



ENGINEERING  
RESEARCH  
INFRASTRUCTURES  
FOR EUROPEAN  
SYNERGIES

Advancing frontier knowledge in earthquake  
engineering through laboratory testing



**IUSS**

Scuola Universitaria Superiore Pavia

Gerard J. O'Reilly, Gian Michele Calvi

IUSS Pavia, Italy



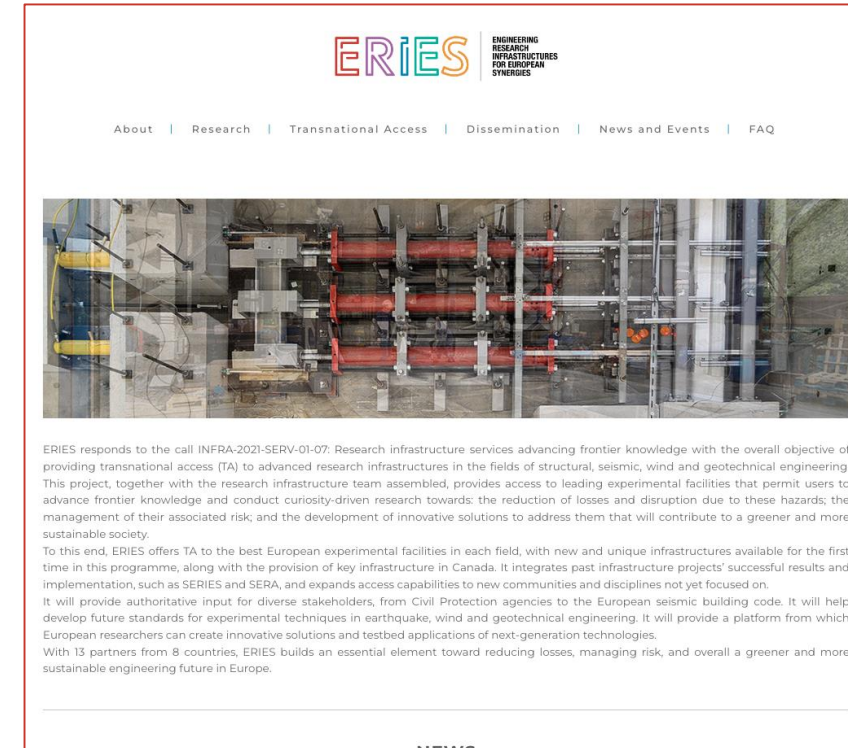
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# PROJECT OVERVIEW



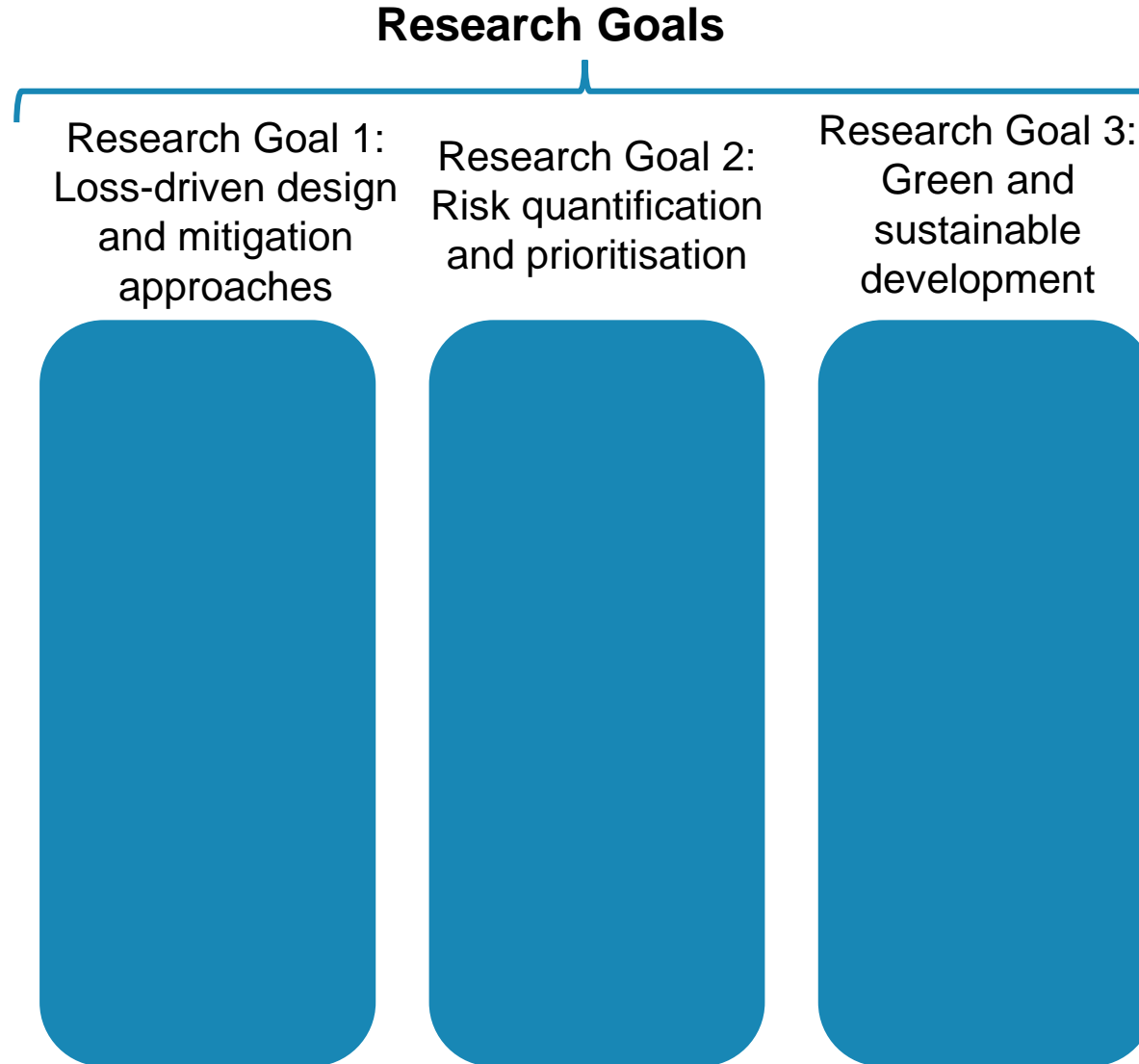
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- The objective of ERIES is to provide transnational access (TA) to research infrastructures to conduct research that will advance frontier knowledge related to seismic, wind and geotechnical hazards
- Funding: European Commission Horizon Europe
- Total Budget: €11,616,118
  - €10,616,225 European Commission Contribution
  - €999,892 UKRI Contribution
- Duration: 4 years (01/06/2022 – 31/05/2026)

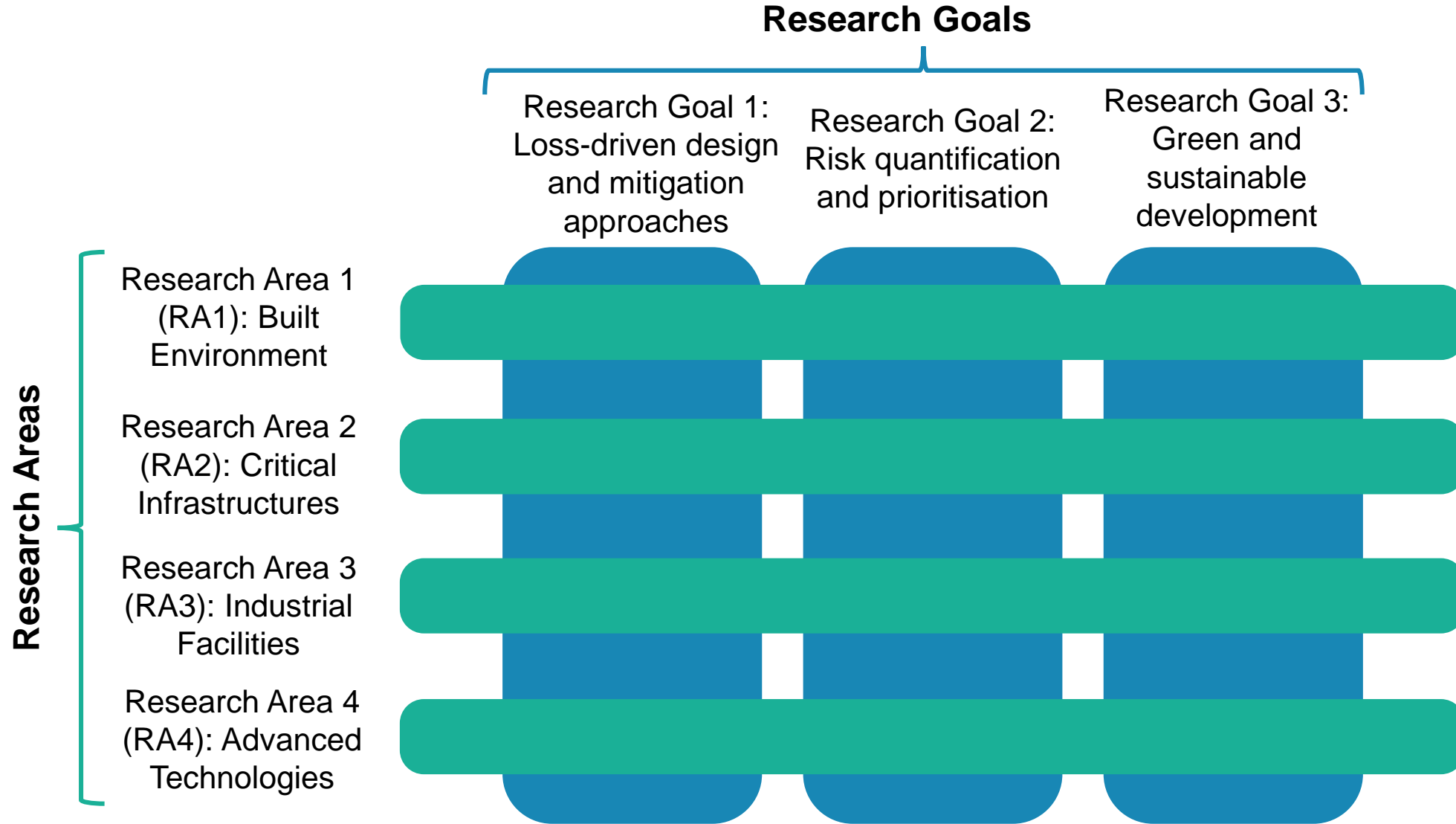


Website: [www.eries.eu](http://www.eries.eu)  
Email: [eries@iusspavia.it](mailto:eries@iusspavia.it)

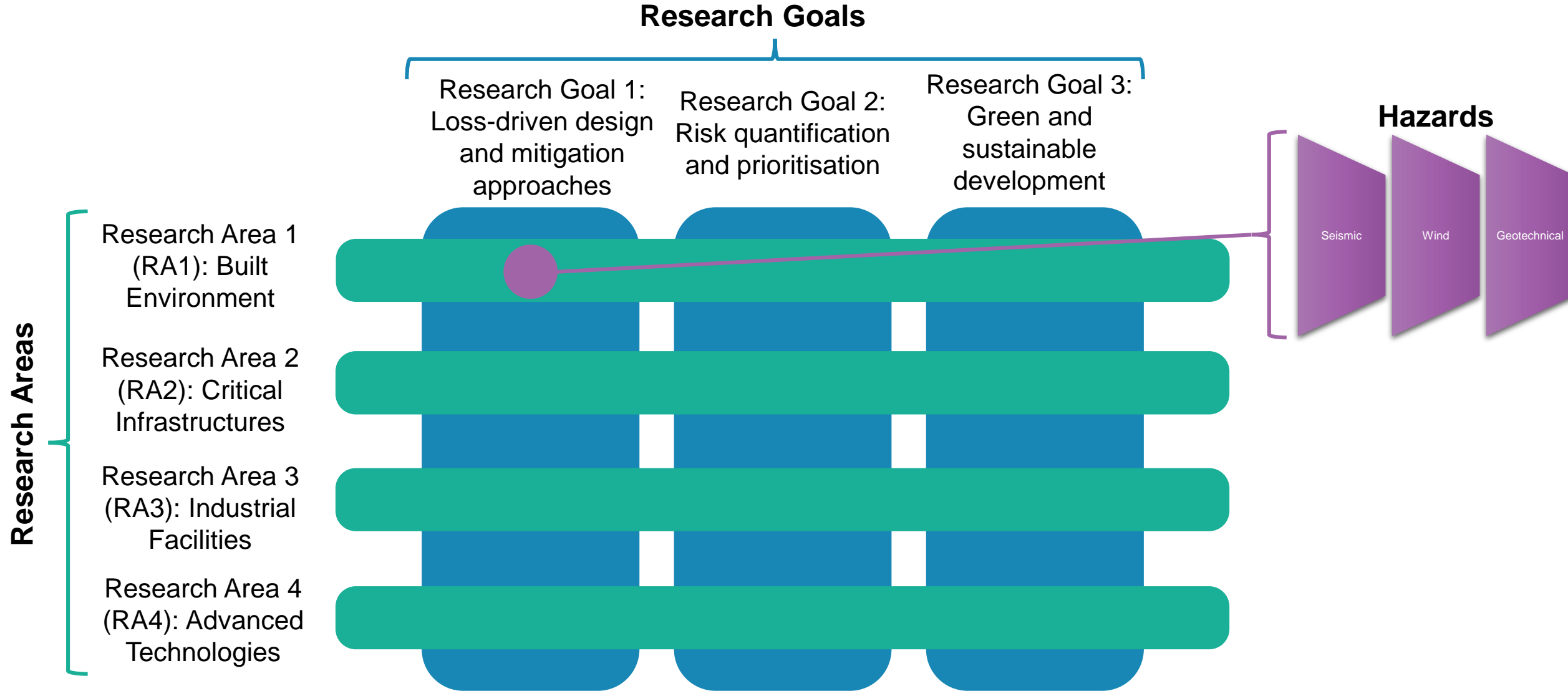
# OVERALL STRUCTURE



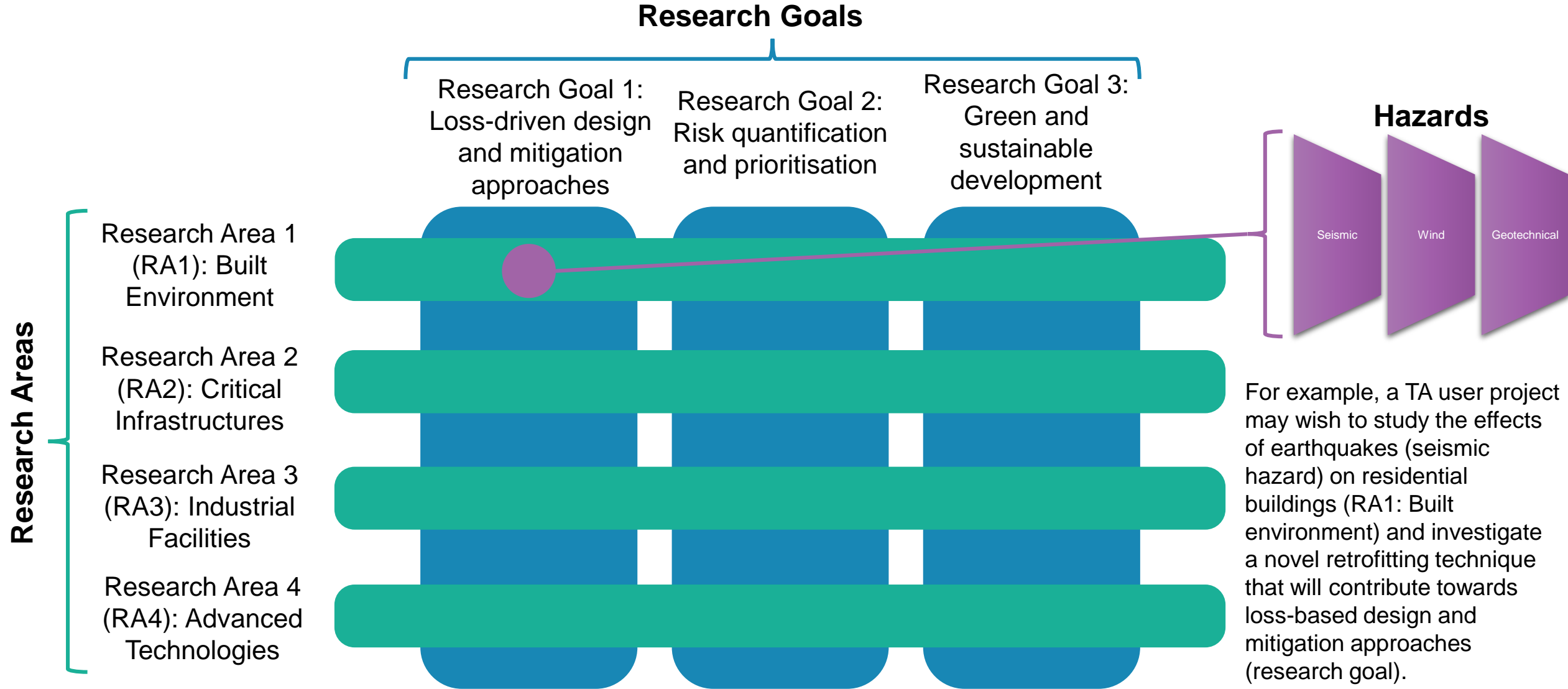
# OVERALL STRUCTURE



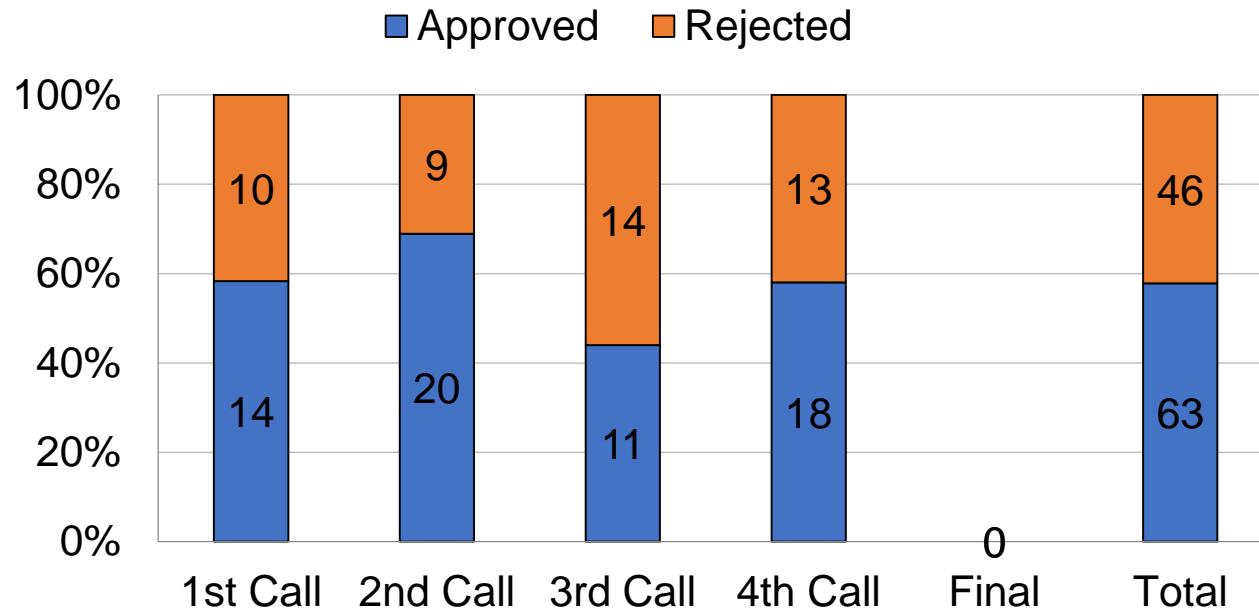
# OVERALL STRUCTURE



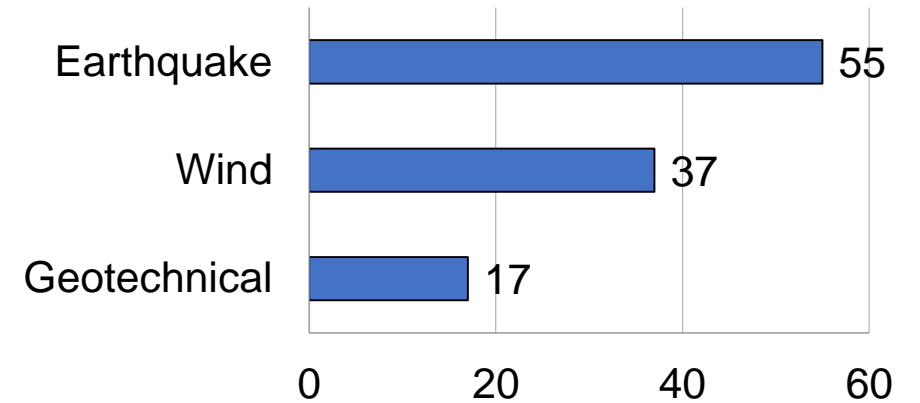
# OVERALL STRUCTURE



# APPLICATIONS

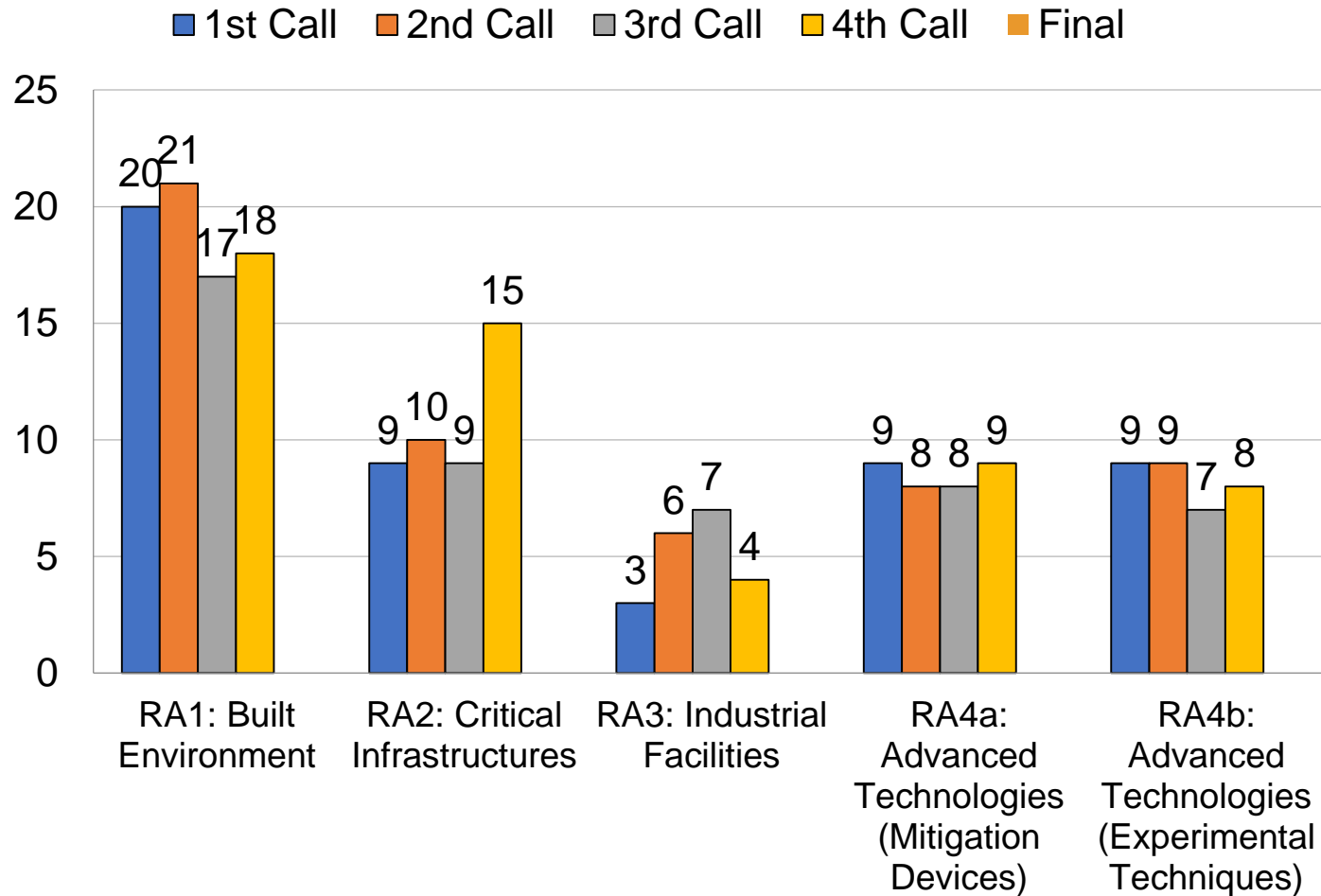


## Which of these three hazards addressed in ERIES does the proposal focus on?

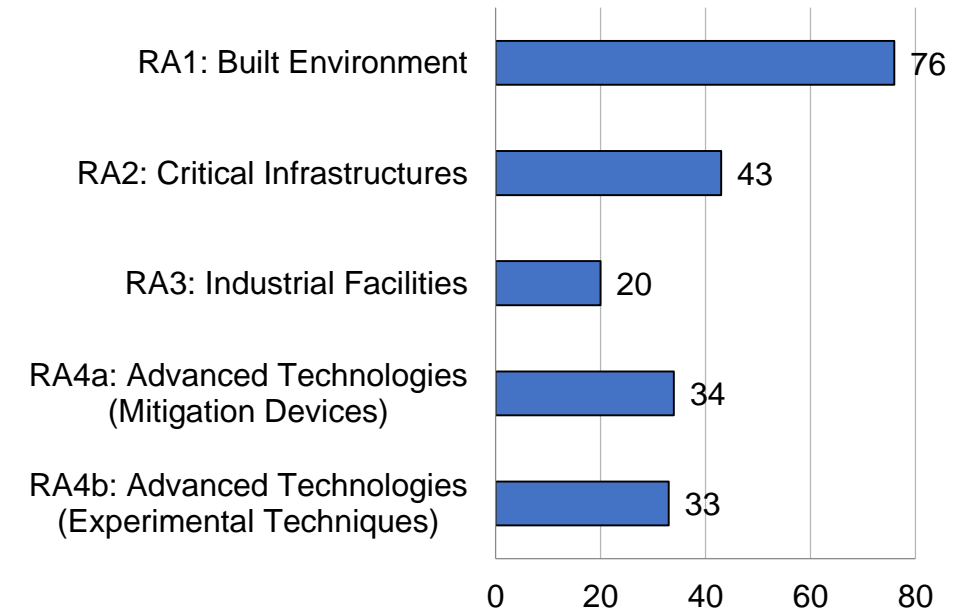


- Overall, a good engagement with an average acceptance rate of 59%

# RESEARCH AREAS



## Which of the four ERIES Research Areas does the proposal focus on?





# RESEARCH INFRASTRUCTURES

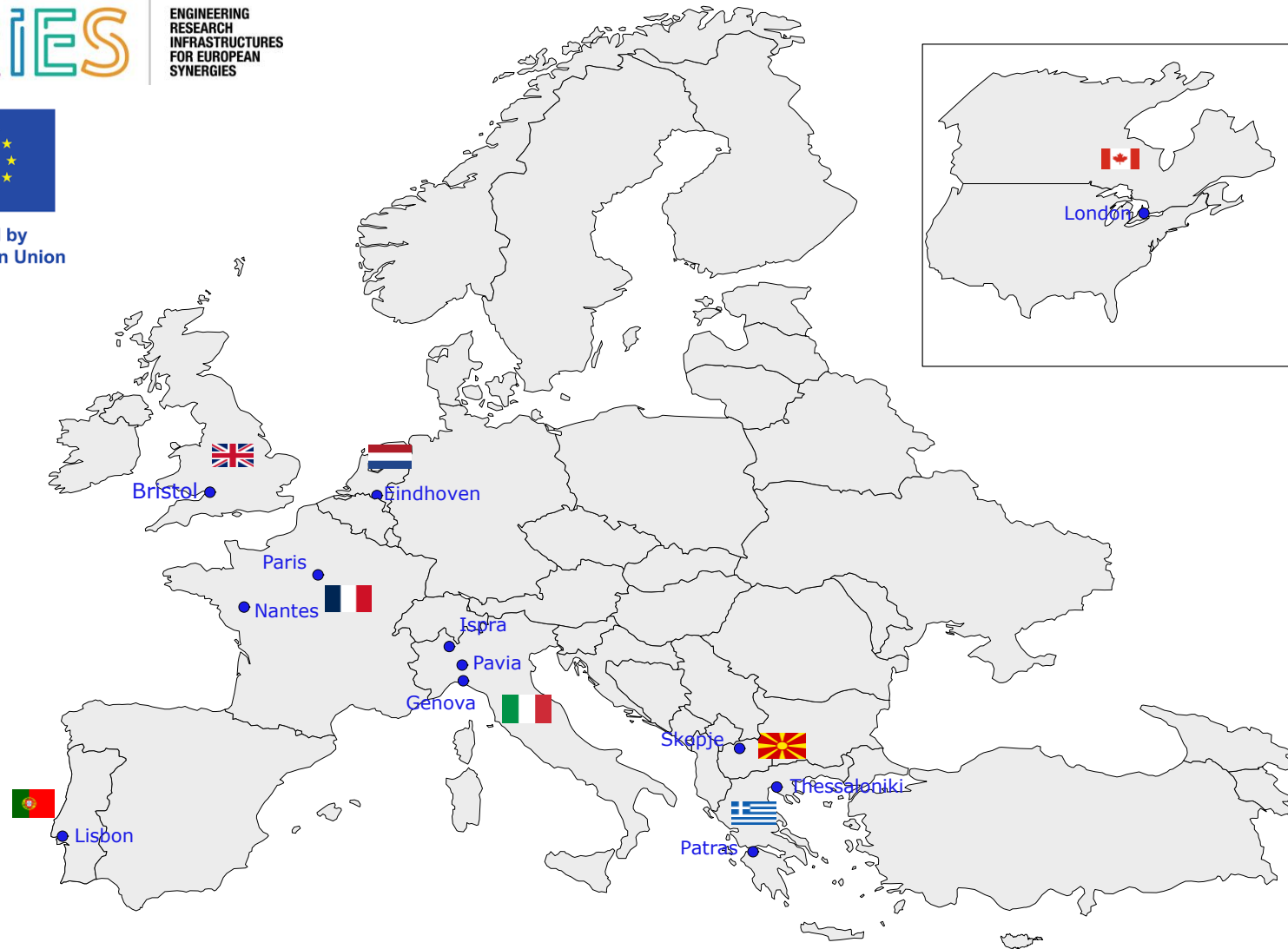
1. IUSS-EUC – Pavia, Italy
2. UPAT – Patras, Greece
3. UBRI – Bristol, UK
4. AUTH – Thessaloniki, Greece
5. LNEC – Lisbon, Portugal
6. CEA – Paris, France
7. IZIIS – Skopje, North Macedonia
8. UNIGE – Genova, Italy
9. WU – London, Canada
10. TUE – Eindhoven, Netherlands
11. CSTB – Nantes, France
12.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

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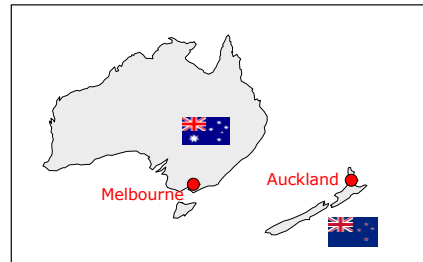
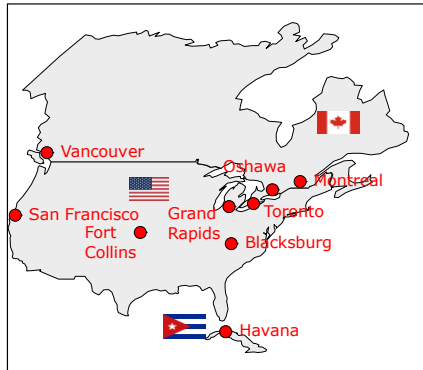
- Europe
- North America
- Oceania
- Asia



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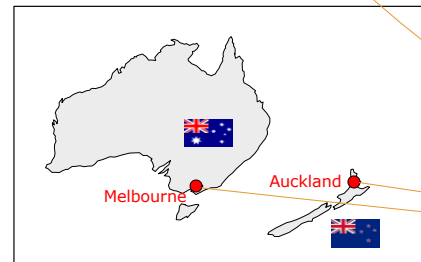
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18th World Conference on Earthquake Engineering

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- Geographical diversity

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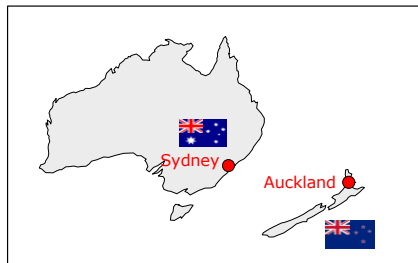
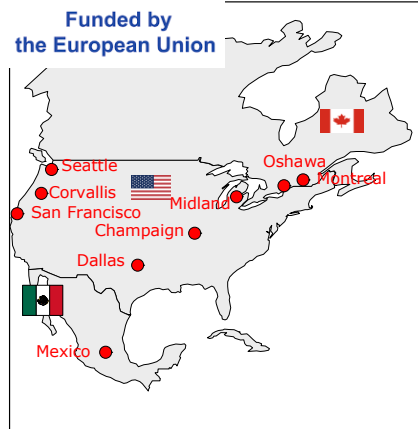
- Europe
- North America
- Oceania

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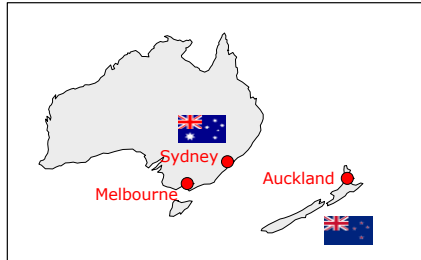
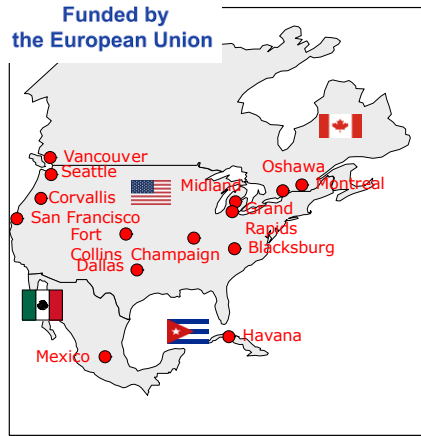
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# 18th World Conference on Earthquake Engineering

# 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. O'Reilly, [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. Voggiagaki, 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. Güneýisi

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. Bojadjeva, 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. Bourmas, F. Smiroldo, A. Bartolotti, N. Damiani, A. Albino, D. Dizhur