

## **DELIVERABLE 4.3**

### **List of potential partners interested in participating to future space missions**

<i>COST Action:</i>	<b>CA15220</b>
<i>Project acronym:</i>	<b>QTSpace</b>
<i>Project title:</i>	<b>Quantum Technologies in Space</b>
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## TABLE OF CONTENT

INTRODUCTION .....	3
IMPLEMENTATION.....	4
CONCLUSIONS .....	10

## INTRODUCTION

As defined by the COST Implementation Rules, a COST Action is open to all:

- institutions (academia, public institutions, SME/industry, NGO, European/international organisations, etc.);
- career stages (both young and experienced);
- COST Members

Non-COST Members are spread across the Near-Neighbour Countries and International Partner Countries and can join on the basis of mutual benefit.

Researchers and innovators from universities, public and private institutions, NGOs, industry and SMEs. Particular emphasis is placed on activities involving researchers from less-research-intensive COST Member countries with a view to increasing their participation.

With that in mind, the QTSpace Action puts together a network of genuine European dimensions. Its technical and scientific excellence, strongly inclusive character, and ambitious research vision will lead QTSpace towards the achievement of inter-sectorial benefits of fundamental and applied nature.

The List of Partners includes all (mainly academic and industrial) members that have actively participated at the QTSpace activities.

The following report analyses data relative to the distribution of members with respect to country of origin, gender, career stage, participation to WG activities.

## **IMPLEMENTATION**

### **Public and Private data**

The following analysis is based on public and private information about the QTSpace partners.

Public information includes the full name of the partners and the name of their Organization. Privately, we also collected the partners' Country, Gender, associated Working Group, list of the QTSpace activities which they took part to, and whether they are Early Career Investigators (less than 8 years from PhD or full time equivalent).

Private information is not disclosed; it is used for statistical purposes only, and will be erased after the end of the Action.

When registering, people were preliminarily informed about which information is public, which private, and how it would be used.

### **List of partners on the QTSpace website**

The full list can be found on the Action's webpage at the link [www.qtspace.eu/?q=cost-participants](http://www.qtspace.eu/?q=cost-participants)

Partners which are part of a specific Working Group are listed on the Working Group webpage:

WG1 - Fundamental Science Studies: [www.qtspace.eu/?q=wg1](http://www.qtspace.eu/?q=wg1)

WG2 – Applications: [www.qtspace.eu/?q=wg2](http://www.qtspace.eu/?q=wg2)

WG3 - Proof-of-principle experiments: [www.qtspace.eu/?q=wg3](http://www.qtspace.eu/?q=wg3)

WG4 – Implementations: [www.qtspace.eu/?q=wg4](http://www.qtspace.eu/?q=wg4)

**Statistics**

The data used for the statistics refers to a total of 482 partners from 46 countries worldwide, among which 30 COST members, Israel (as Cooperative COST member) and South Africa (as Partner COST member). Among them, 78 partners come from the 15 different ICT countries.

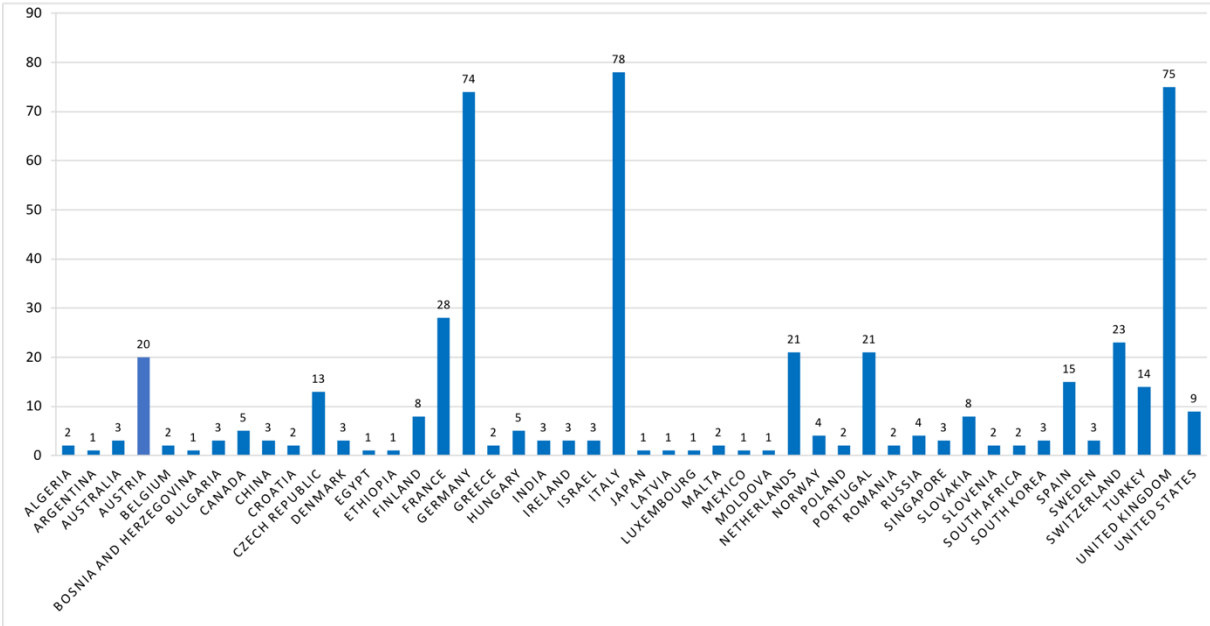


Figure 1: Distribution of the Partners with respect to the 46 countries worldwide, participating to the Action.

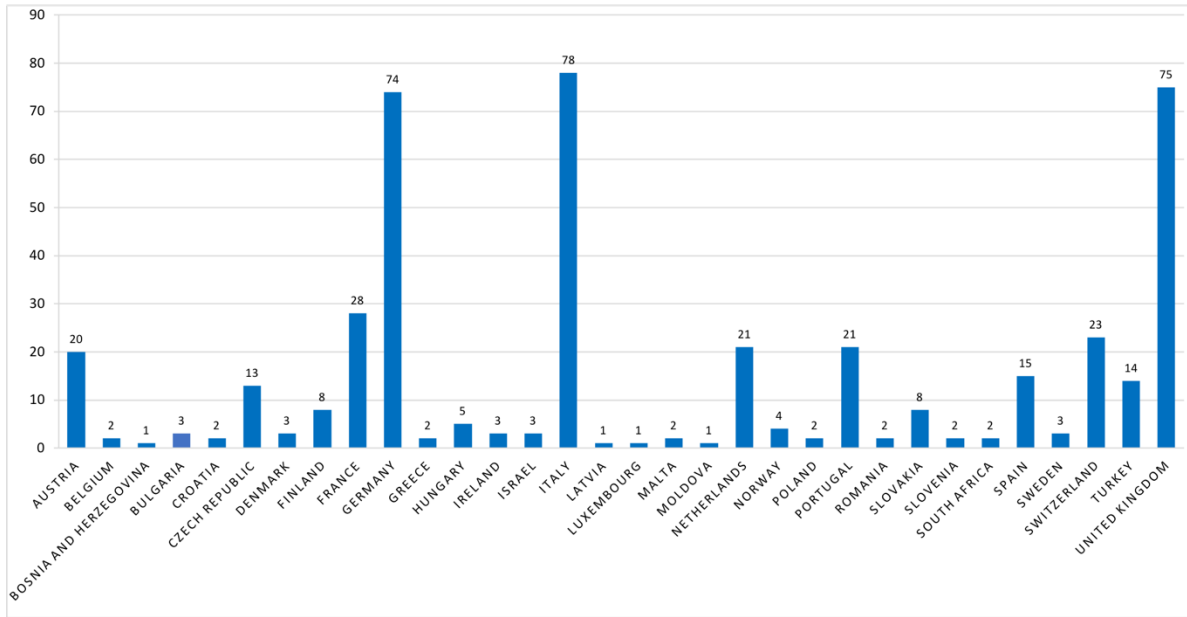


Figure 2: Distribution of the Partners with respect to the 32 COST countries, including the Cooperative and Partner countries, participating to the Action.

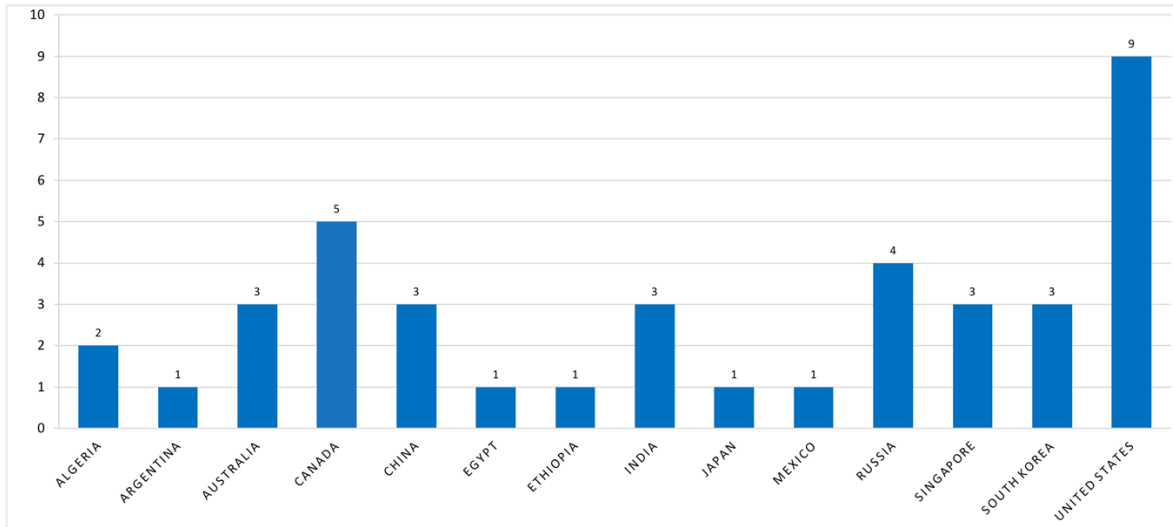


Figure 3: Distribution of the Partners with respect to the 14 non-COST countries participating to the Action.

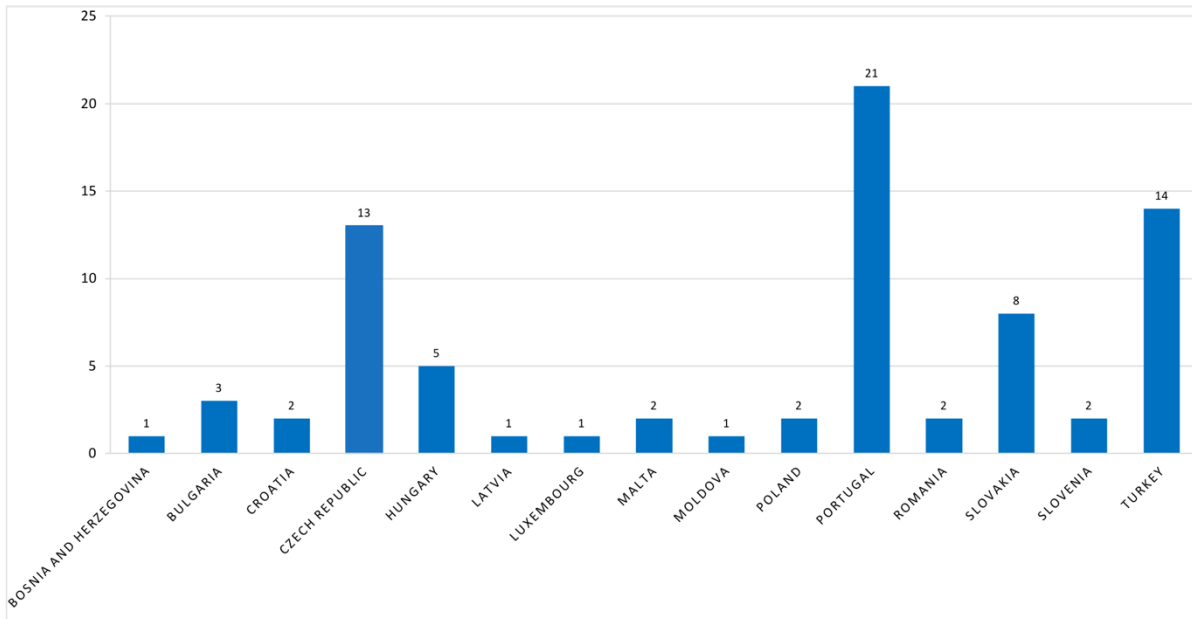


Figure 4: Distribution of the Partners with respect to the 15 ICT countries among the COST countries participating to the Action.

Partners are divided among 415 males, 65 females and 2 persons who preferred to describe themselves differently; 215 partners are Early Career Investigators.

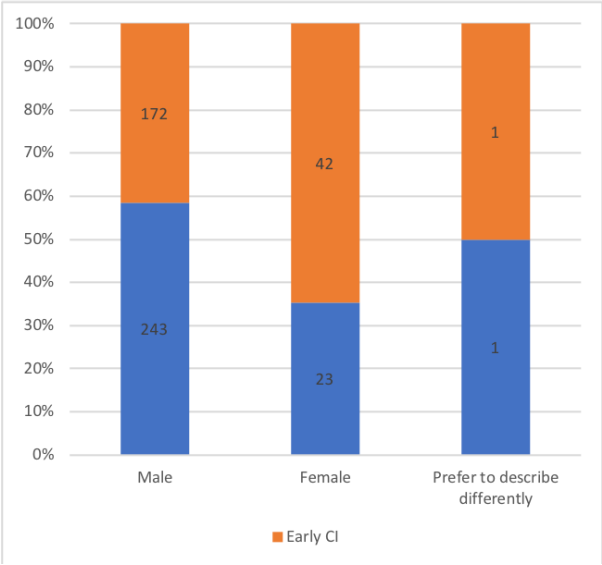
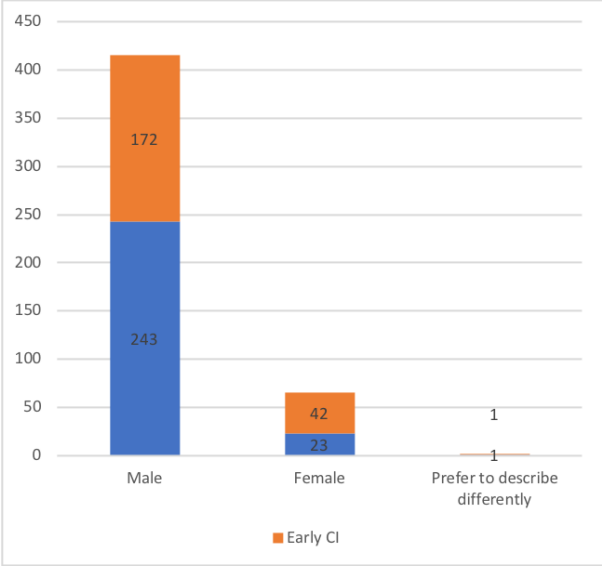


Figure 5: Distribution of the Partners with respect to gender. The Early CI are highlighted in orange.

Partners participated in the Working groups as follows: 111 in WG1 – Fundamental Science Studies, 100 in WG2 – Applications, 102 in WG3 – Proof-of-Principle Experiments, 84 in WG4 – Implementations, and 297 did not indicated a Working Group of reference.

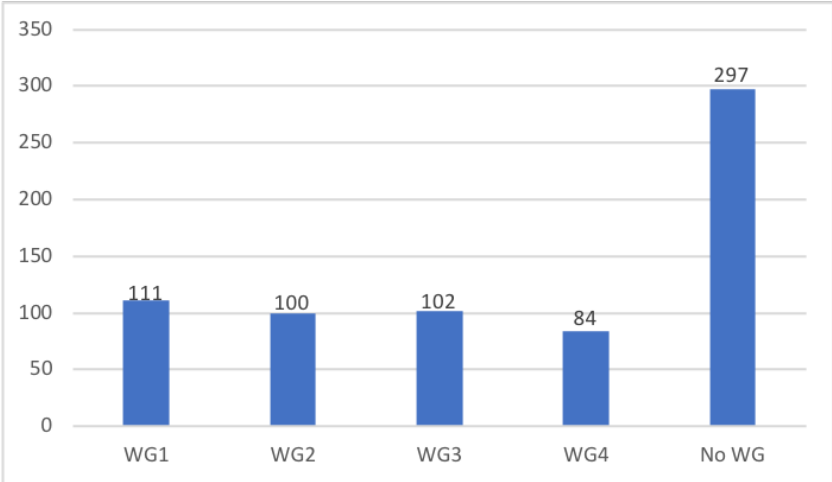


Figure 6: Participation of the Partners to the different WGs.

The participation to the QTSpace activities by the partners was broad, with a net peak in participations to a single activity. However, one should also notice the non-negligible count of partners participating to more than one activity. Notably, the countries hosting activities were those with the larger number of counts in participations, such as Italy (hosting 2 activities) with 114 participations, and Germany (hosting 5 activities) with 108 participations. An exception is provided by United Kingdom, which did not host any activity, but had a large participation to QTSpace activities (119 participations).



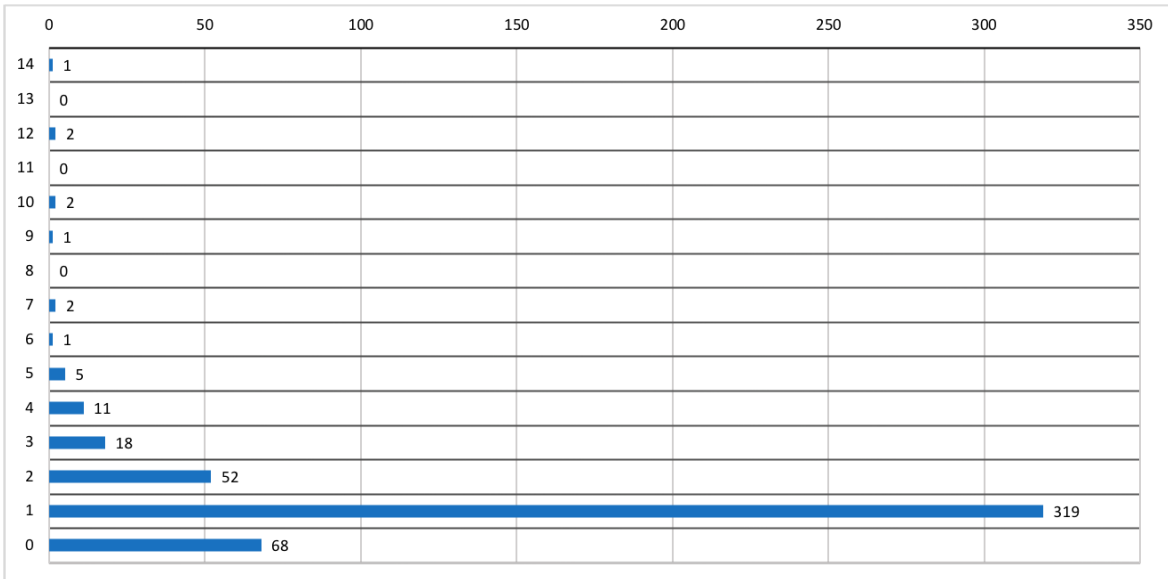


Figure 7: Counts of the participation by single partners.

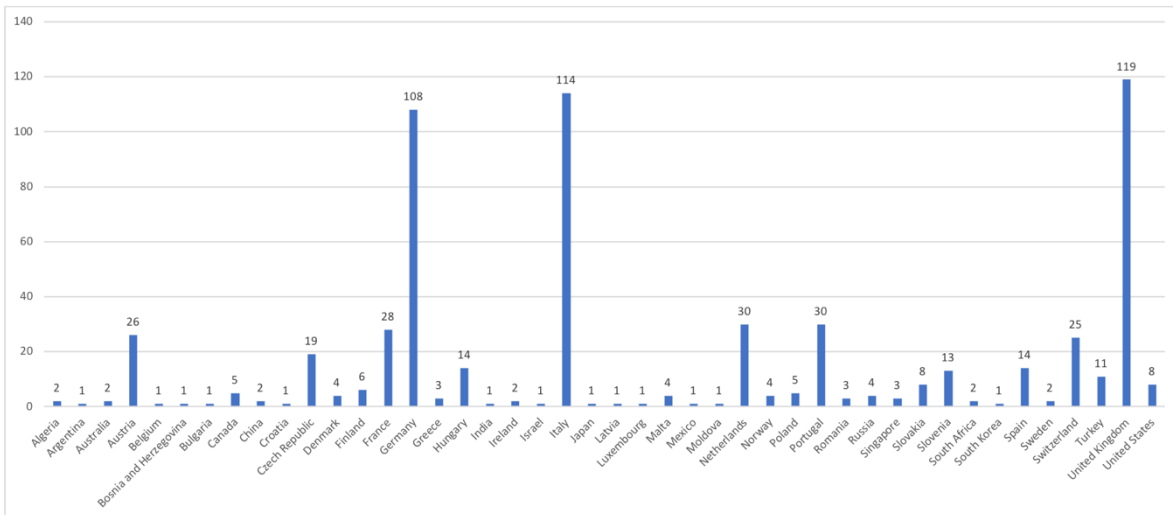


Figure 8: Counts of the participations to activities by country.

## CONCLUSIONS

QTSpace filled a gap in the European landscape by creating the first continental network in Quantum Technologies in Space, bringing together academic and industrial partners scattered through different communities (photonics, cold atoms, optomechanics, ...).

Over the three and half years of life of the Action (not counting the last year which was heavily affected by the COVID-19 pandemic) activities registered a very good participation, driven from core-countries such as Germany, Italy and the United Kingdom, reaching at the same time several other countries, also those where QT in Space are not top-priorities in research and technological development.

There was an excellent response of ECIs to QTSpace activities, a sign that QT in space is an attractive and promising field of research and technological development.