Impact assessment of the Joint Transnational Call 2023

Work Package 8
Deliverable 8.3

Document Summary

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Acronym	THCS
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Contributors

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- CSO-MOH

Introduction

The Partnership in Transforming Health and Care Systems (THCS) launched its first Joint Transnational Call (JTC) for Research and Innovation (R&I) proposals, co-funded by the European Commission (EC) in March 2023. In the framework of this JTC, 36 Funding Organisations from 24 Countries, together with the EC, joined forces to fund the best collaborative transnational research projects under the topic of "Healthcare of the Future" for a total initial funding commitment of around € 41,8 million.

The JTC 2023 addressed the general objective of the THCS Partnership, by focusing on identification, testing, implementation and assessment of models and solutions to optimise complementarity of inpatient and outpatient care, supporting the transformation to people-centred services. The JTC 2023 envisaged to support R&I proposals that will fill knowledge gaps and support implementation of innovative solutions aimed at better organising the health and care systems of the future, with a focus on promotion of prevention, personalised care and fostering better integration and continuity of care, including remote care when desirable/possible. A shift towards more distributed, community-based health and care facilities provides opportunities, but also a range of challenges for the health and care systems and especially for existing health care providers whose roles would need to be redesigned.

Potential Applicants were asked to address the following aims:

1. Provide the necessary knowledge to build the health and care of the future. This includes addressing several dimensions of health and care systems such as quality, safety, equity, efficiency, effectiveness, accessibility, sustainability, economy, ethics and resilience in reorganised health and care settings. By providing this knowledge, the call aims to support the development of new and innovative solutions that can address the current and future challenges facing health and care systems.
2. Support the implementation of innovative solutions on a larger scale. This includes identifying and promoting the adoption and transferability of evidence-based and successful practices that have already been proven to be effective in some contexts in addressing the challenges facing health and care systems. With research and innovation supporting the implementation of these existing solutions, the call aims to accelerate the pace of change and make a positive impact on health and care systems in a more efficient way.

A total of 236 Intent to Applies were submitted, followed by 177 full proposals submitted by the deadline. Of these projects, 162 were deemed administratively eligible and were further evaluated by the appointed external reviewers (150 reviewers for a total of 486 reviews needed). The eligible proposals were further discussed over two Peer Reviewed Panel meetings, with one being held in Warsaw in September 2023 and the other held virtually in January 2024. At the end of January 2024, the Call Steering Committee had decided on a final funding list, which consisted of 28 excellent proposals selected for funding. 29 out of 36 funding agencies participating in this first JTC are involved in the selected for award projects, for a total national call budget expenditure of approximately € 31,1 million. This, in turn generated around € 6.6 million EC top-up that would be dedicated to cofounding the projects.

This report presents details of the impact analysis/performance of this first JTC.

Analysis of "Healthcare of the Future" 2023 Call results

Overall figures of the Call

	N. of proposals	No. of countries involved	No. of teams	Budget
Submitted full proposals	162	23 (33 including collaborators)	942	€ 192 million
Selected proposals	28	20	174	€ 35,3 million

Table 1. Showing overall figures related to the submitted full proposals and selected proposals for award.

With a total of 162 full eligible proposals submitted (as can be viewed in Table 1) and 942 participating teams, the '*Healthcare of the Future'* JTC 2023 demonstrated a strong interest from the scientific community regarding the broad aims and research areas tackled by the Call. Notably, among these teams, 90 consist of collaborators who are self-funded partners. Most proposals submitted included an average of four partners, with projects involving five or six partners also being common. The average budget requested per proposal amounted to €420,000. The overall requested budget under this first JTC was of approximately € 192 million and involved 23 participating countries (33 including collaborators) and 34 funding agencies.

Regarding the allocation of funds, the THCS Call Steering Committee has chosen to fund the top 28 highest-ranked proposals, totalling approximately 35.3 million euros in requested funds (excluding funding from collaborators/self-funded partners). Twenty participating countries were involved and 29 funding agencies. This selection reflects an overall success rate for the JTC 2023 of 17.3%, aligning with the Partnership's expectations. Indeed, this outcome is consistent with the overarching goal of the inaugural Joint Call, which is to address the transformative challenge of reshaping Health and Care Systems within the framework of a newly established Partnership.

This positive result is also attributed to the proactivity and high flexibility demonstrated by several funding organisations, which were willing to increase their budgets as may have been required. Additionally, the availability of the generated EC top-up funds (approximately 6.6 million euros) played a crucial role in bridging financial gaps and further enhancing the overall success of the JTC 2023.

Geographical coverage of submitted and selected for funds proposals

Providing a brief breakdown of the JTC 2023's geographical coverage, it is to be noted that 91% of proposals were submitted by research teams from 23 funding organisations' countries participating in the Call, which includes non-EU participants such as Switzerland and Scotland ineligible for additional funding from the EC top-up. The remaining 9% originated from European countries, such as Germany, Hungary, Bulgaria, Luxembourg, and Cyprus, as well as non-European countries not participating in the Call, such as Canada, USA, Philippines, and Australia.

The majority of eligible full proposals submitted for the JTC 2023 originated from teams from Italy, Switzerland, Spain, The Netherlands, France, Portugal, and Norway (**Figure 1**). In line with the results reported in the following paragraphs, the top-performing teams were primarily from The Netherlands, Italy, Sweden, France, and Switzerland (**Figure 2**).

Similarly, the majority of eligible full proposals were received by Italy, Spain, Switzerland, Portugal, France, and The Netherlands (**Figure 3**). In line with the results reported in the following paragraphs, the top-performing countries were Italy, The Netherland, Switzerland, France, Sweden, and Norway (**Figure 4**).

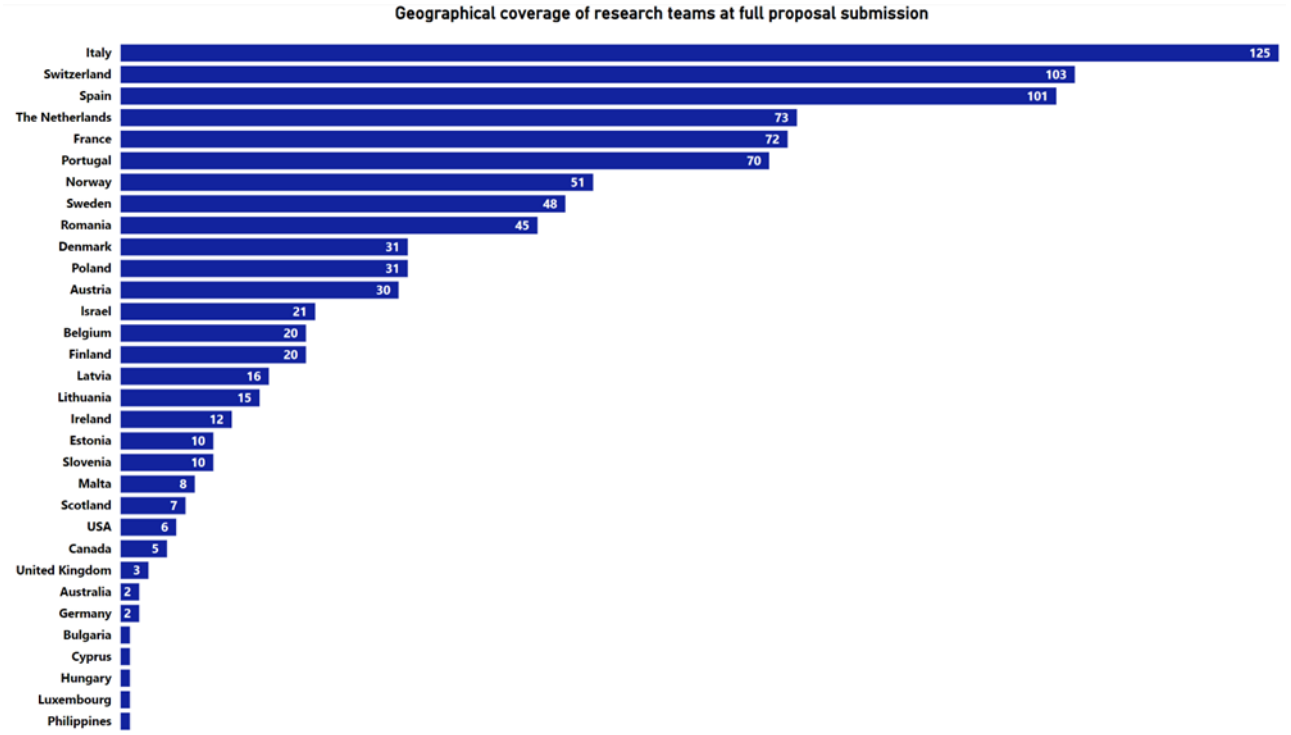

Figure 1. Total number of (research) teams by each country under the THCS JTC2023 that submitted eligible full proposals (Including Non-Participating Countries).

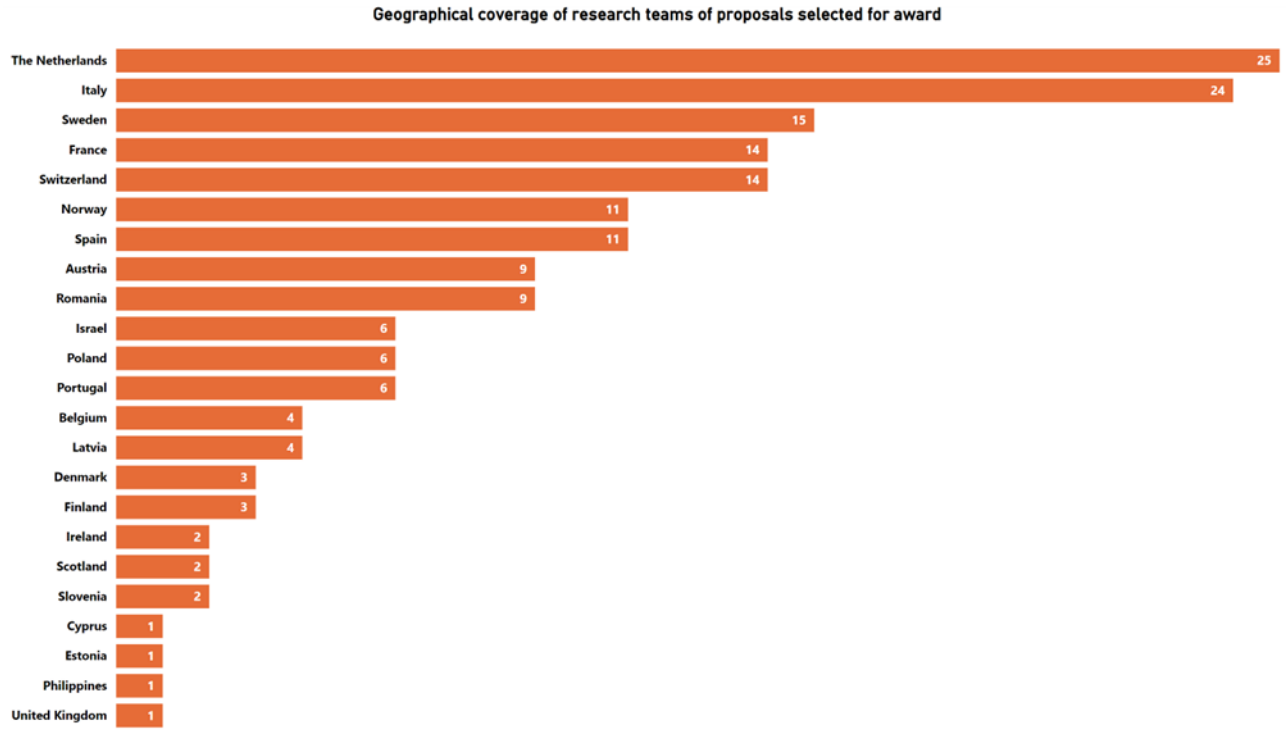

Figure 2. Total number of (research) teams by each country under the THCS JTC 2023 that had proposals selected for award (Including Non-Participating Countries).

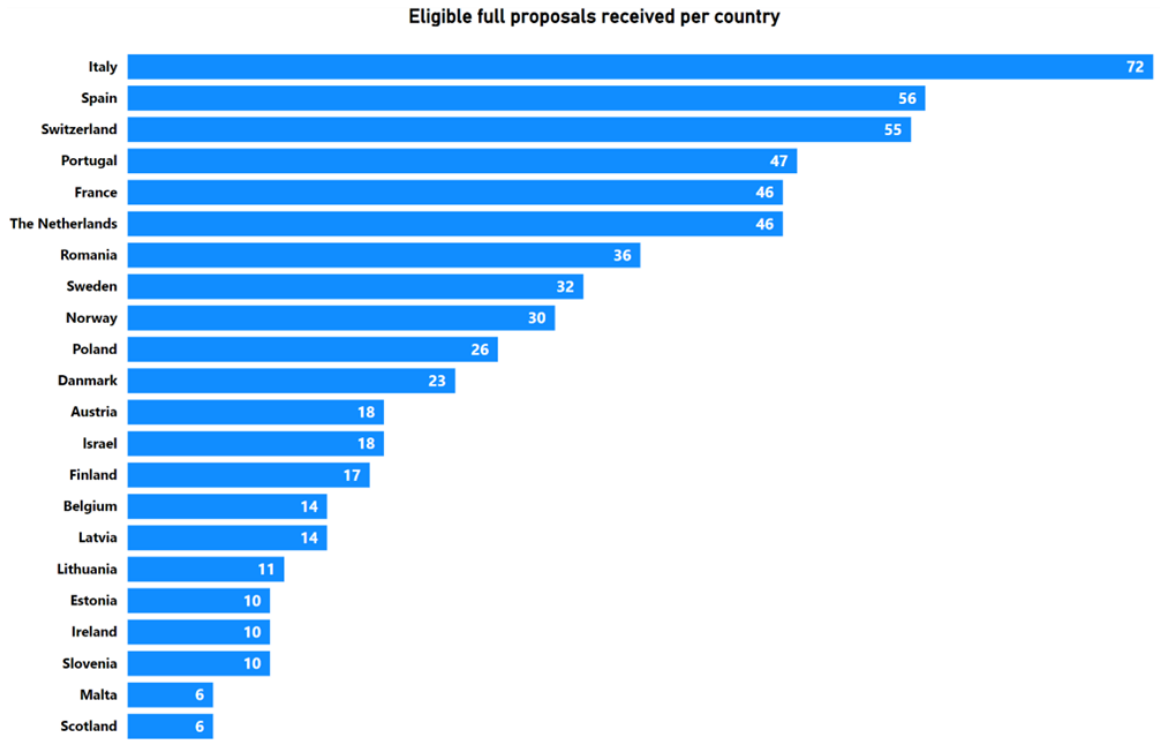

Figure 3. Total number of eligible full proposals received by each country under the THCS JTC2023 (Excluding Non-Participating Countries).

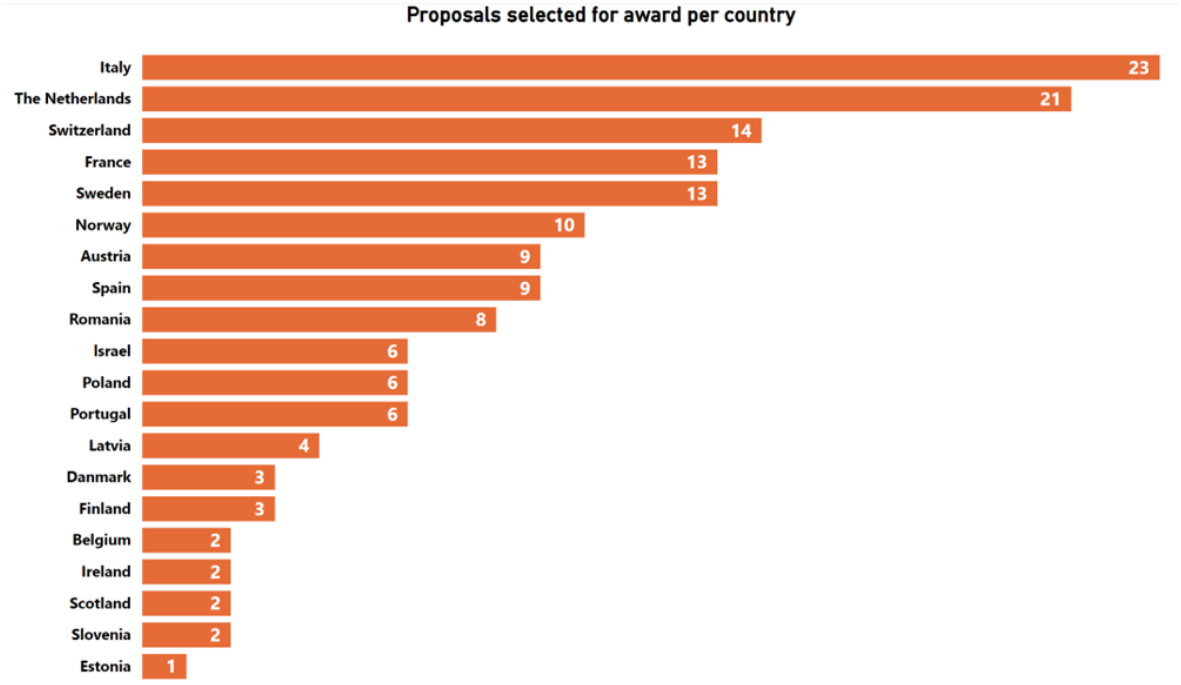

Figure 4. Total number of proposals selected for award by each country under the THCS JTC2023 (Excluding Non-Participating Countries).

Reserved and requested budgets

The announcement of the JTC 2023 included the publication of reserved budgets for participating funding agencies, alongside specific national participation rules. These guidelines encompassed details on eligible costs and funding caps per project per funding agency, potentially influencing applicants' budget requests.

Italy, France, Switzerland, The Netherlands, Sweden, and Norway showed up the highest values for the initial **reserved** budgets (**Figures 5** and **6**). Considering the number of eligible full proposals submitted, Switzerland, Italy, France, Spain, Norway, The Netherlands, and Sweden presented the highest values for **requested** budgets (**Figures 5** and **7**). These values are reflected as well per funding agency, with Switzerland (Innosuisse and SNF), Italy (MoH and MUR), France (MoH and ANR), Spain (ISCIII), Norway (RCN), The Netherlands (NWO), and Sweden (FORTE) characterized by the highest value for both initially reserved and requested budgets (**Figures 6, 7,** and **8**).

A significant number of funding agencies experienced a high oversubscription rate at the full proposal submission stage, particularly Denmark, Estonia, Israel, Latvia, Lithuania, Portugal, and Spain. Notwithstanding, the selection of excellent projects for funding, coupled with the flexibility of funding agencies and the utilization of part of the EC top-up as a common pot, did not compromise the outcome of the call. The 28 top ranked projects could be funded, strictly following the ranking list established by the Call Steering Committee following the evaluation process.

Regrettably, some funding agencies did not use their reserved budget, due to a lower success rate and/or size of their research community, such as Belgium (MFWB), Iceland (RANNIS), Italy (AReSS), Lithuania (LMT), Malta (MCST), and Portugal (CCDRC).

The following paragraph provided further information on the JTC 2023 success rate.

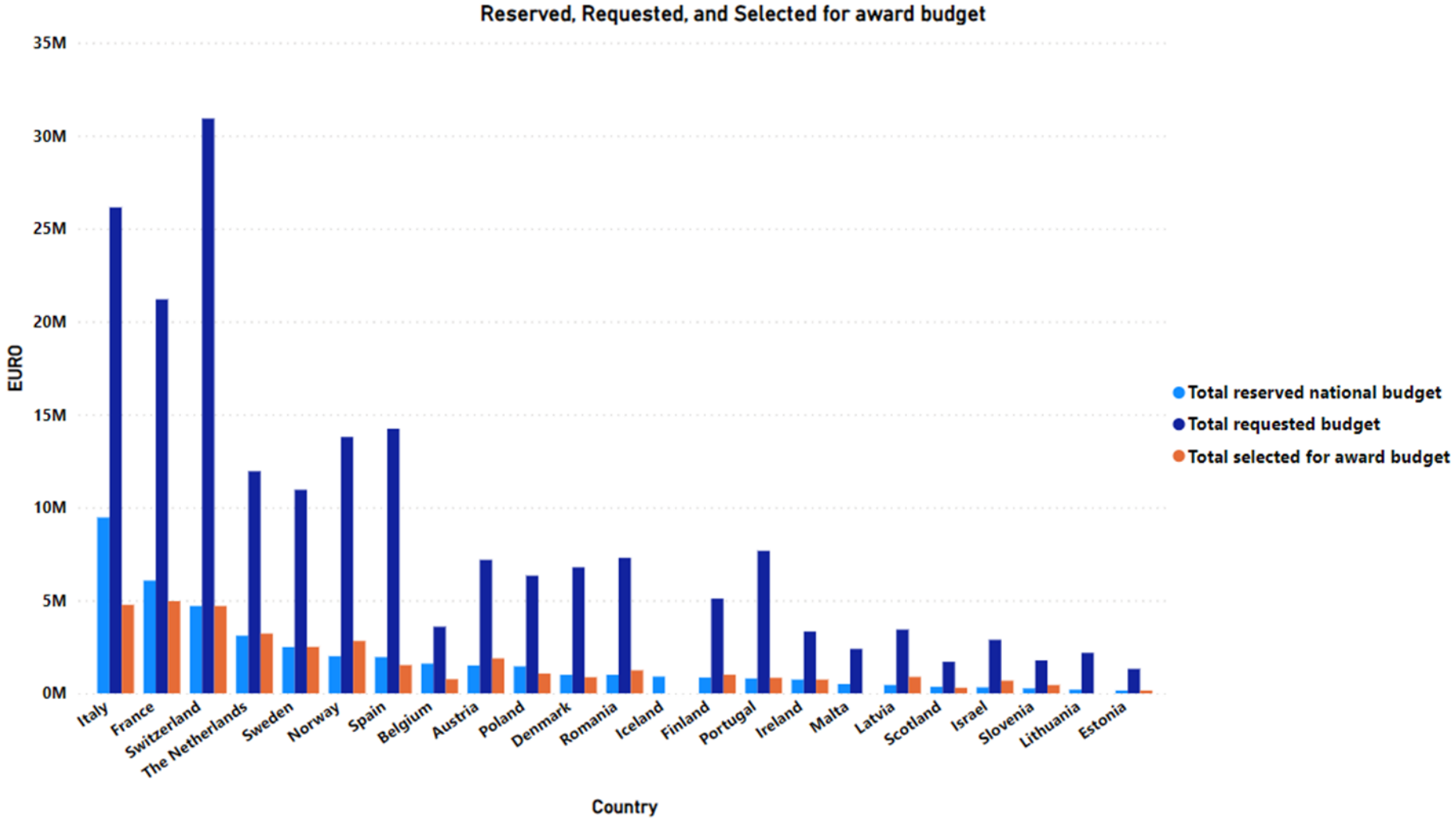

Figure 5. Total initial reserved national budget (light blue), total eligible requested budget at full proposals stage (dark blue), and total eligible selected for award budget (orange) per country participating in the THCS JTC 2023.

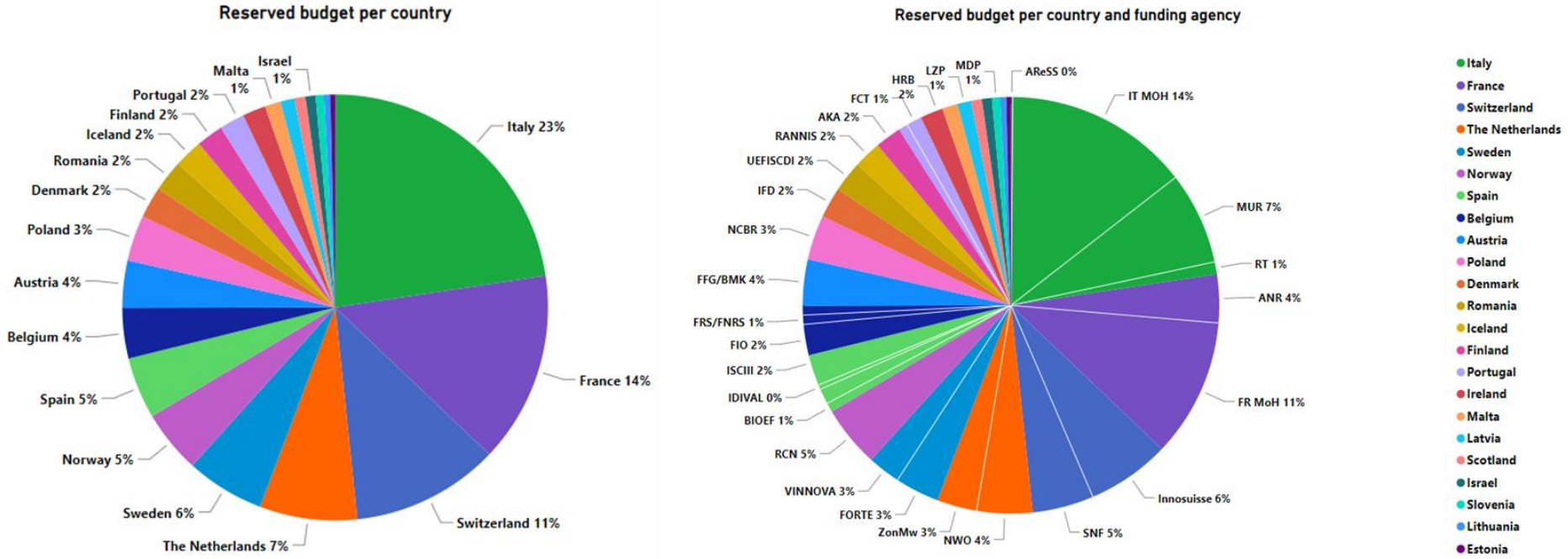

Figure 6. Distribution (%) of the initial reserved budget amongst participating countries (left) and funding agencies (right) under the THCS JTC 2023.

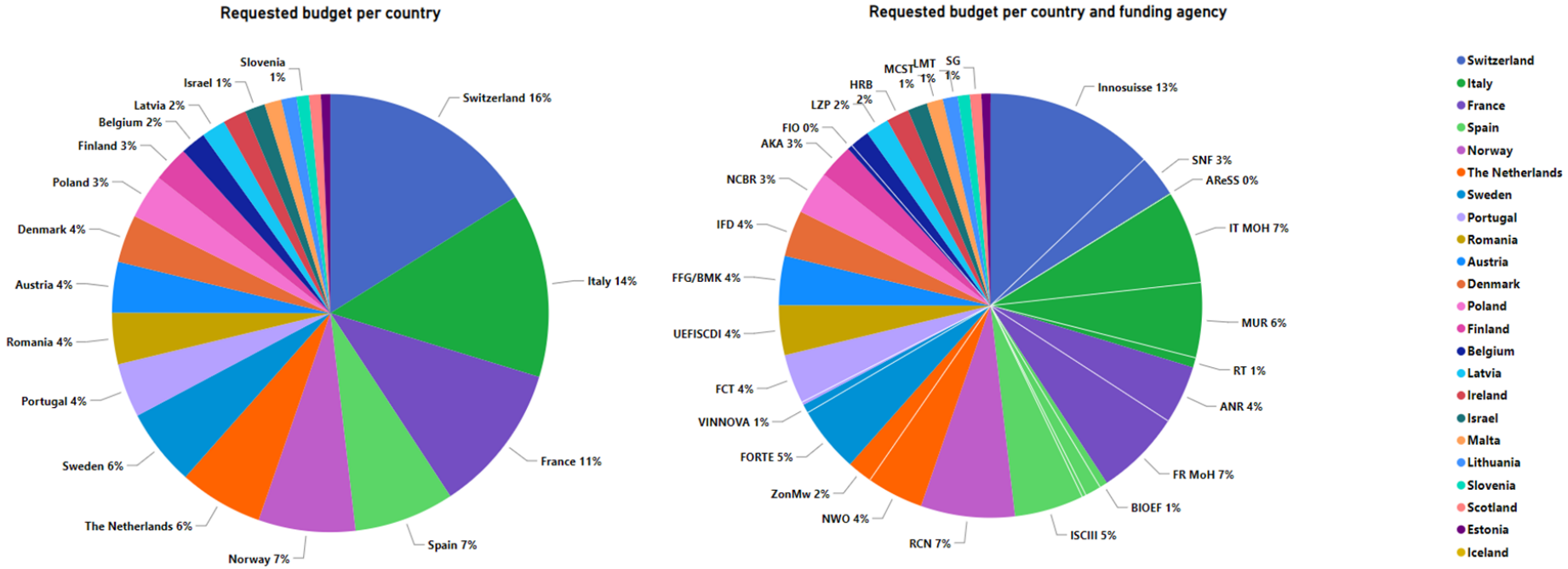

Figure 7. Distribution (%) of the requested budget at full proposals stage amongst participating countries (left) and funding agencies (right) under the THCS JTC 2023.

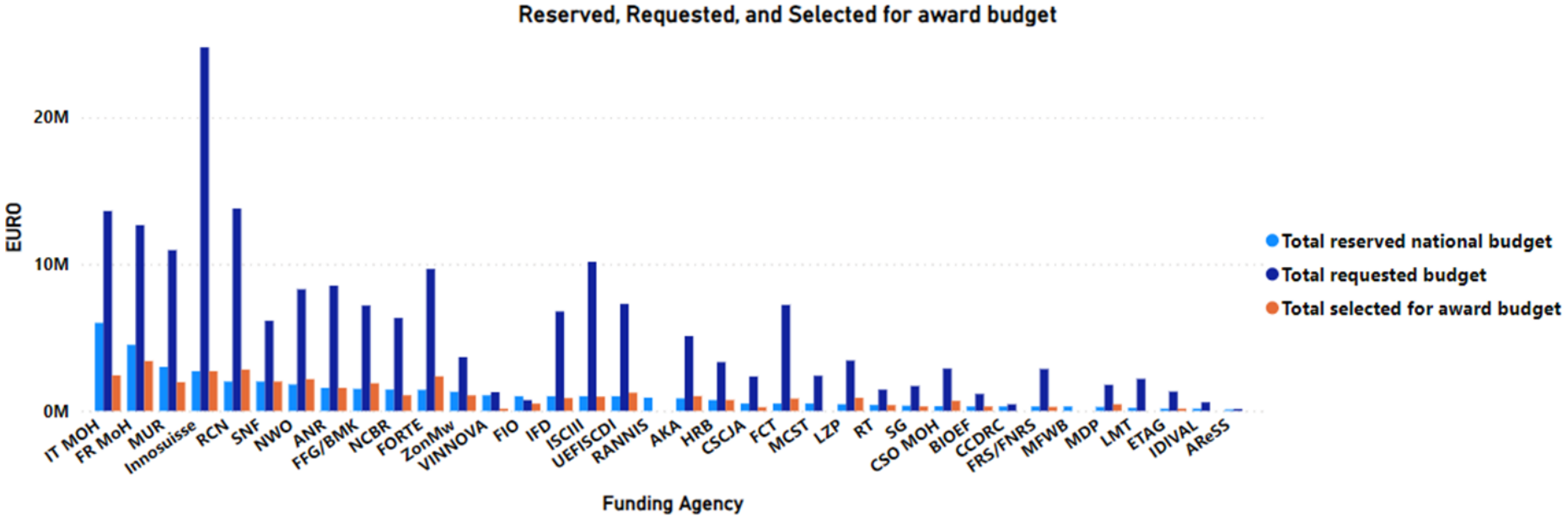

Figure 8. Total initial reserved national budget (light blue), total eligible requested budget at full proposals stage (dark blue), and total eligible selected for award budget (orange) per funding agency participating in the THCS JTC 2023.

Success rate per country and funding agency

The research teams from Belgium 76%, Italy 63%, The Netherlands 55%, Spain 47%, France 45%, and Switzerland 44% applying to the JTC 2023 had a particularly high success rate (calculated as ratio of eligible funding requested to total requested funded amounts) (**Figure 9**).

The teams selected for funding through the JTC 2023 came from 20 different countries and 29 different funding agencies. France (MoH), Norway (RCN), Switzerland (Innosuisse), Italy (MoH), Sweden (Forte), The Netherlands (NOW), Switzerland (SNF), Italy (MUR), and Austria (FFG/BMK) presented the highest values of budget selected for award (**Figure 10**).

Unfortunately, despite the high oversubscription rate of Lithuania, Malta, and Spain (IDAVAL), none of the 28 proposals selected for funding included a research team from these funding countries or agencies. Similarly, for Belgium (MFWB), Iceland, and Portugal (CCDRC), either a low number or zero proposals were submitted, excluding teams from these countries or funding agencies from participation in the selected for award projects.

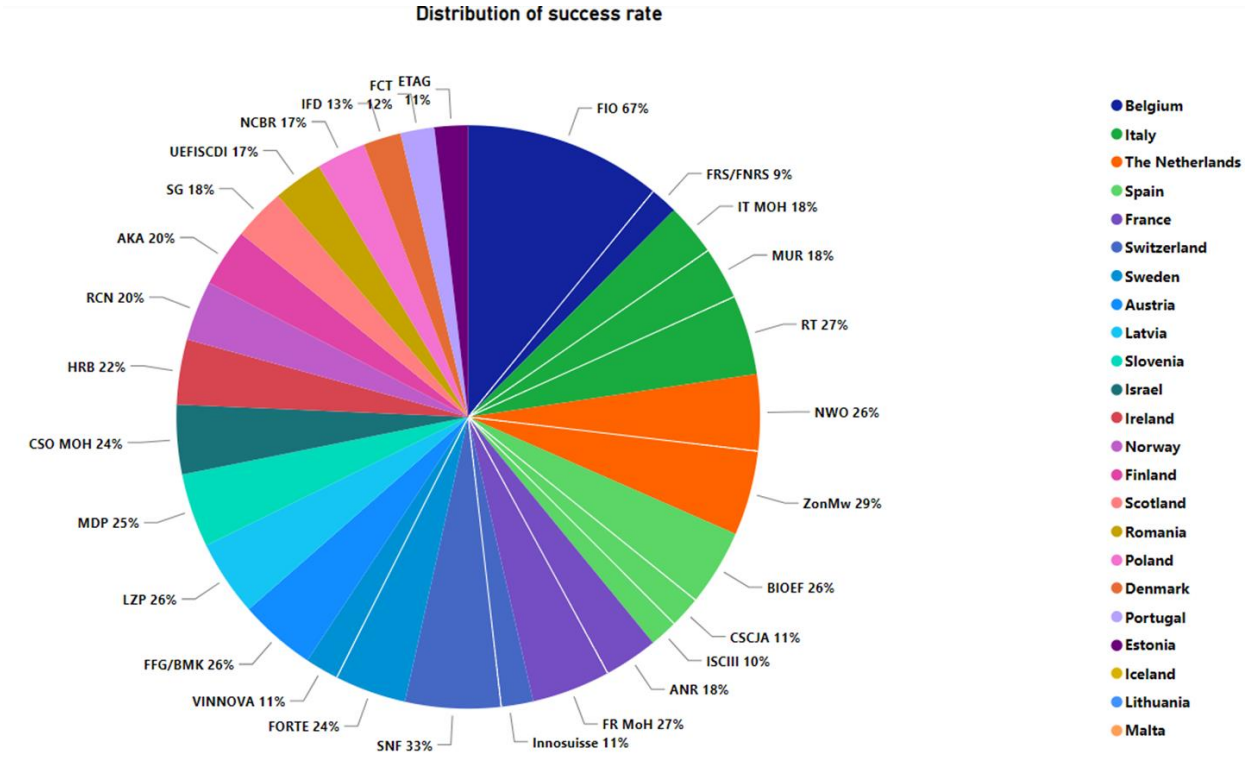

Figure 9. Distribution (%) of success rate (i.e., ratio of eligible funding requested to total requested funded amounts) per country and funding agency participating in the THCS JTC 2023.

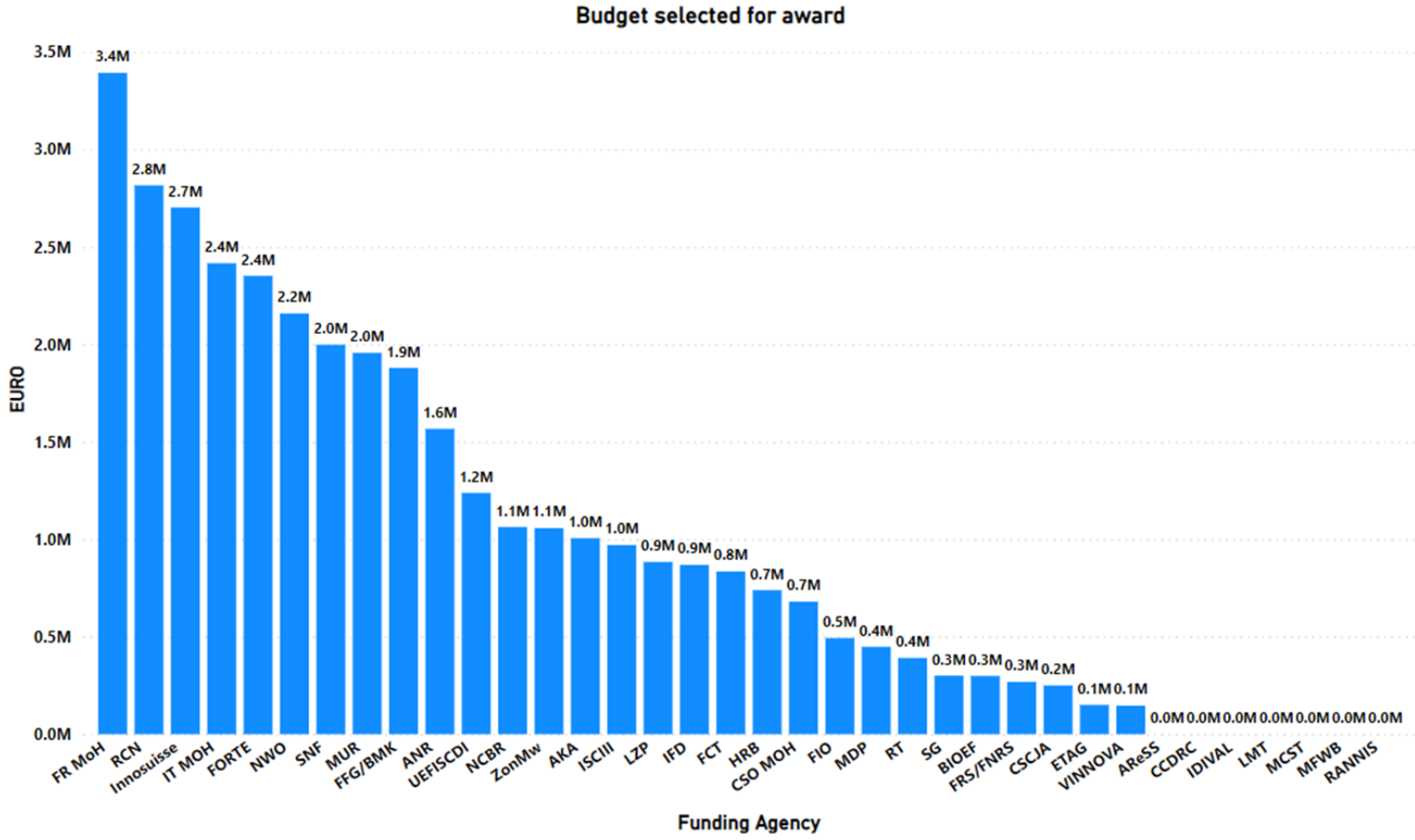

Figure 10. Overall amount of budget selected for award per funding agency participating in the THCS JTC2023.

Project coordinators geographical distribution

At the full proposal stage, the project coordinators represented 19 countries participating in the JTC 2023, whereas the coordinators of the selected for award proposals represented 12 countries participating in the Call. At the full proposals' submission stage, Italy, Switzerland, The Netherlands, Spain, Portugal, and France presented the highest numbers of project coordinators. Whereas project coordinators from The Netherlands, France, Israel, Italy, and Switzerland were the most successful (**Figure 11**).

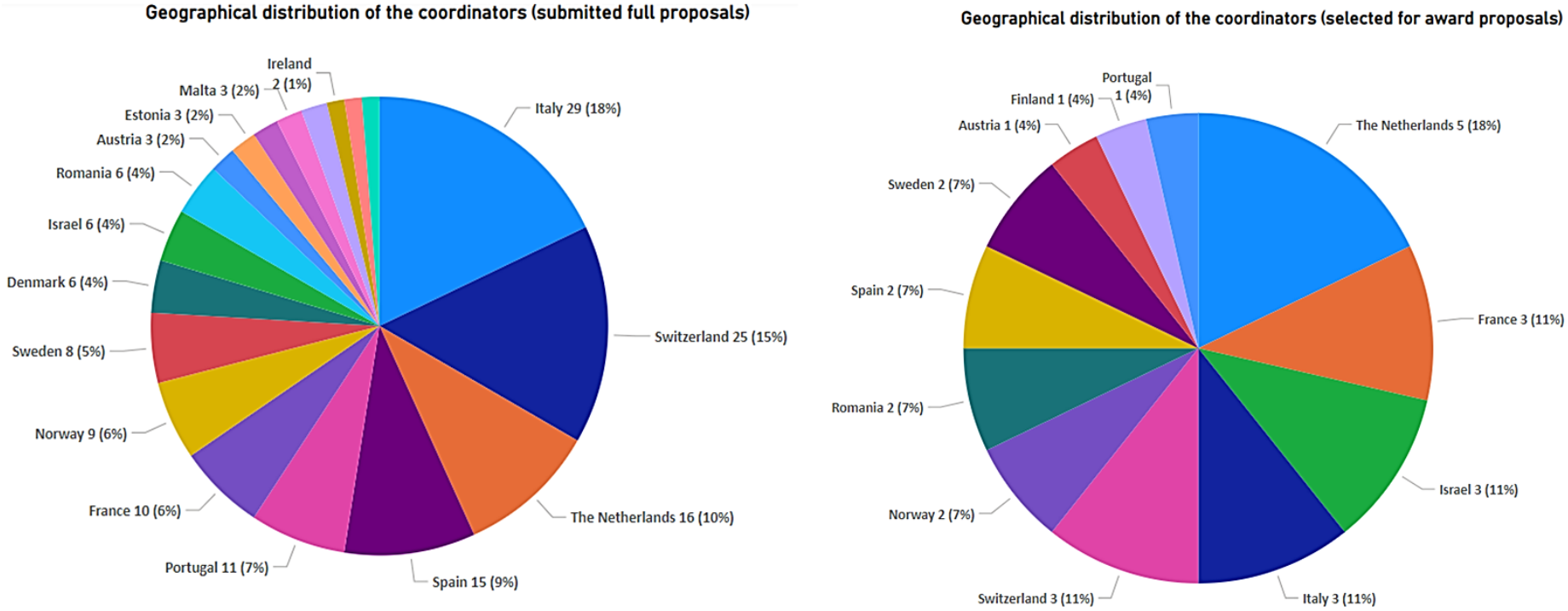

Figure 11. Total amount and geographical distribution (%) of the coordinators of the eligible full proposals (left) and selected for award proposals (right) under the THCS JTC2023.

Type of partners

Both the full proposals submitted and those selected for funding are predominantly teams from academia, followed by healthcare and/or social welfare service providers. Small and medium enterprises (SMEs) accounted for nearly half the number of applications compared to academia, while the presence of large companies was minimal. Additionally, non-profit private partners also submitted 11% of the proposals, with some of them being selected for funding (**Figure 12**).

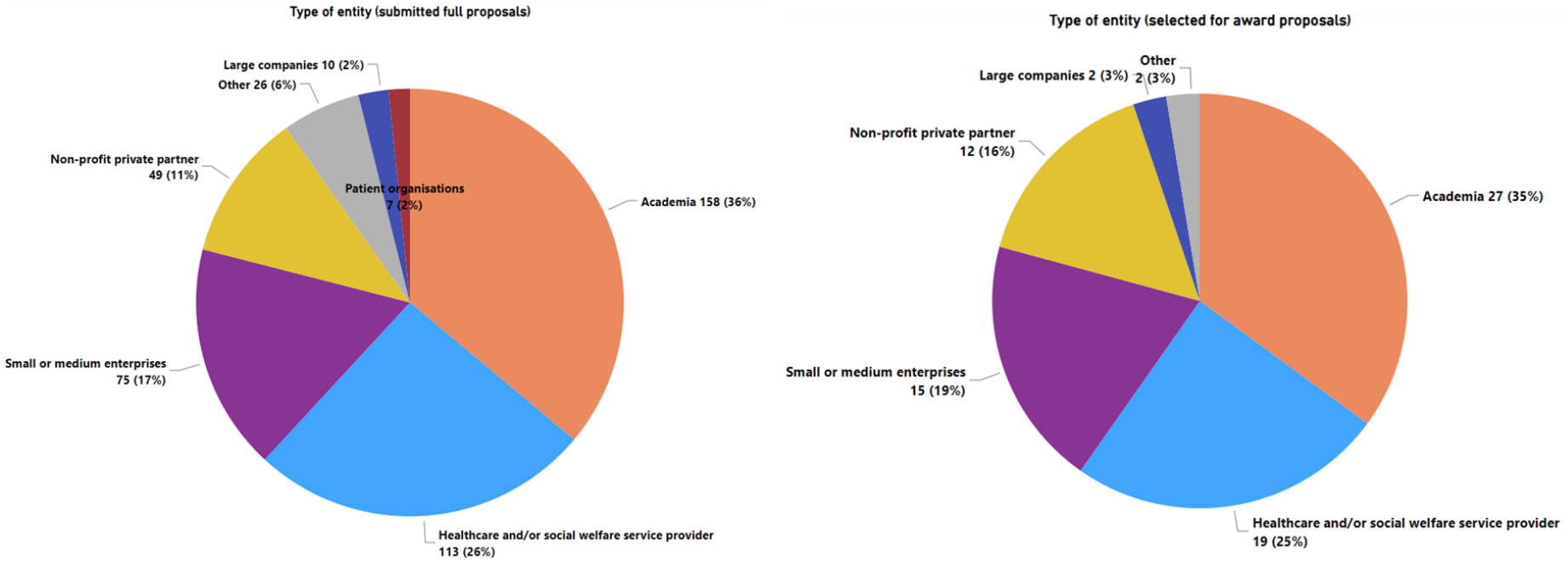

Figure 12. Total number and distribution (%) of partner types that submitted eligible full proposals (left) and those selected for award (right) under the THCS JTC 2023.

Gender distribution

Gender balance was maintained in both the eligible full proposals submitted and those selected for award, although a higher proportion of male coordinators was observed (**Figure 13**).

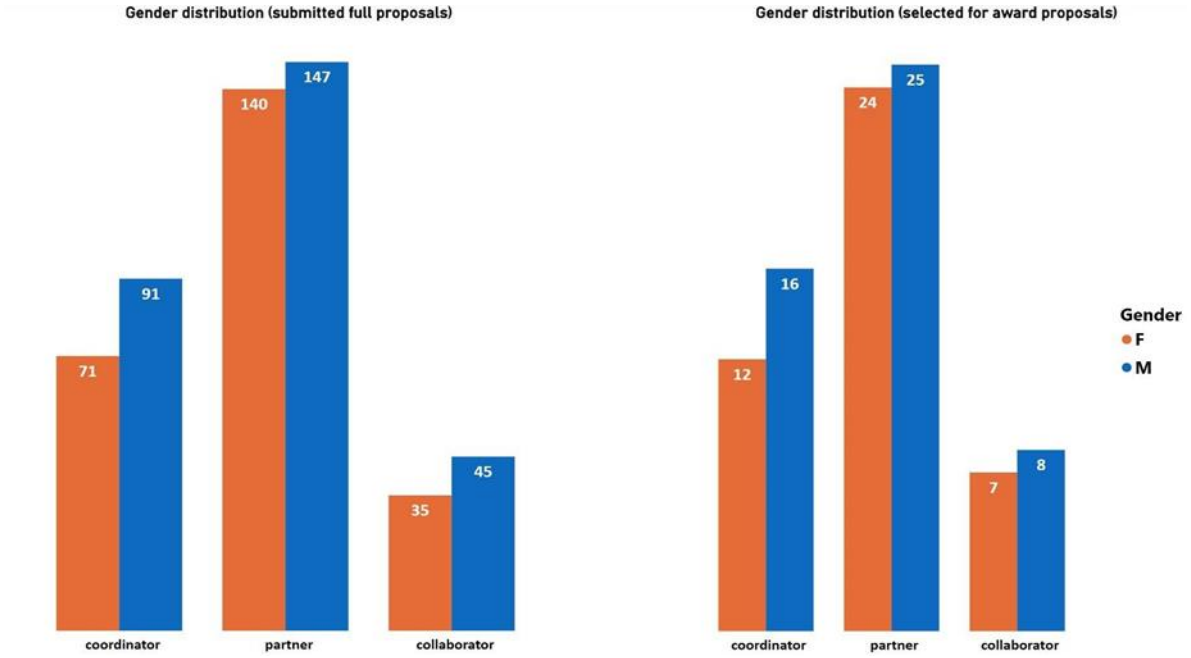

Figure 13. Total amount (female and male) and gender distribution (%) of proposals coordinators, partners, and collaborators (self-funded partners) at full proposal submission stage (left) and at selection for award stage (right) under the THCS JTC 2023.

Call aims and research areas

As previously mentioned, the JTC 2023 covered two major aims: (1) to provide the necessary knowledge to build the health and care of the future; and (2) to support the implementation of innovative solutions on a larger scale. Overall, whilst there was a significant interest for both aims, a higher attentiveness by the applicants was observed for Aim 1. As a result, this was also reflected in the proposals selected for award (**Figure 14**).

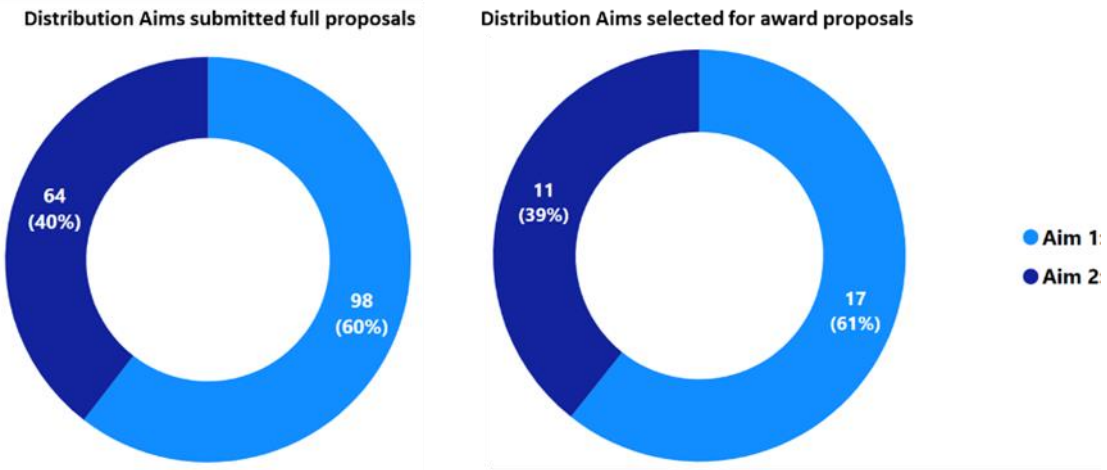

Figure 14. Total number and distribution (%) of Aims in the submitted eligible full proposals (left) and selected for award proposals (right) under the THCS JTC 2023

Furthermore, the JTC 2023 focused on three primary research domains: Health Policy and Systems Research, Health Technology Research, and Social and Economic Research. The majority of submitted full proposals concentrated on Health Policy and Systems Research, followed by Health Technology. However, among those selected for award, there was a notable emphasis on Health Technology, while Social and Economic Research remained the least preferred areas (**Figure 15**).

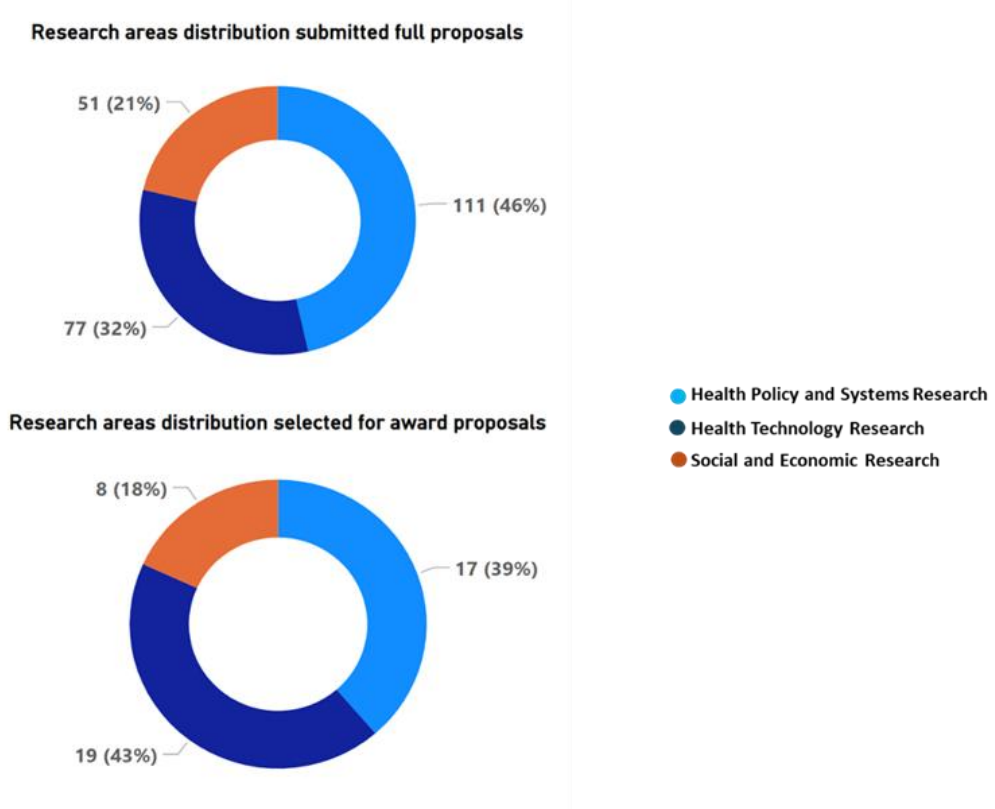

Figure 15. Total number and distribution (%) of submitted eligible full proposals (left) and selected for award proposals (right) as per the research areas selected under the THCS JTC 2023. One proposal can address several research areas.

Additionally, the JTC 2023 focused on six research types: Basic Research, Translational Research, Applied Research, Implementation Research, Demonstrator Projects-proof of concept, and Demonstrator Projects-validation of concept. Analysis revealed that the majority of eligible full proposals concentrated on Applied Research and Implementation Research, with Demonstrator Projects - proof of concept and Demonstrator Projects - validation of concept following closely (**Figure 16**). Among the selected proposals for funding, there was a similar emphasis on Implementation and Applied Research, with Demonstrator Projects validation of concept also prominent (**Figure 17**). Translational and Basic Research remained the least applied research types in both stages.

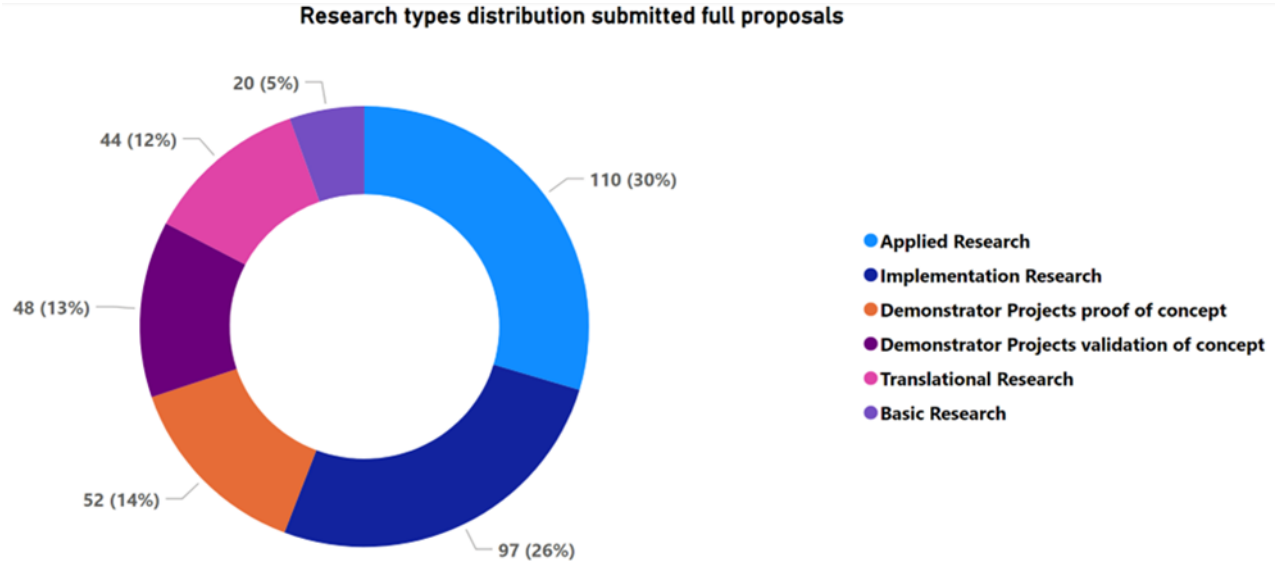

Figure 16. Total number and distribution (%) of submitted eligible full proposals according to the research types selected under the THCS JTC 2023. One proposal can address several research types.

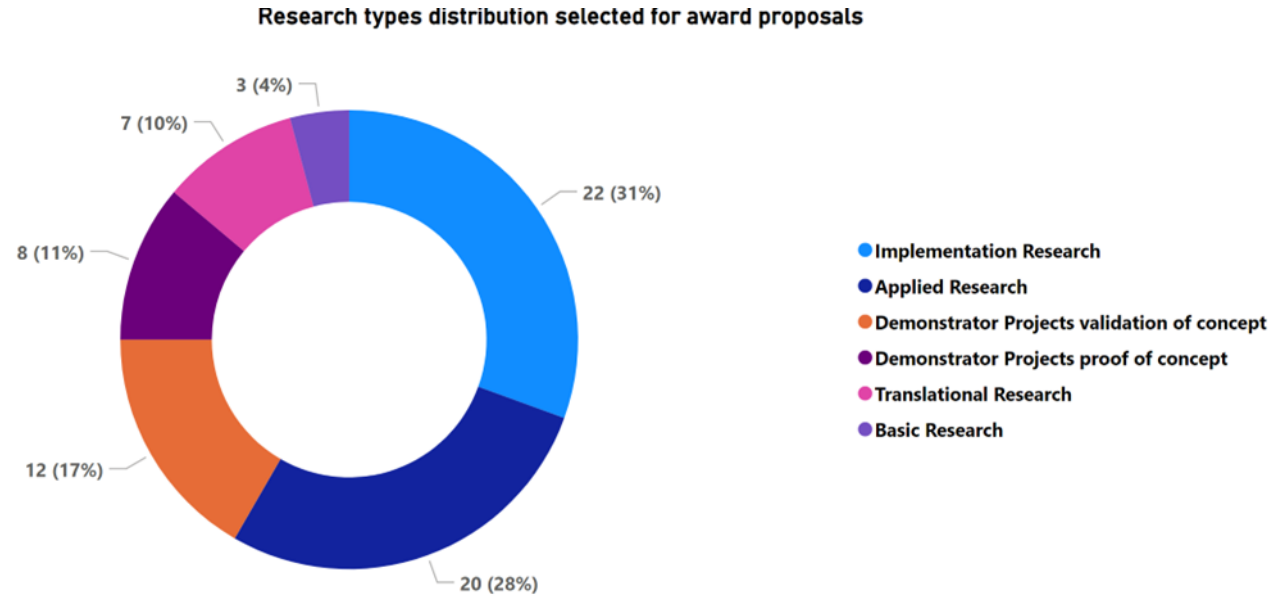

Figure 17. Total number and distribution (%) of selected for award proposals according to the research types selected under the THCS JTC 2023. One proposal can address several research types.

Finally, the JTC 2023 had specific expected outcomes that proposals were required to contribute to:

a) **Citizens and Patients:** Proposals were to ensure that citizens and patients are better informed and engaged, and have access to more distributed, community-based health and care facilities that better support their needs. This includes new/adapted sustainable concepts of care, prevention models, personalised approaches in prevention and care in different intervention areas to be translated in different contexts;
b) **Primary care and community-based health:** Proposals were sought to equip primary care and community-based health services with integrated and cost-effective tools to help prevent, monitor, and manage age-related diseases, conditions and disabilities, while promoting healthy lifestyles;
c) **Health and care providers:** Health and care professionals were to be engaged and have access to validated customized and largely adopted solutions for health and care delivery supporting continuity of care and integration of the different settings;
d) **Health and care authorities:** Health and care authorities and policy makers and other stakeholders involved in the decision-making processes have access to evidence-based strategies and learn from good practices supporting the transformation towards people-centred services and the optimisation of the delivery of health and care services across different settings.

Analysis of the Call outcomes revealed a balanced distribution, with Health and Care providers predominating, followed by Citizens and Patients, Health and Care authorities, and Primary care and community-based health (**Figure 18**). Similarly, among the selected proposals for funding, this balance was maintained, with Health and Care providers being the primary choice, followed by Health and Care authorities, Citizens and Patients, and finally Primary care and community-based health (**Figure 19**).

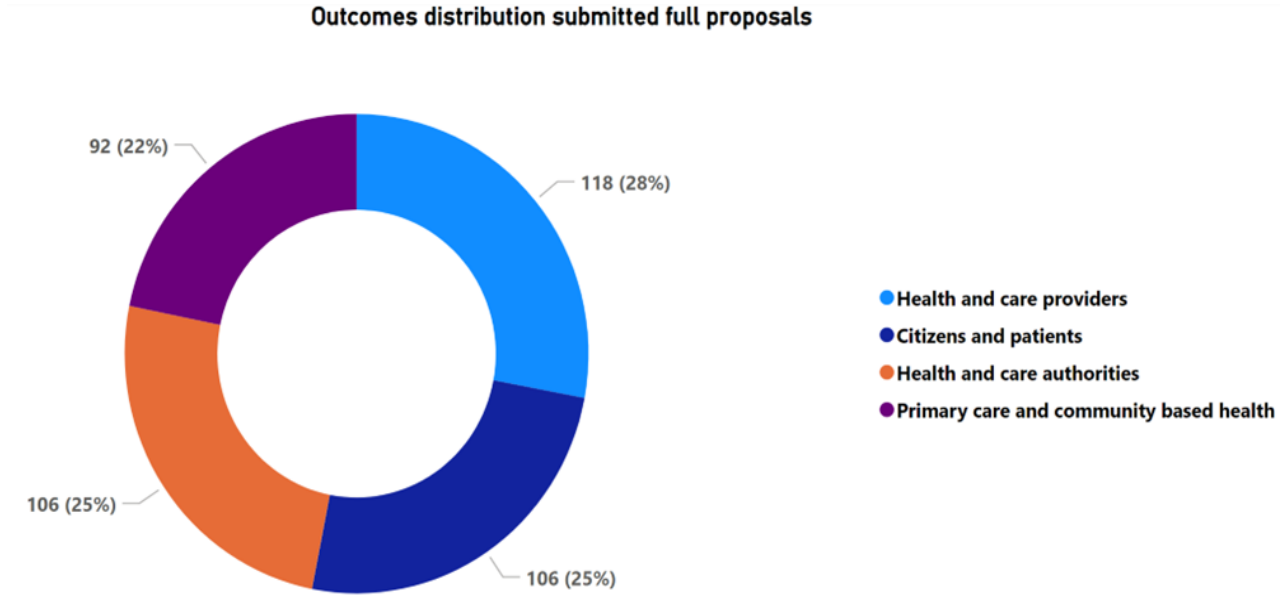

Figure 18. Total number and distribution (%) of submitted eligible full proposals according to the Call outcomes selected under the THCS JTC 2023. One proposal can address several outcomes.

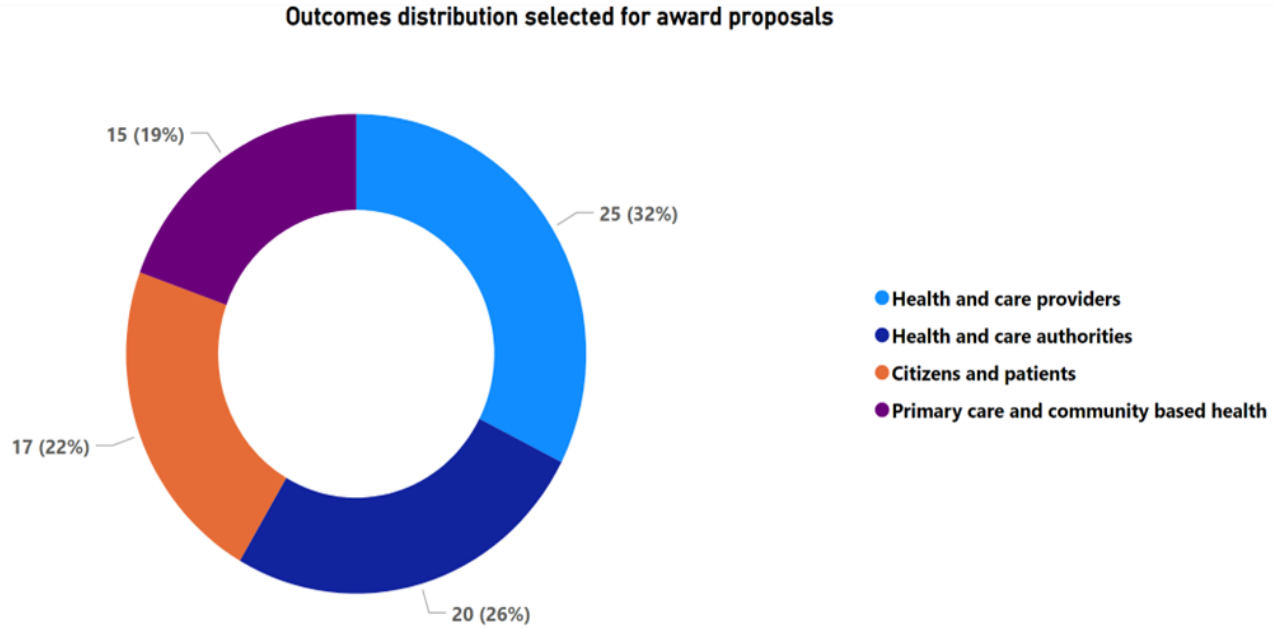

Figure 19. Total number and distribution (%) of selected for award proposals according to the Call outcomes selected under the THCS JTC 2023. One proposal can address several outcomes.

Funding Agencies acronyms

Country	Funding organisations (ACRONYM)
Austria	- BUNDESMINISTERIUM FUER KLIMASCHUTZ, UMWELT, ENERGIE, MOBILITAET, INNOVATION UND TECHNOLOGIE (**FFG/BMK**)
Belgium	- FONDS INNOVEREN EN ONDERNEMEN (**FIO**) - MINISTERE DE LA COMMUNAUTE FRANÇAISE DE BELGIQUE (**FWB**) - FONDS DE LA RECHERCHE SCIENTIFIQUE- FNRS (**F.R.S.-FNRS**)
Denmark	- Innovationsfonden (**IFD**)
Estonia	- SIHTASUTUS EESTI TEADUSAGENTUUR (**ETAg**)
Finland	- SUOMEN AKATEMIA (**AKA**)
France	- AGENCE NATIONALE DE LA RECHERCHE (**ANR**) - MINISTERE DE LA SANTE ET DE LA PREVENTION (**FR MOH**)
Iceland	- RANNSOKNAMIDSTOD ISLANDS (**RANNIS**)
Ireland	- Health Research Board (**HRB**)
Israel	- MINISTRY OF HEALTH (**CSO MOH**)
Italy	- MINISTERO DELLA SALUTE (**IT MOH**) - MINISTERO DELL'UNIVERSITA E DELLA RICERCA (**MUR**) - REGIONE TOSCANA (**RT**) - AGENZIA REGIONALE STRATEGICA PER LA SALUTE ED IL SOCIALE (**ARESS**)
Latvia	- LATVIJAS ZINATNES PADOME (**LZP**)
Lithuania	- LIETUVOS MOKSLO TARYBA (**LMT**)
Malta	- MALTA COUNCIL FOR SCIENCE AND TECHNOLOGY (**MCST**)
Netherlands	- NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK (**NWO**) - ZORG ONDERZOEK NEDERLAND ZON (**ZonMw**)
Norway	- NORGES FORSKNINGSRAD (**RCN**)
Poland	- NARODOWE CENTRUM BADAN I ROZWOJU (**NCBR**)
Portugal	- FUNDACAO PARA A CIENCIA E A TECNOLOGIA (**FCT**) - COMISSÃO DE COORDENACAO E DESENVOLVIMENTO REGIONAL DO CENTRO (**CCDRC**)
Romania	- Executive Agency for Higher Education, Research, Development and Innovation Funding (**UEFISCDI**)
Scotland	- SCOTTISH GOVERNMENT Technology Enabled Care and Digital Healthcare Innovation (**SG**)
Spain	- INSTITUTO DE SALUD CARLOS III (**ISCIII**) - CONSEJERÍA DE SALUD Y CONSUMO DE LA JUNTA DE ANDALUCÍA (**CSCJA**) - FUNDACION INSTITUTO DE INVESTIGACION MARQUES DE VALDECILLA (**IDIVAL**) - DEPARTAMENTO DE SALUD GOBIERNO VASCO (**DPTO SALUD**)
Sweden	- FORSKINGSRADET FOR HALSA ARBETSLIVOCH VALFARD (**FORTE**) - VERKET FOR INNOVATIONSSYSTEM (**VINNOVA**)
Switzerland	- SCHWEIZERISCHE AGENTUR FUR INNOVATIONSFORDERUNG (**INNOSUISSE**) - SCHWEIZERISCHER NATIONALFONDS ZUR FÖRDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG (**SNSF**)

Projects selected for award JTC 2023

Acronym	Title
EUAdvance-MS	Advance Care Planning in Multiple Sclerosis in Europe
DADAP	Digitizing and Automating the Diagnostic psychiatric Assessment Process
Digital CACTUS	Digital CAre Contribution to the Transformation of User Services
TeleEPI	Integrated care pathway for people with epilepsy based on an unobtrusive AI-powered telemedical system
ReSTAGE	Integrative Decision Making in Rectal Cancer Care: Advanced Imaging, Predictive Models, and Patient-Centered Digital Tools
PAI	Predicting Care Needs of Older Adults in the Healthcare System through AI-enabled Analysis of Patient-Monitoring Data
EQL Stroke	Enhancing Quality of Life: The Impact of Social Networks, Collective Efficacy, and Physical Environment on Home-Based Rehabilitation for Stroke Survivors EQL
MDR in AIS	Minimizing Door to Reperfusion Times in Drip and Ship Model for Patients with Acute Ischemic Stroke
MI-RICORDO	Transcultural and Multidimensional validation of dIgital Rehabilitation Intervention of COgnitive Resources Domain-Oriented
RE-USABLE	Reduction of CO-2 Emissions in hospitals by implementation of hybrid procedure trays including re-usable textiles in the operation room
NeuroRehab4EU	Democratising access to an innovative, evidence-based model of care for neurological disorders in Europe
ACTION-PD	ACcellerate The Implementation Of Networkcare for Parkinsons Disease
UPSCALE	Unfolding the processes between user needs and health and welfare technology in socio-technical transition of health and care services
TransCare	New care pathways for supporting TRANSitional CARE from hospitals to home using AI and personalised digital assistance
IDjaundice@home	Early recognition of neonatal jaundice application of novel preventive strategies in different health systems
Zero OCD	Getting rid of your obsessions with your own smartphone: Augmented Reality app-based Cognitive Behaviour Therapy for Obsessive Compulsive Disorder Health-economic and process evaluation alongside a Randomized Controlled Trial.
MUSICALISE	MUltiple Sclerosis, how to Instigate Care integrAtion across nationaL contexts via patIentS Engagement?
AAPEHS	Adolescent and Adult Perspectives on European Health System Performance: A Four-Country Study
HOMEVEND	Home Ventilation in the age of Digital care
ARC	Ageing Right Care(fully) a system approach to understanding, redesigning and futuring integrated care for older adults ageing in place in the Netherlands, Israel and Sweden
ARMS4elderly	Advanced remote medical services for elderly people - a pilot program focused on remote medical care for elderly populations in Europe aimed at reducing hospital admissions
ROOMMATE	IntegRated system of rObOts and Multimedia Monitors: technology for innovAtion and personalizaTion of rEhabilitation care
PROHEALTH	A novel technology-based care concept for an accessible and personalized cognitive-motor therapy to counteract frailty and promote health
EU-MIND	EUropean Mental and physical health Initiative for people with severe Mental Disorders
TOGETHER	Vascular age as a key for a Team-based approach to manage blood pressure and cardiovascular risk between community pharmacists and Primary Health Care Centers
RENEW	Reshaping data-driven smart healthcare to optimize resources and personalize care for hypertensive patients through AI and digital twin models
PLATINUMS	ImPLementation of an Advanced TelerehabIlitatioN solUtion for people with Multiple Sclerosis
ICAREWOUNDS	Intelligence and integration of care for smarter chronic wounds management