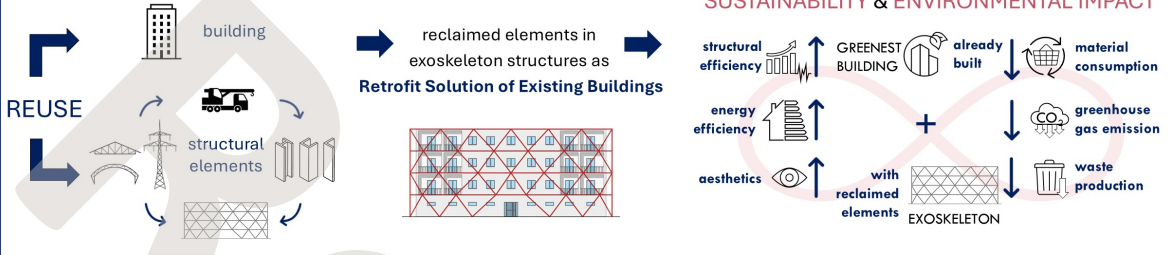


Reuse and Dissipative Connection in Steel Exoskeletons

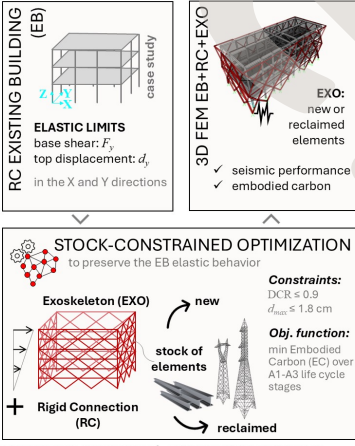
UR13 – Responsabile scientifico: Prof. E. Mele
Membri: PhD D. Faiella, PhD F. Esposito, F. Ascione

NEW or RENEW?

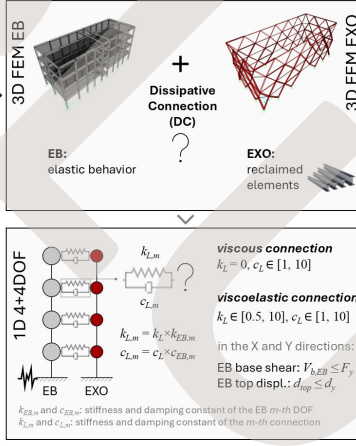


METHODOLOGY

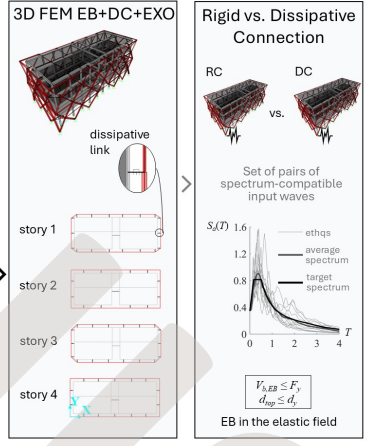
I – Rigid Connection



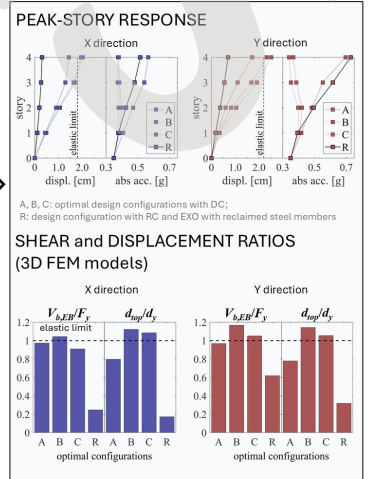
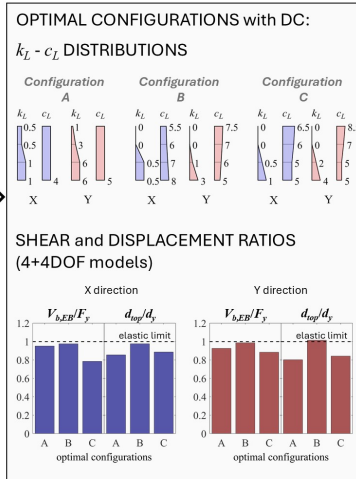
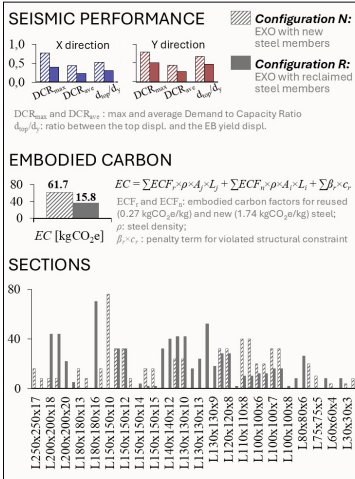
II – Dissipative Connection



III – Seismic Assessment



RESULTS



CONCLUSIONS

- ✓ Reuse in steel exoskeleton cuts embodied carbon (~75%) while preserving seismic performance
- ✓ Dissipative connections, optimized via simplified models, keep the RC building elastic
- ✓ Results validated with both simplified and refined finite element models
- ✓ Ongoing work: alternative exoskeleton patterns, simplified 1+1DOF models, and physical implementation of connections