or GI Services.
- Consultancy is not to deliver EO services but support to the ecosystem (e.g. studies for ESA or EC).
- Infrastructure as a Service (IaaS) is included for the companies offering cloud or processing services.
- Internal service departments where a company in a different sector (e.g. O&G) has an internal unit delivering EO services information to other parts of its business, but is not selling EO services to others. They are not in the scope of the survey.

Methodology (3)

Data Analysis:

- The first step is to analyse the industrial landscape which may also identify gaps which need to be filled. A cut-off is set for company data which we had entered before the end of the year in question (2021 in this case). This is sorted by country and by year of formation.
- The second step is to assemble the employee information. We start from the final data coming from the previous survey that is then updated with new data from the latest survey. New companies added are researched using public sources and/or direct contact to establish core information ie. their employee numbers and revenues.
- A comparison is made of like-for-like employment figures to establish a growth trend. Each company which has responded 2 times in the last three years provides a basis for comparison. A growth figure is calculated for each category of company class, and is then applied, to any company whose employment data in our database is more than 2 years old.
- The companies are classified according to the latest employment figures available. This leads us to establish a “new” final table of employment figures which will also be the starting point for the analysis next year.

Methodology (4)

- We start from the final data established from the previous survey then update this with the new numbers.
- For all companies for which no data has been compiled, they are assumed to all be micro or small companies (i.e. we know and have included all the medium and large companies) and are assumed to be distributed to match the known figures. An average number of employees is then used to calculate a value for the missing data.
- The third step is to establish the revenue information. As for the employment figures, the final list of revenues is taken from the last survey and updated where new figures have been provided this year (around 50 companies). Average revenues per head for each category of company are used for those companies where no revenue numbers have been obtained. A final table of revenue figures is assembled for all the companies with projected numbers added for all those with no data being available.
- The final table becomes the starting point for next year.