ERIES | ENGINEERING RESEARCH INFRASTRUCTURES FOR EUROPEAN SYNERGIES

Advancing frontier knowledge in earthquake engineering through laboratory testing

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IUSS
Scuola Universitaria Superiore Pavia

Funded by
the European Union

PROJECT OVERVIEW

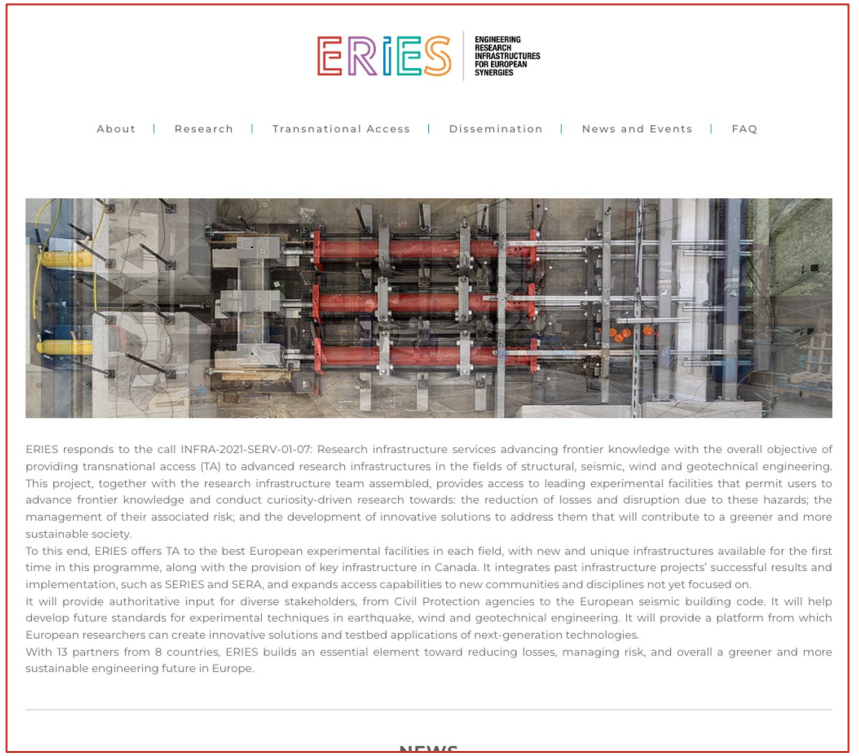
ERIES ENGINEERING RESEARCH INFRASTRUCTURES FOR EUROPEAN SYNERGIES

- The objective of ERIES is to provide transnational access (TA) to research infrastructures to conduct research that will advance frontier knowledge related to seismic, wind and geotechnical hazards
- Funding: European Commission Horizon Europe

European Commission

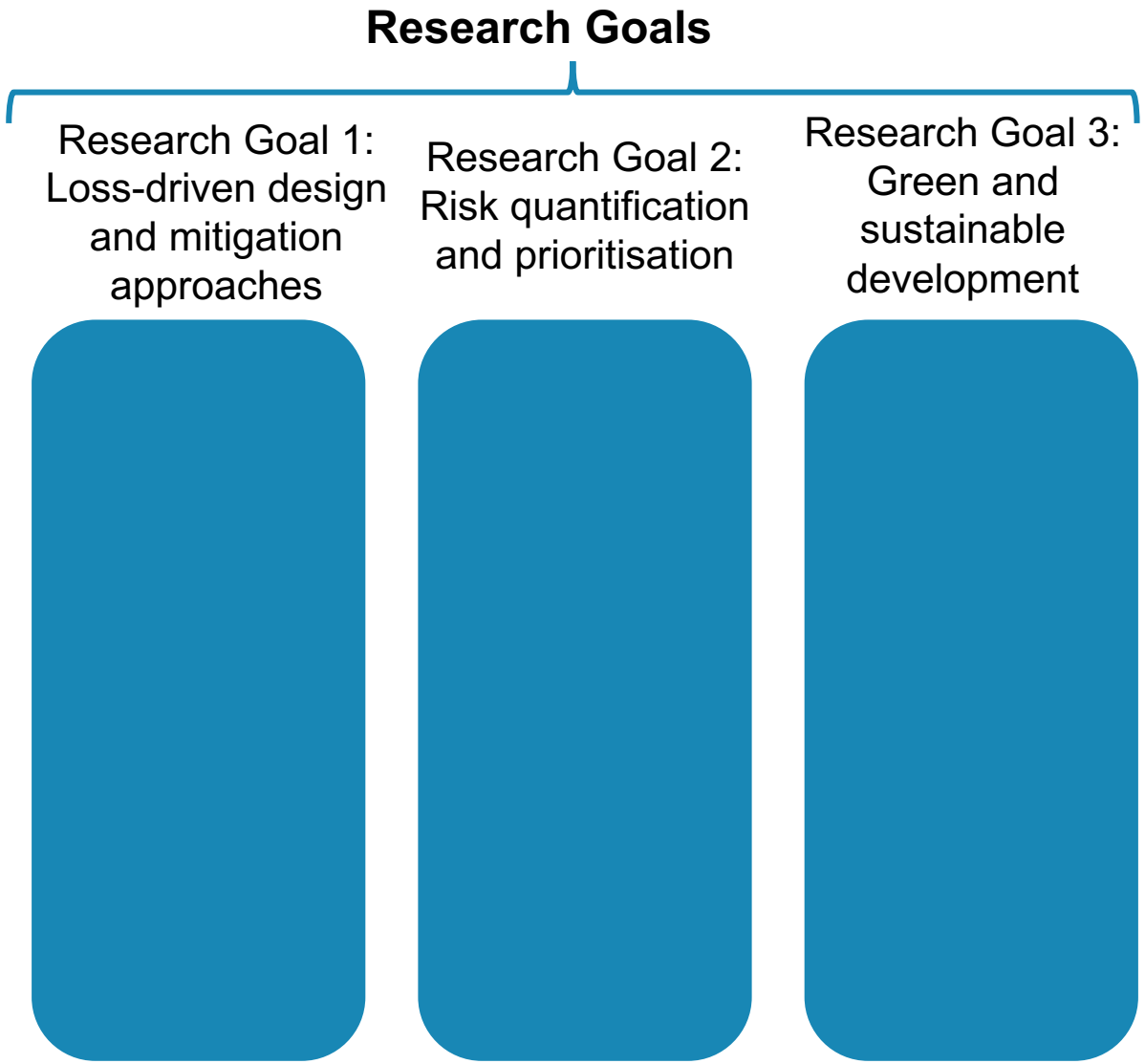
Horizon Europe

- Total Budget: €11,616,118
  - €10,616,225 European Commission Contribution
  - €999,892 UKRI Contribution
- Duration: 4 years (01/06/2022 – 31/05/2026)

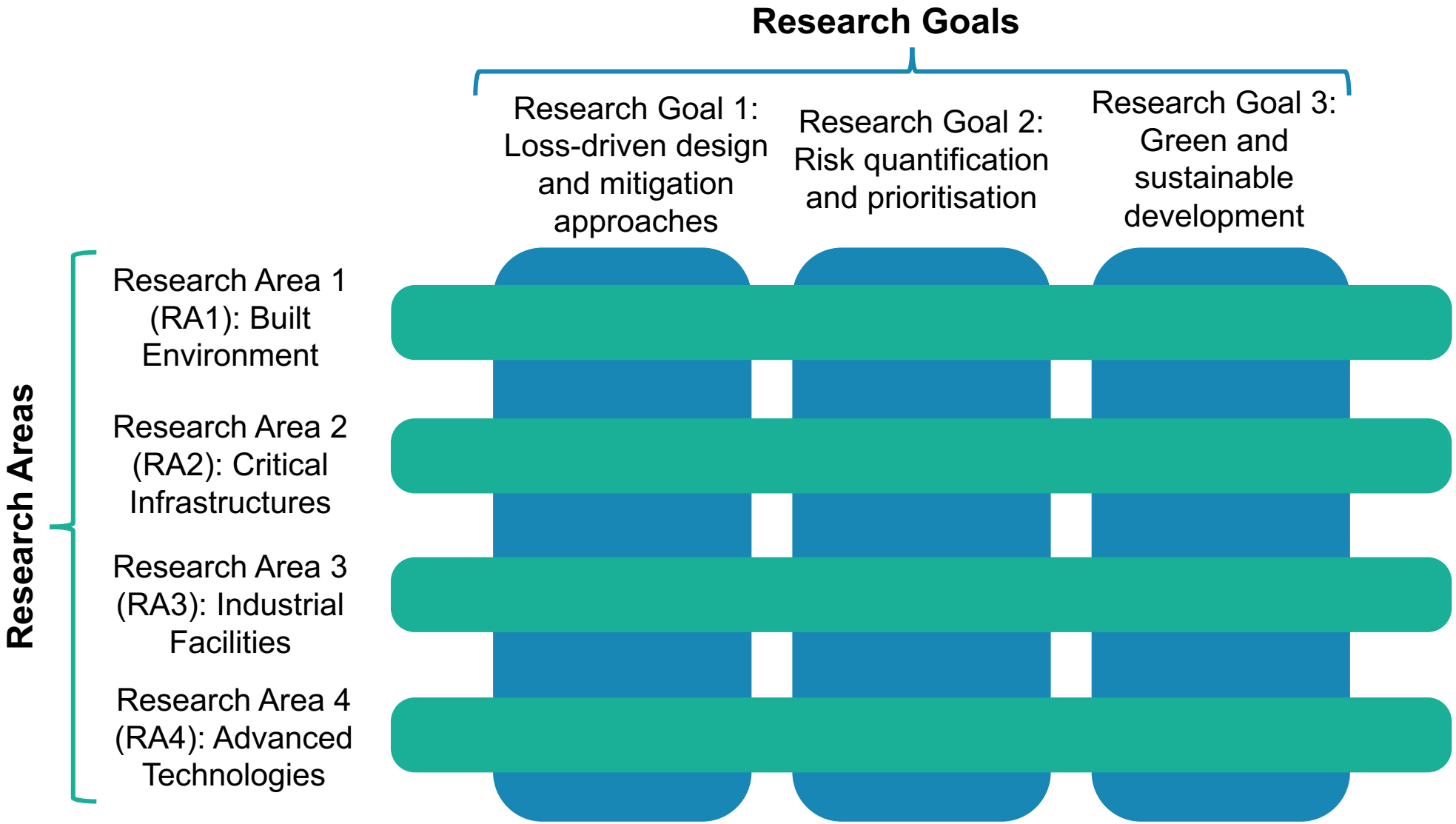


Website: www.eries.eu
Email: eries@iusspavia.it

OVERALL STRUCTURE



OVERALL STRUCTURE



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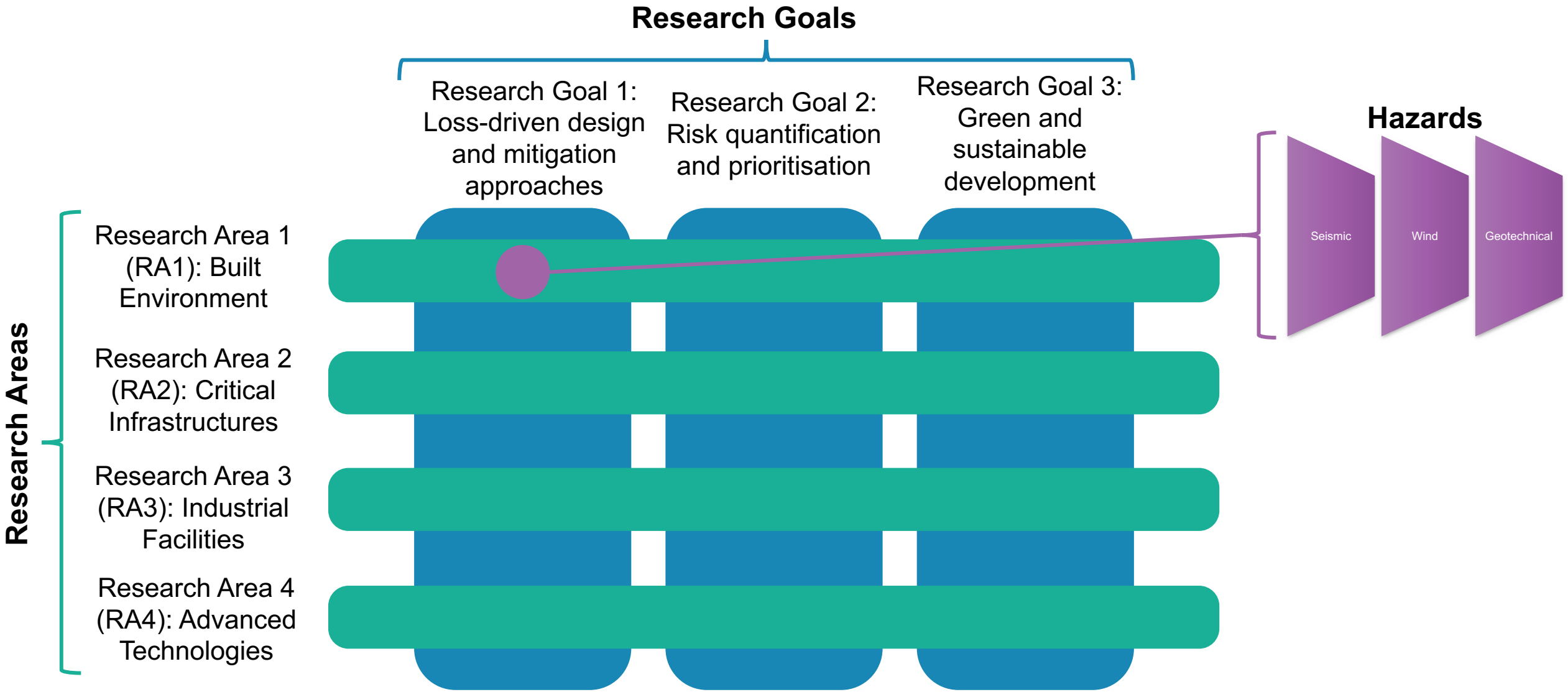
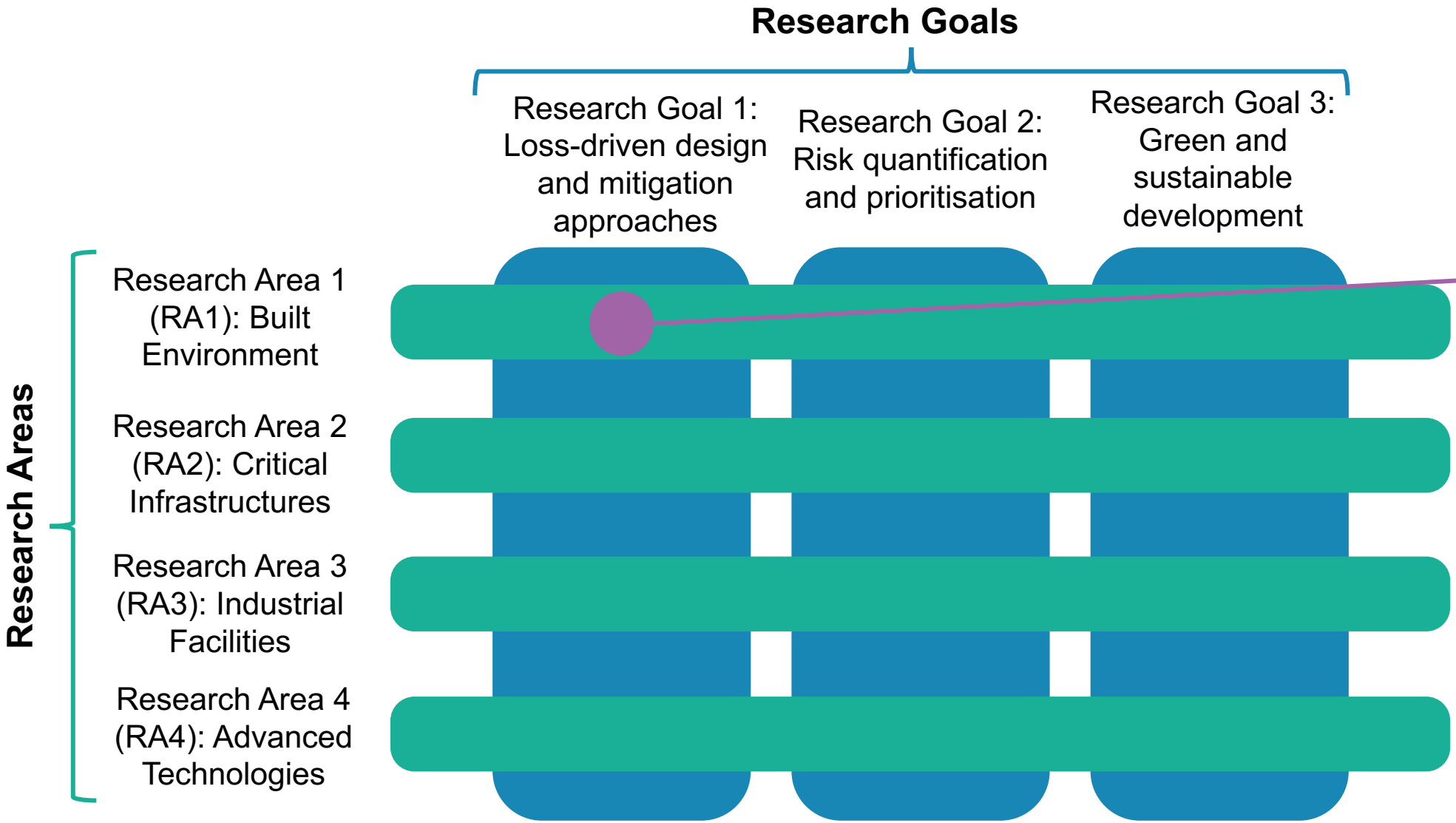
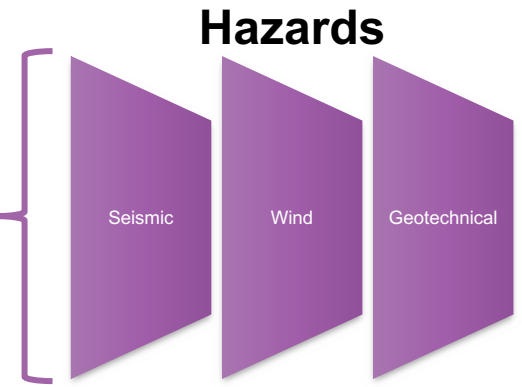


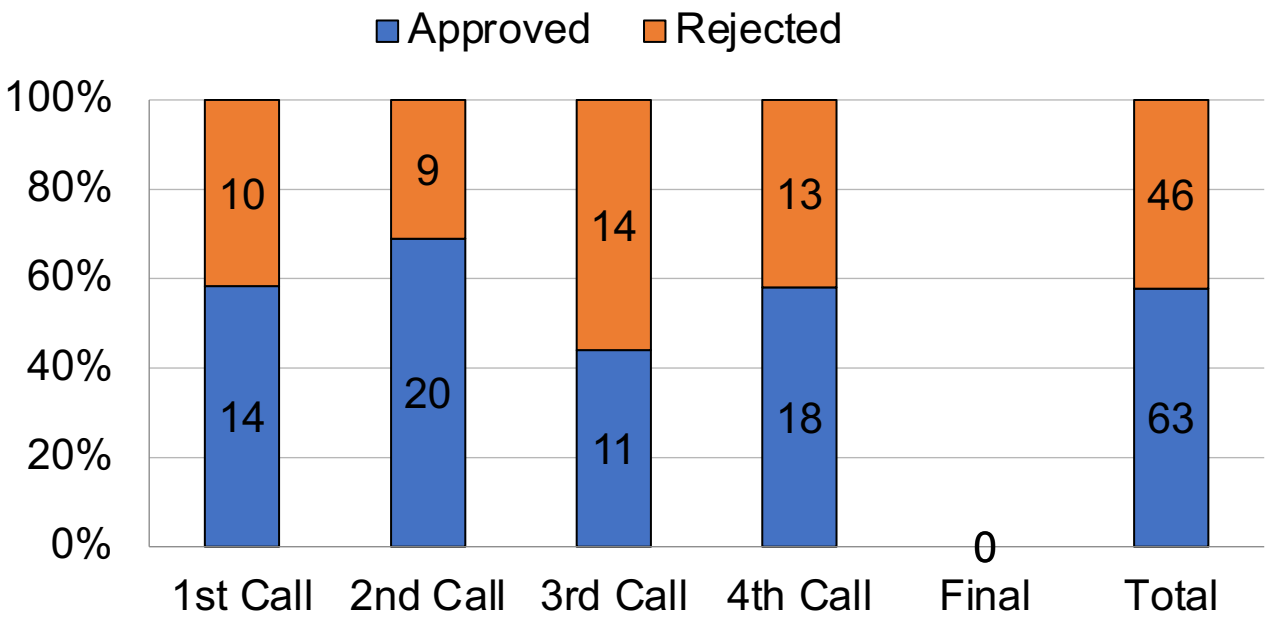
OVERALL STRUCTURE

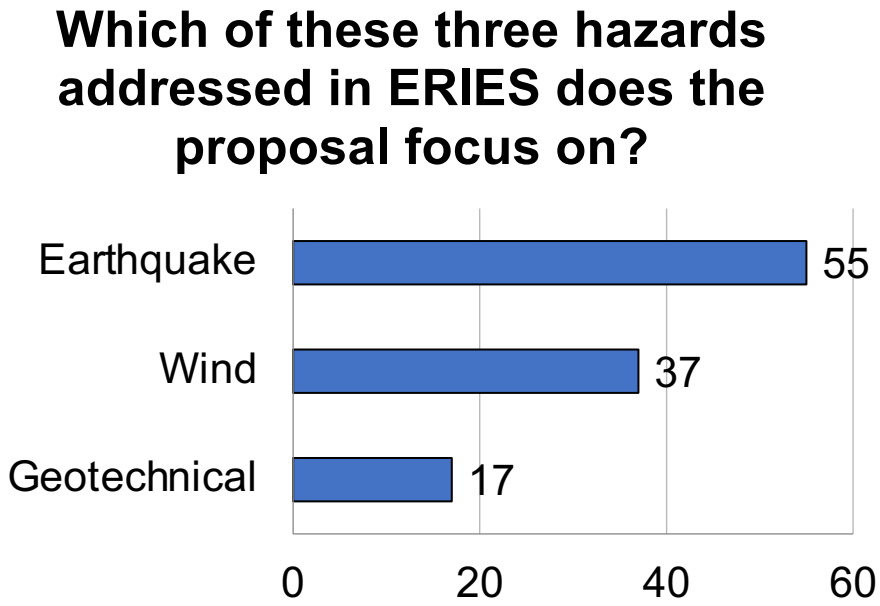




For example, a TA user project may wish to study the effects of earthquakes (seismic hazard) on residential buildings (RA1: Built environment) and investigate a novel retrofitting technique that will contribute towards loss-based design and mitigation approaches (research goal).

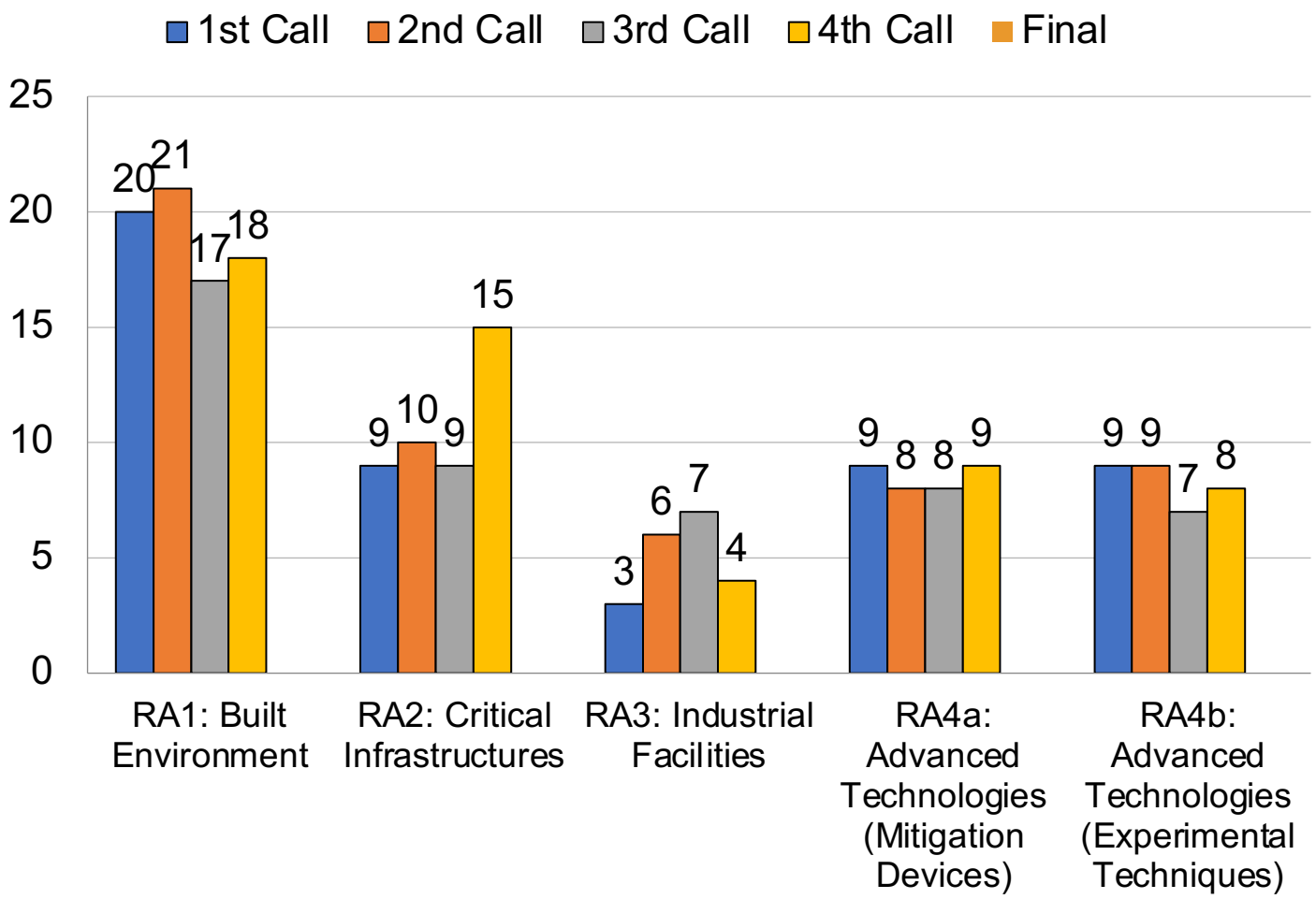
APPLICATIONS

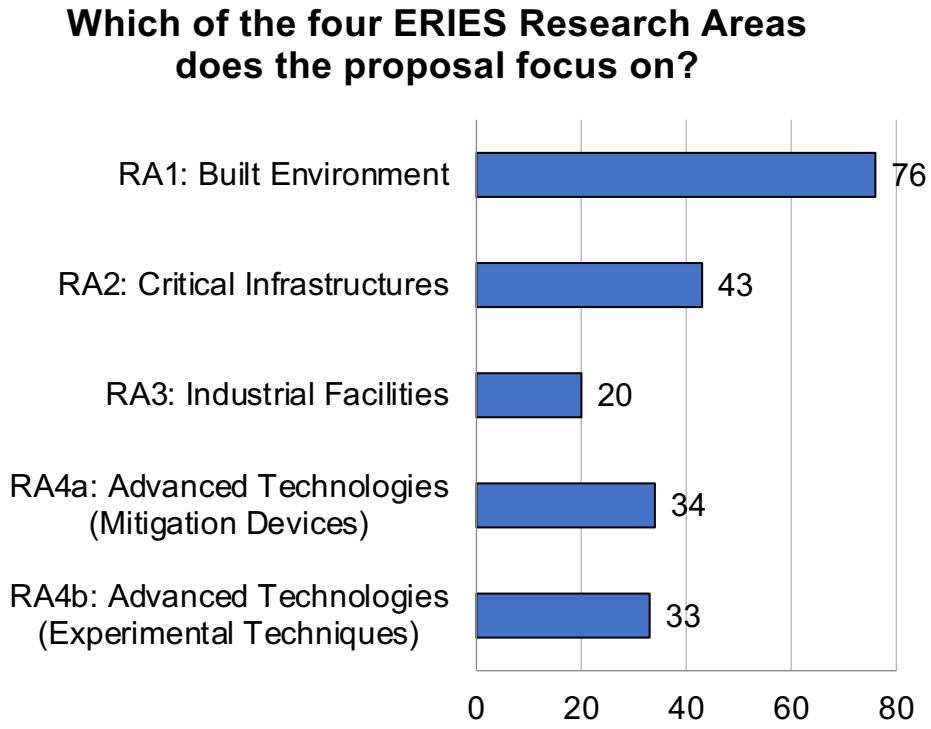




- Overall, a good engagement with an average acceptance rate of 59%

RESEARCH AREAS





RESEARCH INFRASTRUCTURES

1. IUSS-EUC – Pavia, Italy
2. UPAT – Patras, Greece
3. UBRI – Bristol, UK
4. AUTH – Thessaloniki, Greece
5. LNEC – Lisbon, Portugal
6. CEA – Paris, France
7. IZIIS – Skopje, North Macedonia
8. UNIGE – Genova, Italy
9. WU – London, Canada
10. TUE – Eindhoven, Netherlands
11. CSTB – Nantes, France
12. JRC – Ispra, Italy

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USER GROUP DISTRIBUTION (1ST AND 2ND CALL)

- Geographical diversity

Users from:

- Europe
- North America
- Oceania
- Asia

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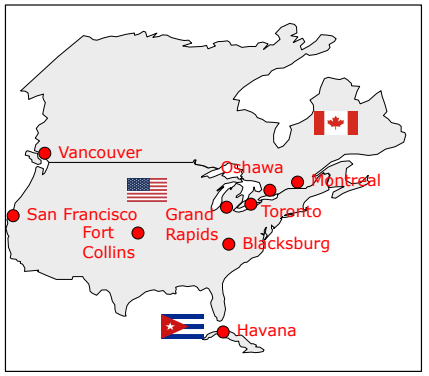
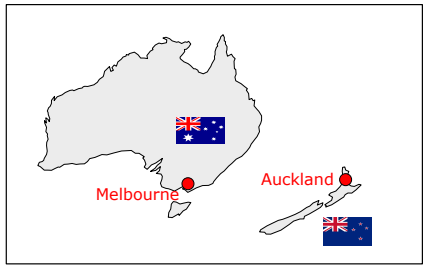
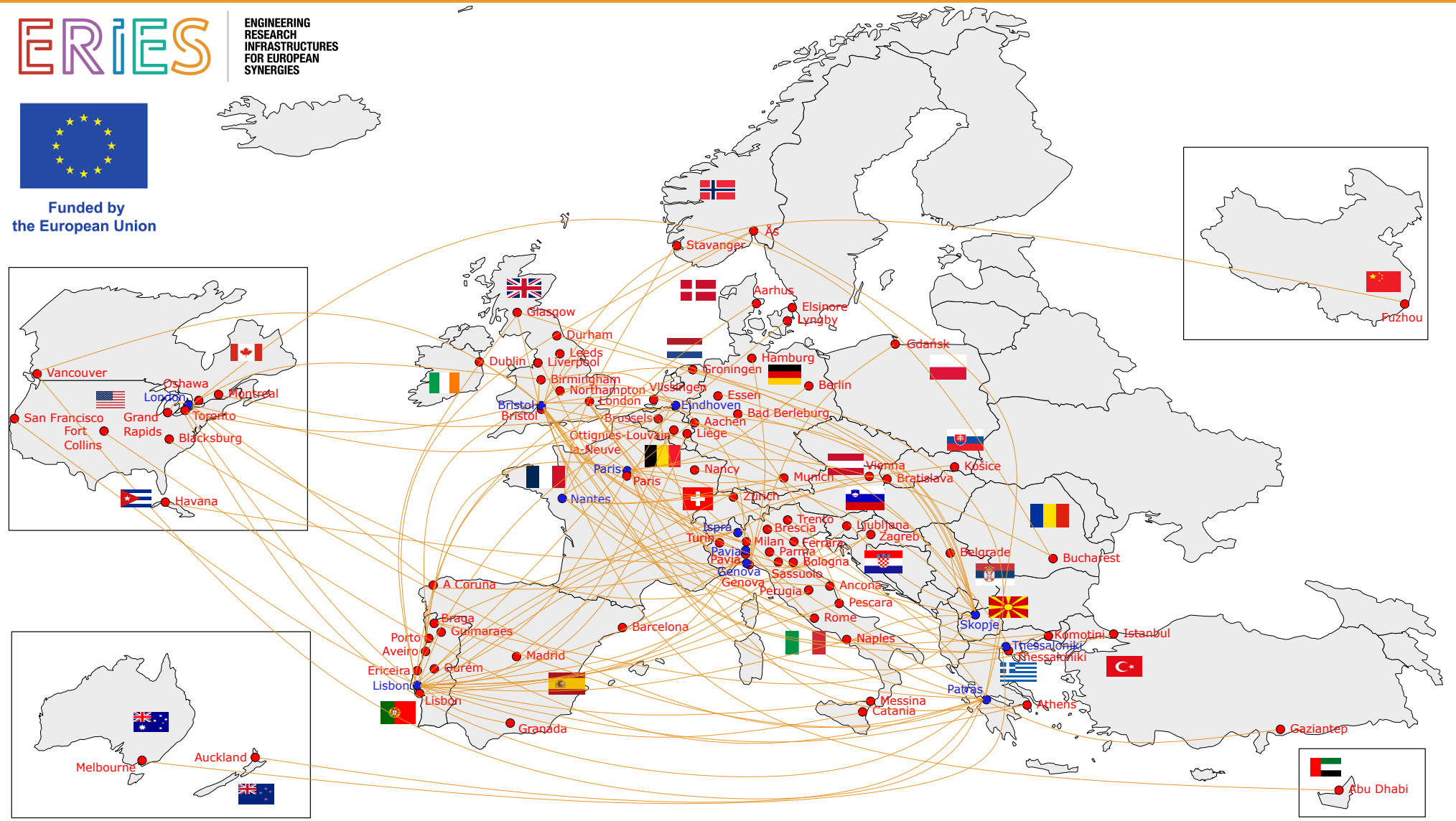




USER GROUP COLLABORATION (1ST AND 2ND CALL)

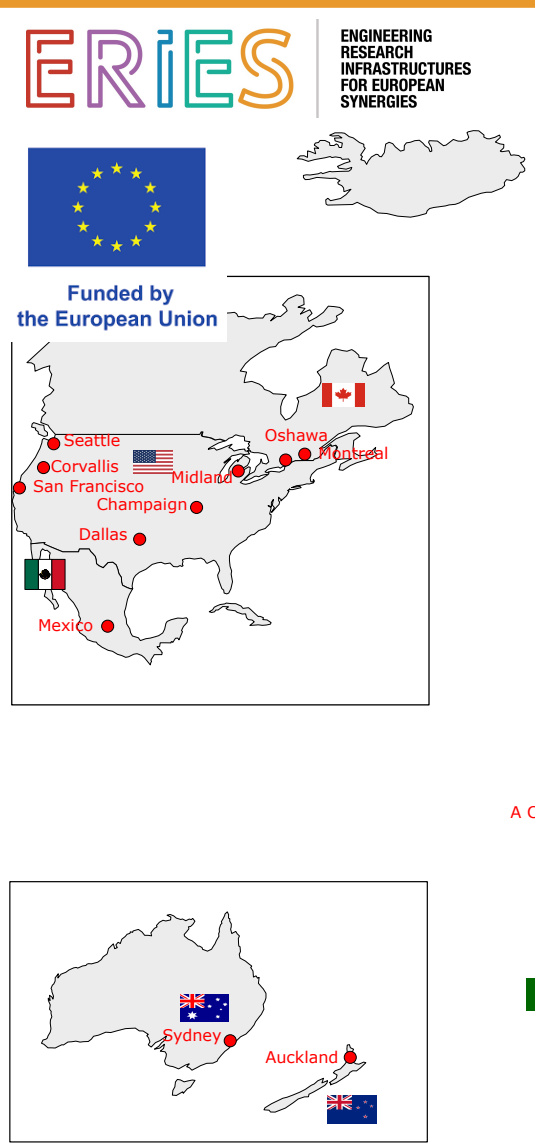


USER GROUP DISTRIBUTION (3RD AND 4RD CALL)

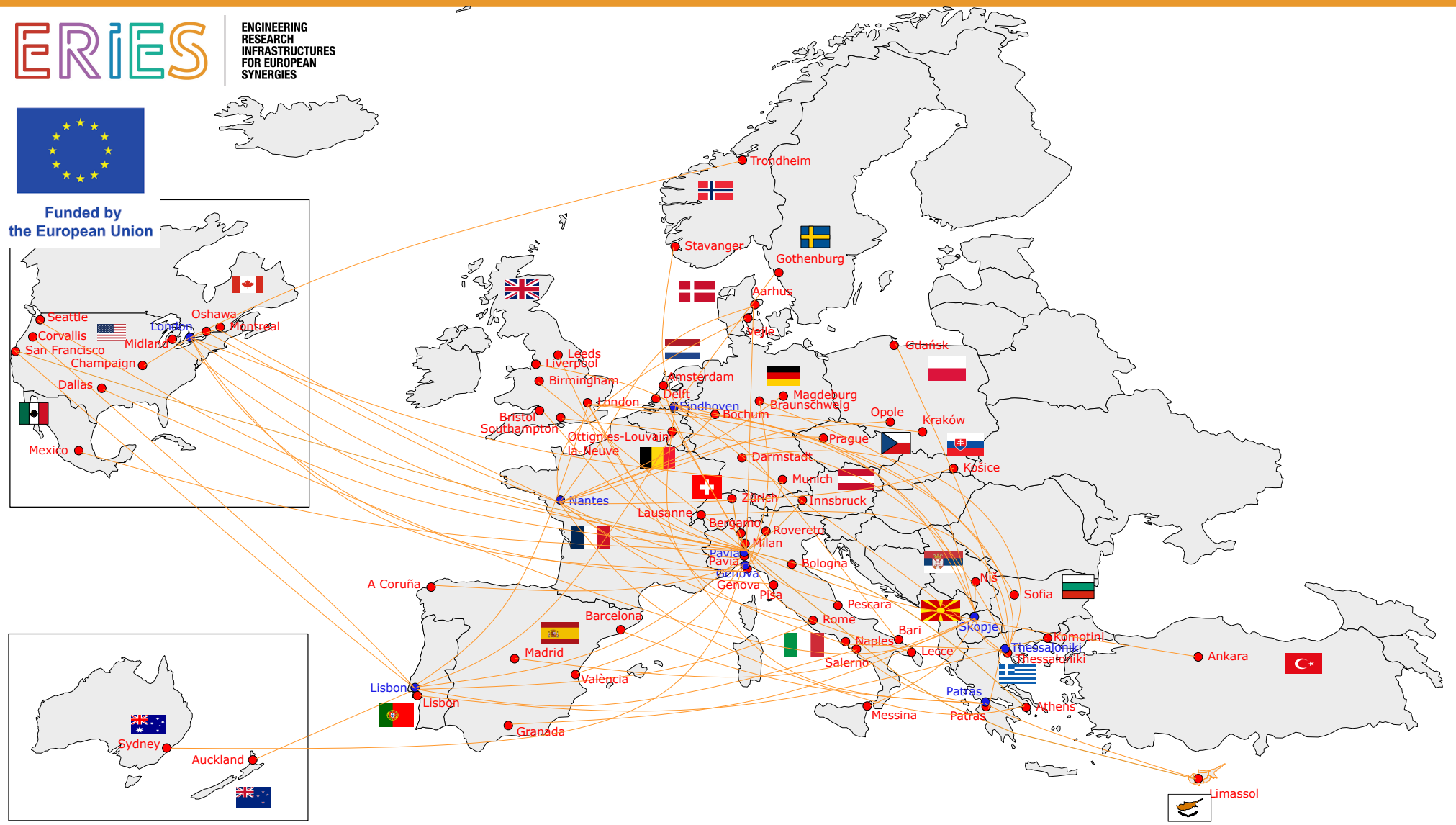
- Geographical diversity

Users from:

- Europe
- North America
- Oceania



USER GROUP DISTRIBUTION (3RD AND 4RD CALL)



USER GROUP DISTRIBUTION (ALL CALLS)

TECHNICAL SESSION PRESENTATIONS

AMBER 3 | Convenors: G. O'Reilly, G.M. Calvi

10:30 - 10:35	**ERIES: ADVANCING FRONTIER KNOWLEDGE IN EARTHQUAKE ENGINEERING THROUGH LABORATORY TESTING** G. OReilly, G.M. Calvi
10:35 - 10:45	**MULTI-HAZARD LARGE SCALE TESTS AT THE UNIVERSITY OF BRISTOL IN THE FRAMEWORK OF EU-ERIES PROJECT** A. Sextos, G. Mylonakis, R. De Risi, F. De Luca, D. Karamitros, A. Crewe, M. Dietz, E. Vogiagaki, T. Horseman, T. Gokce, D. Williams
10:45 - 10:55	**RETROFITTING OF STONE MASONRY USING INNOVATIVE GRID-BASED COMPOSITES: THE ERIES-RESTORING PROJECT** M. Ponte, G. Guerrini, L. Garcia-Ramonda, I. Lanese, E. Rizzo Parisi, G. O Reilly, F. Graziotti, A. Tsiavos, L. Pelà, A. Penna, G. Magenes, R. Bento
10:55 - 11:05	**SHAKE-TABLE TESTING OF TWO U-SHAPED RC WALLS: OVERVIEW OF PROJECT ERIES-ALL4WALL** J. Pacheco de Almeida, R. Hoult, A. Simar, C. Doneux, B. Payen, A. Bertholet, R. Pinho, A. Orgnoni, T. Isakovic, A. Janevski, D. Palermo, S. Lo Feudo, Y. Han, C. Gwendal, B. Mihaylov, P. Candeias, F. Ribeiro, A. Carvalho, M.L. Sousa, A.A. Correia
11:05 - 11:15	**ENHANCING STATE-DEPENDENT FRAGILITY THROUGH EXPERIMENTALLY VALIDATED ENERGY-BASED APPROACHES** R. Gentile, G. Angelucci, J. Wu, P. Morandi, R. Milanesi, F. Mollaioli, G. O Reilly, F. Freddi, F. Jalayer
11:15 - 11:25	**SEISMIC PERFORMANCE OF EXPOSED COLUMN-BASE PLATE CONNECTIONS IN EXISTING STEEL FRAMES** L. Di Sarno, J. Wu, N. Stathas, F. Freddi, M. D Aniello, S. Bousias, R. Landolfo, E.M. Güneyisi
11:25 - 11:35	**THE REVAULT PROJECT: RESPONSE EVALUATION OF MASONRY VAULTS UNDER PSEUDO-STATIC CYCLIC TESTS** C. Calderini, C. Cirabisi, N. Mendes, N. Bianchini, C. Ferrero, P.B. Lourenço
11:35 - 11:45	**FLEXIBLE JOINTS FOR RESILIENT INFILLED RC FRAMES: PRELIMINARY ANALYSES FOR SHAKING TABLE TESTING** E. Tubaldi, P. Dhir, F. Freddi, M. Marinkovic, H. Ahmadi, M. Gams, C. Butenweg, D. Losanno, B. Pantó, F. Parisi, A. Bogdanovic, J. Bojadjieva, Z. Rakicevic, V. Sheshov

MONITOR 14 | Convenors: G. O'Reilly, G.M. Calvi

14:30 - 14:40	**EXPERIMENTAL ASSESSMENT OF THE COLLAPSE CAPACITY OF CODE-COMPLIANT RC FRAMES** R. Pinho, C. Fontana, F. Cavalieri, A. Orgnoni, G. Gabbianelli
14:40 - 14:50	**1-G SHAKING TABLE TESTING FOR SOIL RESPONSE UNDER VERTICAL ACCELERATIONS** A.L. Simonelli, E. Marotti, F. Zotti, A. Penna, M. Dietz, R. De Risi, G. Mylonakis
14:50 - 15:00	**DESIGN OF SHAKING TABLE TESTS FOR RESILIENT STRUCTURES WITH FIBER-REINFORCED ELASTOMERIC ISOLATORS** D. Losanno, D. Konstantinidis, E. Tubaldi, H. Ahmadi, A. Strauss, D. De Domenico, F. Parisi, M. Vassiliou, L. Piga, F.L. Ribeiro, A.A. Correia
15:00 - 15:10	**SHAKING TABLE TEST CHALLENGES FOR A LIGHTWEIGHT CONCRETE STRUCTURE** D. Kober, C. Butenweg, T. Chaudat, L. Miccoli, M. Nomikou, V. Kaloidas, M. Dumitrescu, C. Czaderski, F. Bernauer
15:10 - 15:20	**SHAKING TABLE TESTS OF A 3-STOREY SELF-CENTRING STEEL MRF: PRELIMINARY ANALYSIS AND DESIGN** E. Elettore, F. Freddi, M. Latour, L. Pieroni, S. Di Benedetto, F. Gutierrez Urzua, A.B. Francavilla, B. Simpson, A.R. Barbosa, S. Ramhormozian, D. Grant, G. Rizzano, F.L. Ribeiro, A.A. Correia
15:20 - 15:30	**ERIES-STRONG: SEISMIC TESTING OF MASONRY-INFILLED FRAMES RETROFITTED WITH CLT PANELS** I. Giongo, F. Graziotti, J. Branco, N. Stathas, S. Bournas, F. Smiroldo, A. Bartolotti, N. Damiani, A. Albino, D. Dizhur