MECON

Revolutionizing Global Connectivity
## Multi-Access Edge Computing (MEC) over NTN for beyond 5G & 6G

Overview

Non-Terrestrial Networks (NTNs) are not just supplementary to 5G; they are integral to achieving the full vision of what 5G and beyond can offer in terms of coverage, reliability, capacity, and innovative services. Their role will continue to evolve as 5G networks expand and as demands for more comprehensive global connectivity grow, On-demand cost-effective global coverage in crowded and unserved areas, guarantee trunking, backhauling, direct connectivity, energy efficiency, support for global IoT, high-speed mobility, and high-throughput services everywhere, anytime, decrease of site real estate, and instantaneous operation of coverage.

The primary objective of the MECON project is to research and develop the necessary technologies to integrate satellite networks seamlessly into future Unified Networks. This integration aims to ensure global connectivity that is universally accessible, available everywhere and at any time, and affordable for all.

Innovations and outcomes

- Unification of NTN and TN encompasses concepts like native integration of air and space to enhance cost-efficiency and user experience.

- Enhancing MEC operation efficiency involves aspects of power processing, steerable beams, Radio Resource Management (RRM), and dynamic allocation of network functions.

- Self-Organizing Network (SON) and ISAC concepts for NTN-TN automation facilitate efficient Network Slicing, smart beam and traffic steering, and bandwidth management.

- E2E delay reduction enables real-time services over NTN and URLLC services over non-static TN channels.

- Multi-tenant O&M for resource sharing and neutral host networking for creation of new market opportunities.

- A distributed orchestrator manages NTN-TN services and infrastructures, supporting autonomous operations across multiple clouds and domains.
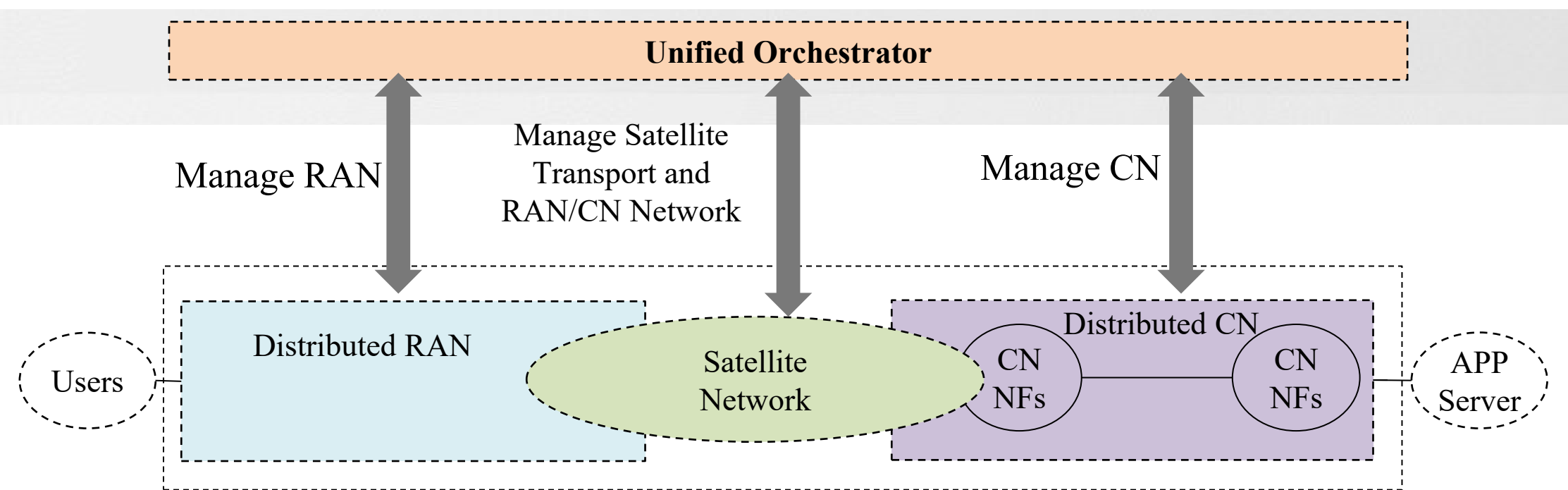
MECON Network Automation
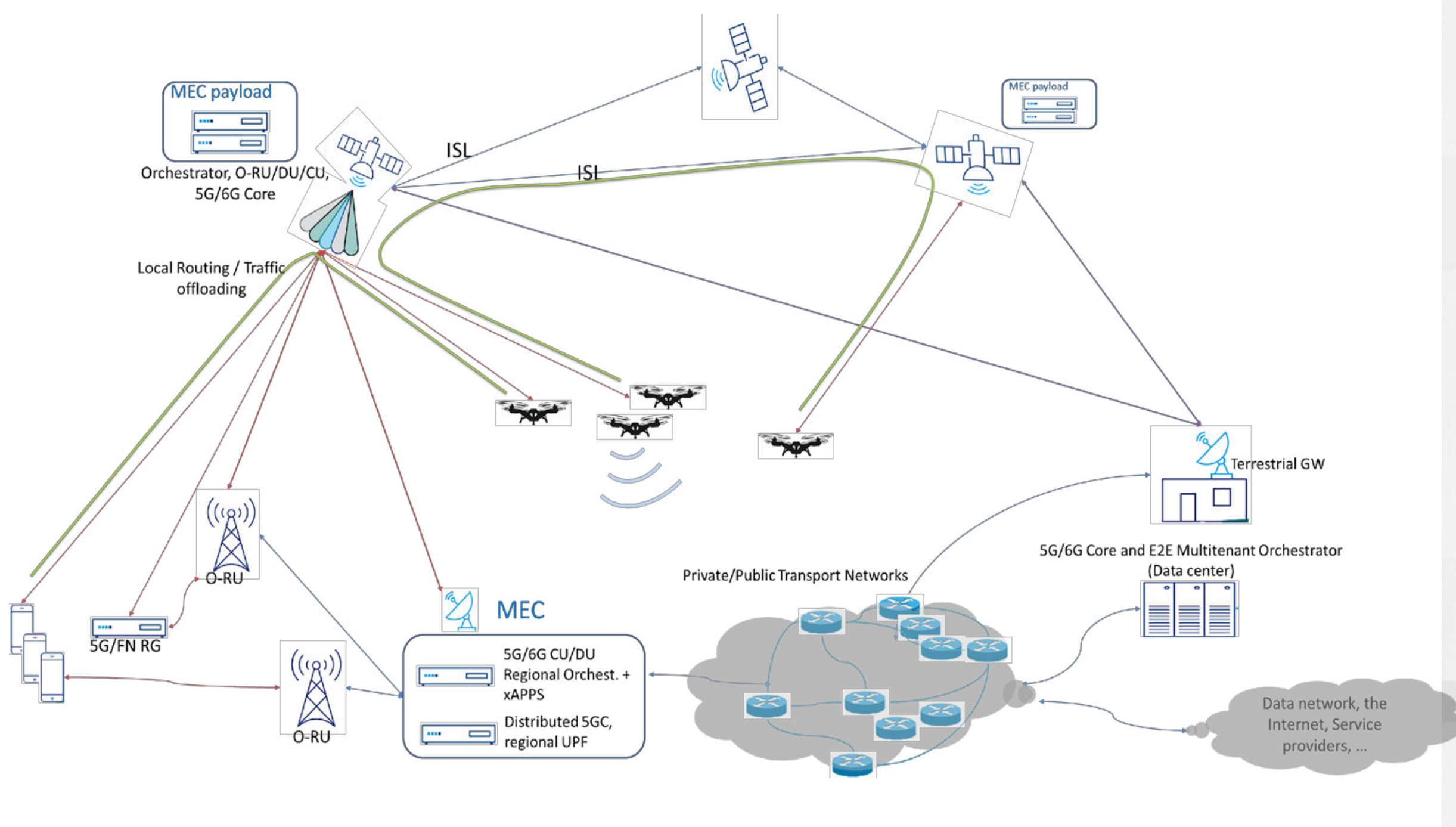
Working packages

- WP1: Coordination and Technical Project Management
- WP2: Requirements, challenges, ISAC and Architecture
- WP3: MEC over NTN for B-5G/6G
- WP4: AI based NTN enabler
- WP5: Use Cases, Interoperability, integration, Unification and Testing
- WP6: Communication, Dissemination, Exploitation and Engagement