



CELL-INSIDE

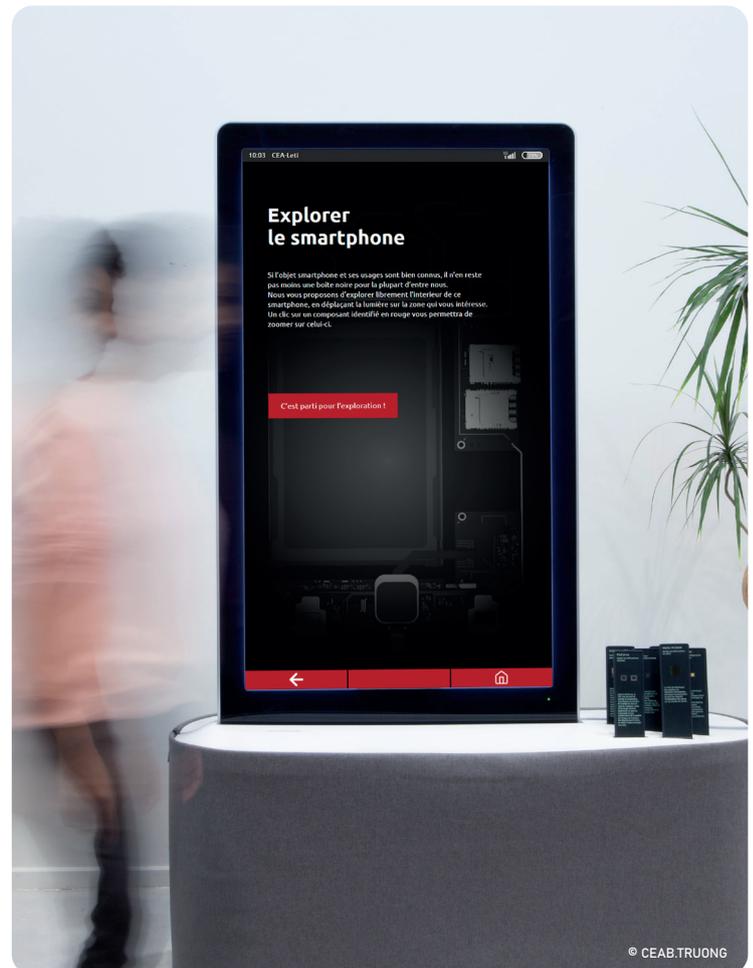
Smartphones: Carnot CEA LETI Institute's technologies for both today and tomorrow

Carnot CEA LETI Institute is harnessing its expertise in nanotechnologies and uses to come up with a range of innovative technologies for today's and tomorrow's smartphones. From a gyroscope for screen rotation to future 6G antennae, this demonstrator brings together all CEA LETI technologies being used at present or in the very near future by telecom players.

Carnot CEA LETI Institute

Scientific / technological breakthrough

- **Telecoms:** 5G/ 6G antennae, Ultra-wideband technology
- **Computing:** 3D integration, non-volatile memories, FD-SOI transistors, embedded AI
- **Sensors:** smart M&NEMS sensors, piezoelectric components, miniaturised optical systems on chips
- **Display:** GaN Micro-LED screens
- **Security:** managing the risks of intrusion and data theft with pattern recognition sensors
- **Radio frequency:** components (filters, amplifiers, switches) used in wireless transmissions



Competitive advantage for the economic stakeholders

More than 1 billion smartphones in circulation contain at least one technology developed by CEA LETI. Nearly 20 years of innovation funded by the Carnot CEA LETI Institute.