

5GAlner: Portugal 5G+IA Networks Reliability Center

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The 5GAlner initiative brings together different stakeholders, namely academics, operators, vendors and vertical industries. The goal is to facilitate vertical markets’ digital transition to 5G by providing an environment for easy innovation, development, and experimentation. Covering a broad 5G ecosystem, the aggregated expertise not only potentiates the evolution of mobile communications technologies, but also the creation, consolidation and validation of novel business models. Additionally, the resulting insights drive the development of advanced functionalities that empower verticals with high-performant, easy-to-use shareable solutions, thus fostering the adoption of 5G technologies.

The 5GAlner infrastructure includes resources with very disparate characteristics, creating an ideal environment for technological innovation and validation. High-end research-grade resources are leveraged for going from early concept development into proof-of-concept prototypes which can later go into an end-of-line validation on state-of-the-art commercial-grade 5G SA equipment. The infrastructure is continuously evolving and open for collaboration and experimentation, thus increasing the reach of the platform and associated tools.

Overall, 5GAlner provides a real-life environment for developing, integrating and testing novel solutions for 5G and beyond technologies. With various use cases already running (e.g., Industry 4.0, Transportation, Energy), 5GAlner is increasing the 5G awareness of vertical industries (e.g., Bosch, EFACEC) and has been providing support to national and international projects (e.g., H2020 5GASP, H2020 5Growth, P2020 Augmanity, Portuguese 5G mobilizer). As a result, the impact of this reference competence centre is not contained but spans over a plethora of technologies and applications, acting as an enabler to scientific innovation in multiple disparate domains.

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FIGURE 1
 5GAlner sites at (i) Aveiro Seaport, (ii) Institute of Telecommunications, (iii) University of Aveiro and (iv) Bosch Thermotechnology.

FIGURE 2
 5GAlner infrastructure overview featuring both research-grade (in green) and commercial-graded (in blue) solutions..

