

CSA project InCoQFlag

Nurturing QT international collaboration:

Preliminary international landscape of QT competences

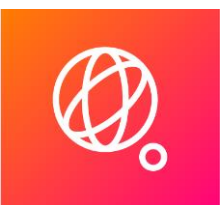
Partners

TNO
CEA (FR) Coord.
NCN (PL)
ICFO (SP)

TNO team

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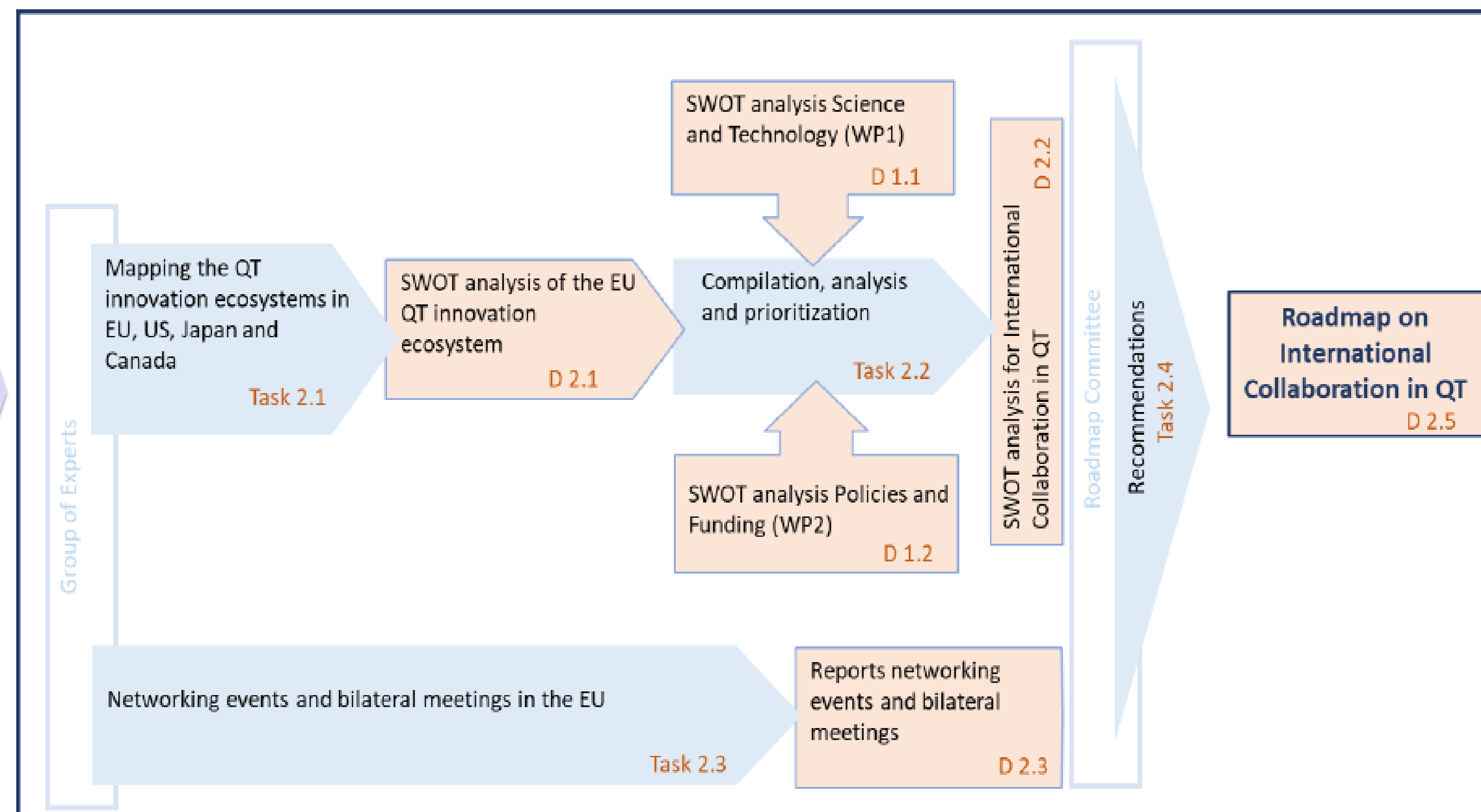
May 2021

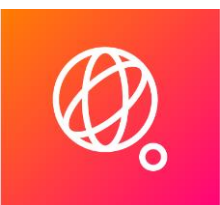


What are we doing?

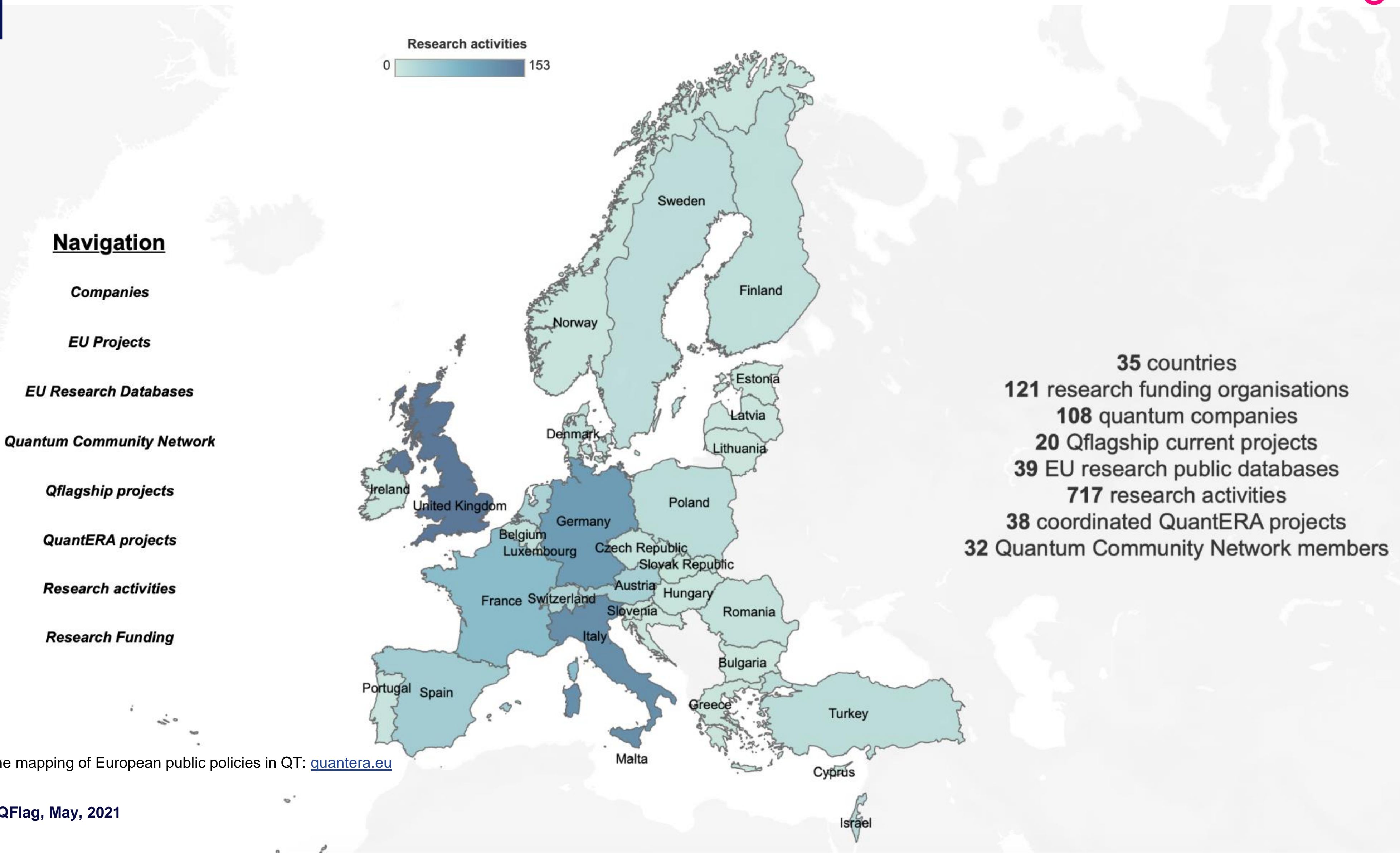
Mapping:

- Competences;
- IP, standards;
- Access to infra;
- Skills needs, and
- Supporting Strategies and Policies

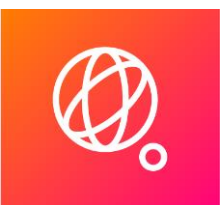




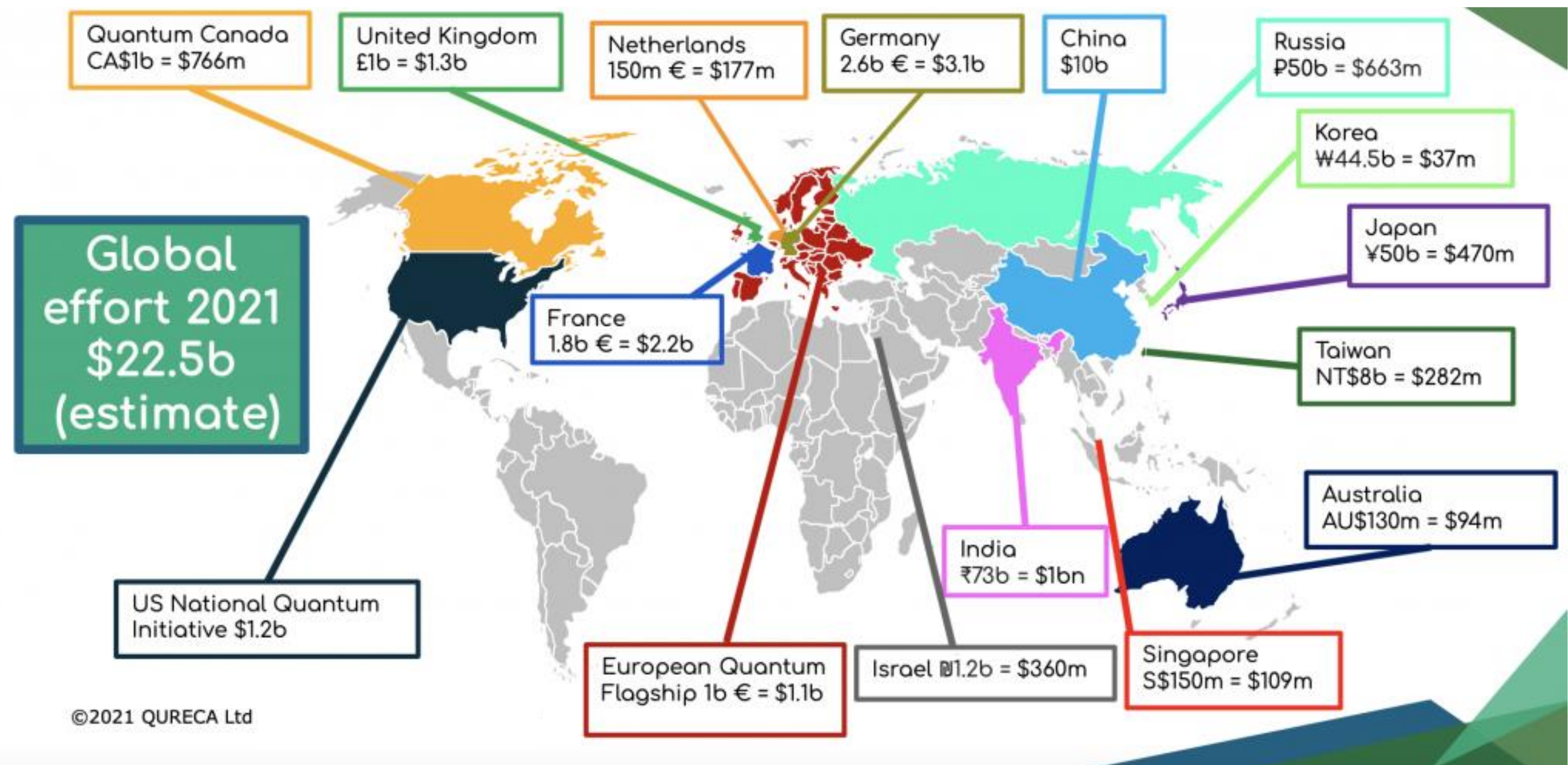
Mapping of EU Public Policies in QT

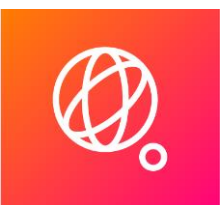


Report on the mapping of European public policies in QT: quantera.eu

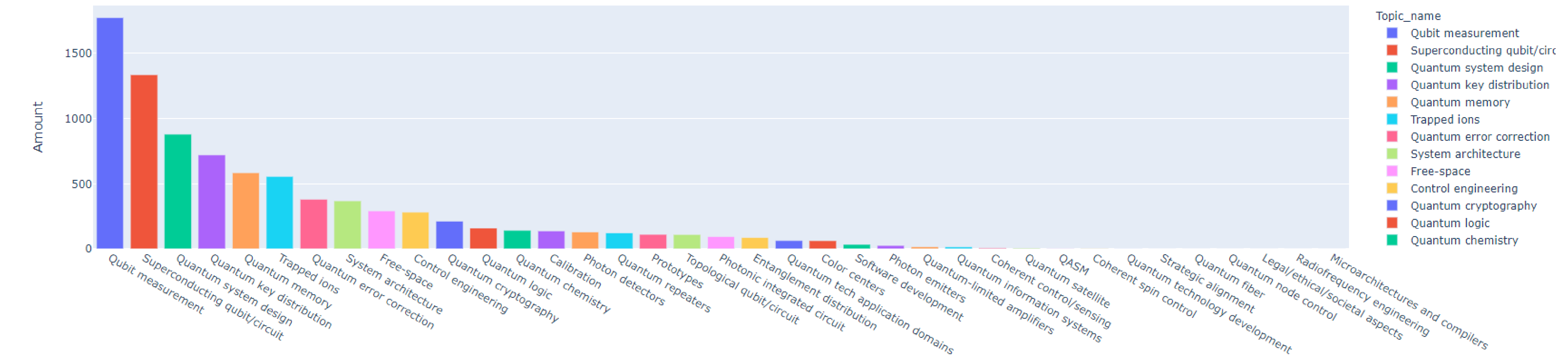


Which countries are investing the most?

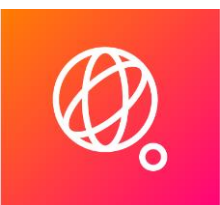




What topics receive more attention? (top 25)

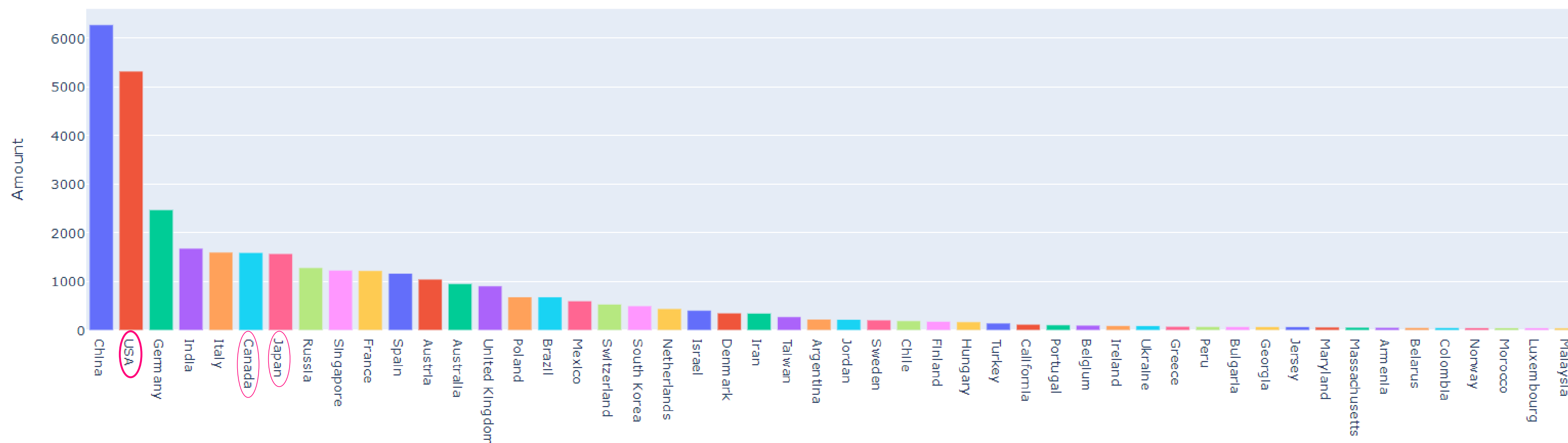


- All data is gathered from ArXiv, considering publications from June 2014 up until February 2021
- Scraping is done considering the label 'quantum', and using key words

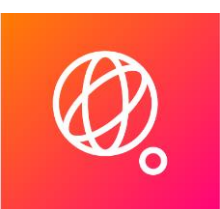


Which countries are publishing the most?

Number of papers per country (based on affiliation, 50 most published countries shown)

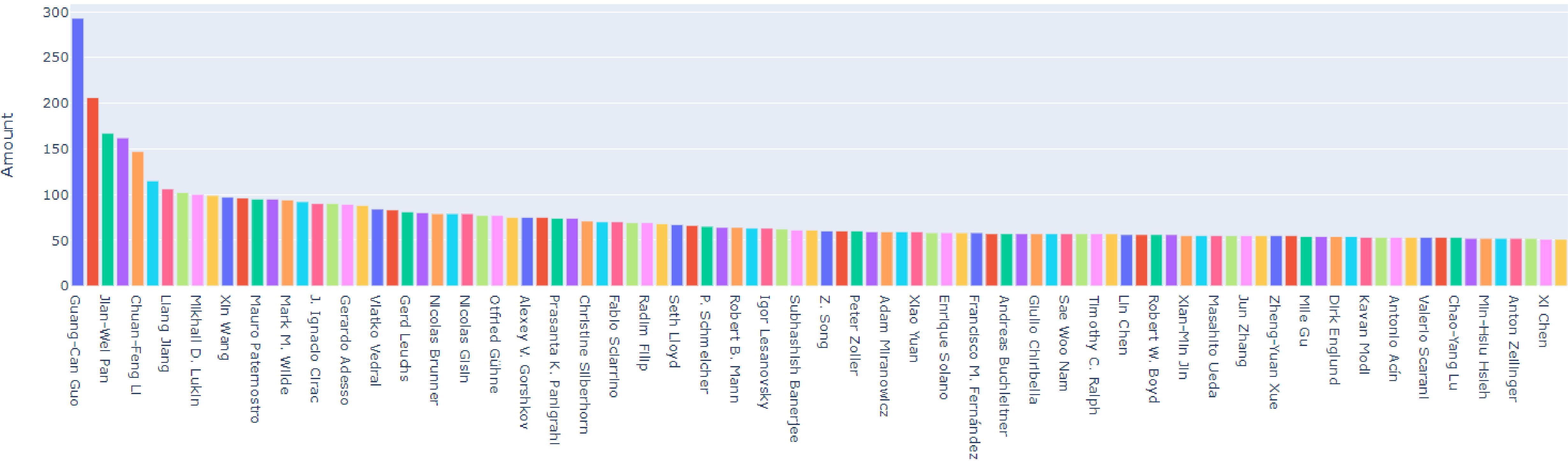


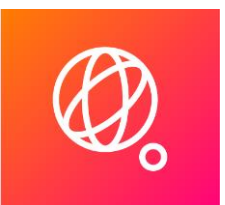
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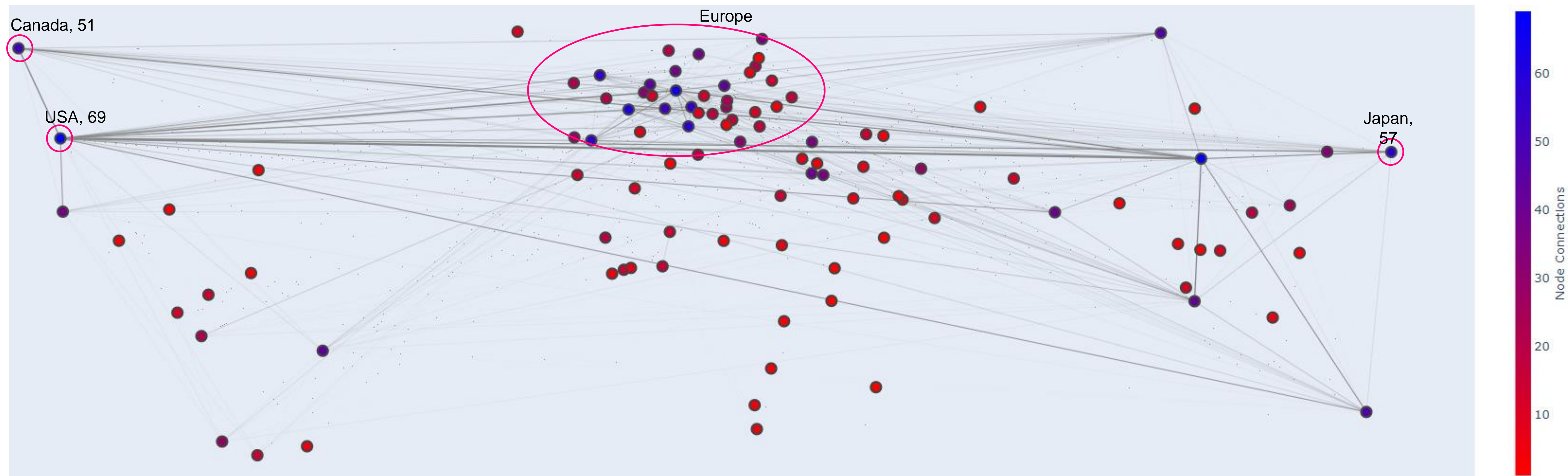
Who is publishing the most in the world?

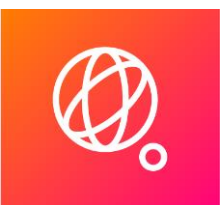
Number of papers per author (100 most published authors shown)





Mapping of international research collaborati





Skills and competences survey

	Computing	Simulation	Communication	Sensing	
	<i>Education stage – Skills</i>	<i>Education stage – Skills</i>	<i>Education stage – Skills</i>	<i>Education stage – Skills</i>	
A1	<ul style="list-style-type: none">• Basic Quantum Theory (Computing)• (Quantum) System Development• Quantum Information Systems	<ul style="list-style-type: none">• Basic Quantum Theory (Computing)• (Quantum) System Development• Quantum Information Systems	<ul style="list-style-type: none">• Basic Quantum Theory (Communication)• (Quantum) System Development• Quantum Information Systems	<ul style="list-style-type: none">• Basic Quantum Theory (Sensing)• (Quantum) System Development• Quantum Information Systems	For all (80 general / 20 specific)
A2	<ul style="list-style-type: none">• Quantum Computing Hardware• Quantum Computing Software• Quantum Algorithms	<ul style="list-style-type: none">• Quantum Computing Hardware• Quantum Computing Software• Quantum Chemistry	<ul style="list-style-type: none">• Quantum Communication Hardware• Quantum Communication Software• Quantum Cryptography Protocols	<ul style="list-style-type: none">• Quantum Sensor Hardware	(80 specific/ 20 general)
	<i>Radical innovation competences</i>	<i>Radical innovation competences</i>	<i>Radical innovation competences</i>	<i>Radical innovation competences</i>	
	<ul style="list-style-type: none">• Discovery• Incubation• Acceleration• Commercialisation	<ul style="list-style-type: none">• Discovery• Incubation• Acceleration• Commercialisation	<ul style="list-style-type: none">• Discovery• Incubation• Acceleration• Commercialisation	<ul style="list-style-type: none">• Discovery• Incubation• Acceleration• Commercialisation	
C2	Competences from (low) A1 to C2 (high)				



Thank you!



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