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FIND

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@**FIND-EU-PROJECT**

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www.find-project.eu

Objectives

Led by ASNR, France's nuclear safety regulator, FIND is a groundbreaking project that brings innovative monitoring technologies to improve nuclear safety.

1. Develop real-time remote monitoring systems for safety-critical defects in aging NPP metallic pipes.
2. Develop instrumentation to support the management of incidents and accidents.
3. Validate innovative NDE technologies' performance in nuclear environments.
4. Foster new technology adoption across the sector.
5. Bridge communication between operators and technology providers to enhance nuclear safety.

Expected Impact

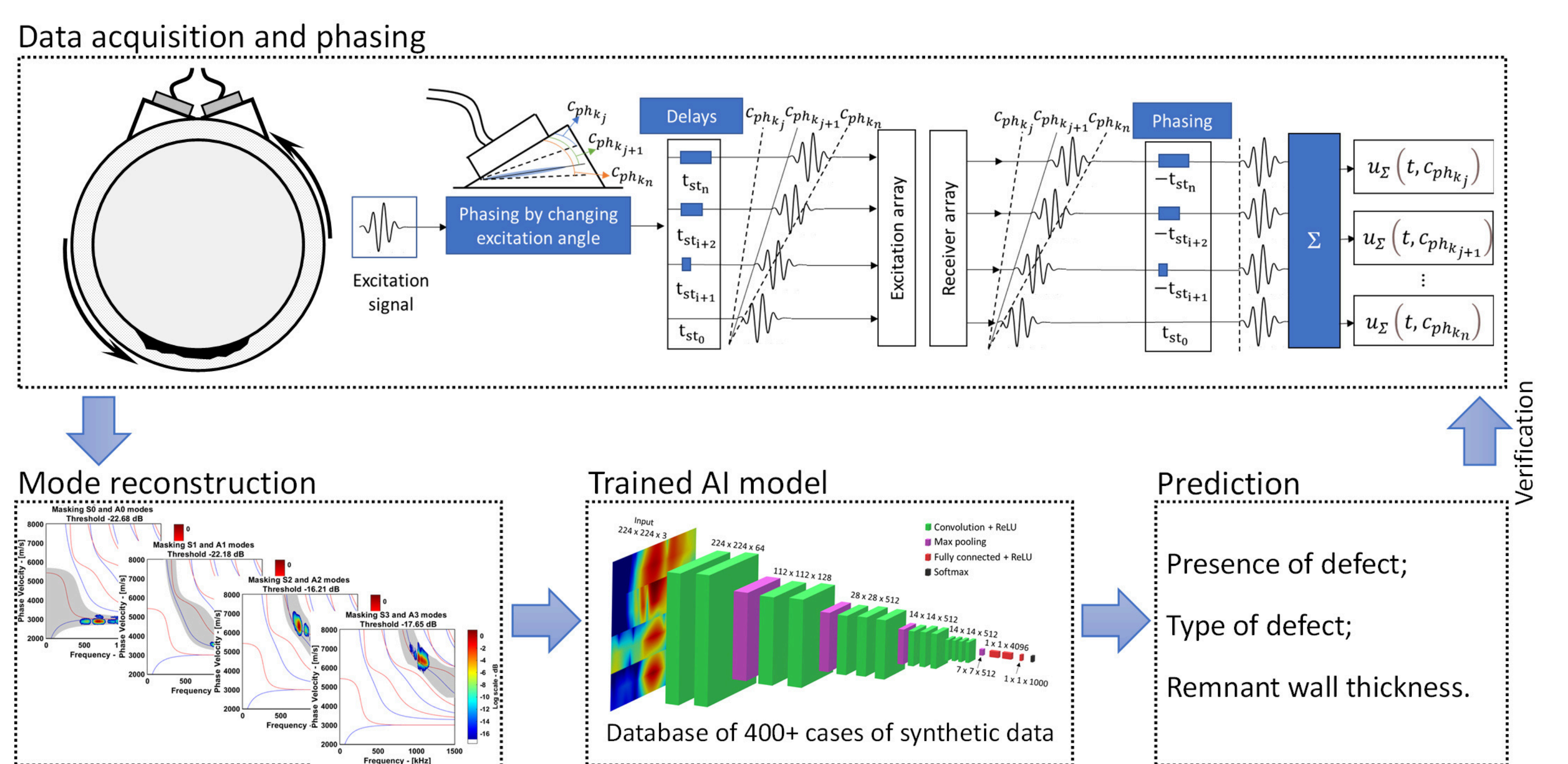
FIND's technologies are designed to be cost-effective and minimally intrusive, supporting safer and more efficient long-term operation of nuclear power plants.

- **Technical & safety innovation:** Development of advanced monitoring systems and digital twin technologies to prevent and manage abnormal situations in nuclear power plants.
- **Methodological advancement:** Creation of a roadmap for technology adoption, including recommendations to adapt qualification codes and standards, as well as human and organisational factors impacting operational acceptability.
- **Industrial impact:** Improved long-term operation of nuclear facilities through better maintenance planning leading to reduced costs and shorter outages, lower worker radiation exposure, and opportunities for technology transfer to other sectors.

Highlights

FIND employs advanced monitoring and sensing technologies to detect and manage a wide range of critical defects in nuclear facilities:

- Monitoring deformation, feedwater pipe leakage, stress corrosion cracking, thermal and vibrational fatigue, and flow-accelerated corrosion.
- Adapting ultrasonic technologies such as guided-wave tomography and acoustic emission.
- Developing embedded signal processing for digital twin sensors.
- Tracking water movements during loss-of-coolant accidents using heated thermocouples.
- Measuring fission products during severe accidents with metallic-organic framework sensors.



General methodology for the inspection of metallic pipes thanks to high-order ultrasonic guided waves

Partners



This project has received funding from Horizon Europe - Euratom programme under grant agreement No 101163659.