



SHIFT - Sustainable Technologies Enabling Future Telecom Applications

The KDT JU co-funded project SHIFT started in 2022 12 01 with the aim of reaching four main objectives:

- Develop new Semiconductor and packaging Technologies for very high frequencies, achieving better energy efficiency and output power;
- Develop new Semiconductor Technology platforms associated with these semiconductor technologies, with corresponding tests, characterization, and modelling methodologies needed for very high frequencies;
- Demonstrate the progress of the new semiconductor technologies by innovative and competitive System Demonstrators that will integrate MMICs designed with the developed and proposed semiconductor technologies, covering domains for:
 - Wireless (network access and backhaul) and Fiber optics Telecommunication systems;
 - Satellite telecommunication and Earth Observation systems;
- Demonstrate the economic and operational impact of these systems while reducing their environmental impact.

Supported by 43 partners, SHIFT aims to make important contributions to the "twin transition", through innovations in component and system technologies for advanced telecommunications. SHIFT consortium will develop innovative semiconductor and packaging technologies and their validation with demonstrators for telecommunication areas such as 5G NR (Beyond 5G) and 6G wireless network access and backhaul, ultra-high speed optical links between servers, satellite telecommunications, and Earth observation. SHIFT will also contribute to environmental and societal concerns, with an analysis of the life cycle of telecommunications products, through their manufacturing chain, their operational use, and their recycling. Finally, SHIFT project supports Europe's will for sovereignty in semiconductors, by accelerating the development and dissemination of new European technologies, and by enabling many young engineers and researchers to train, thanks to the most recent results. Thus, SHIFT is an ambitious project and sustainable development for innovative European companies.

More information can be found [here](#).

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