

# Explore How 5G-EMERGE Helps MNOs Leverage Satellite-Enhanced Media Delivery to Optimize Resources and Reduce Video Streaming Costs

The growing video traffic challenges mobile operators in maintaining service quality. 5G-EMERGE enhances hybrid Satellite/5G networks with advanced technology for efficient, scalable, and secure media delivery.



## Hybrid Satellite/5G Network Ecosystem

5G-EMERGE is a next-generation, end-to-end platform designed to optimize network bandwidth, alleviate congestion, and significantly reduce video distribution costs by seamlessly integrating cutting-edge satellite-native IP streaming with the latest 5G edge cloud technologies.

By leveraging the inherent benefits of satellite technology—specifically its expansive coverage and low latency - 5G-EMERGE empowers Mobile Network Operators (MNOs) and video streaming service providers to extend their service footprint and deliver a superior quality of experience to end users.

Popular content is delivered via satellite, efficiently freeing up expensive unicast capacity on the backhaul network and CDNs. Depending on the base station configuration, the content can be delivered to subscribers using the following methods:

- **5G NR Unicast**, supporting 5G Media Streaming (3GPP TS 26.501)
- **5G NR Multicast**, supporting 5G Multicast Broadcast Services (3GPP TS 23.247)
- **5G Broadcast**, leveraging the LTE-based 5G terrestrial broadcast system (ETSI TS 103 720 V1.2.1)

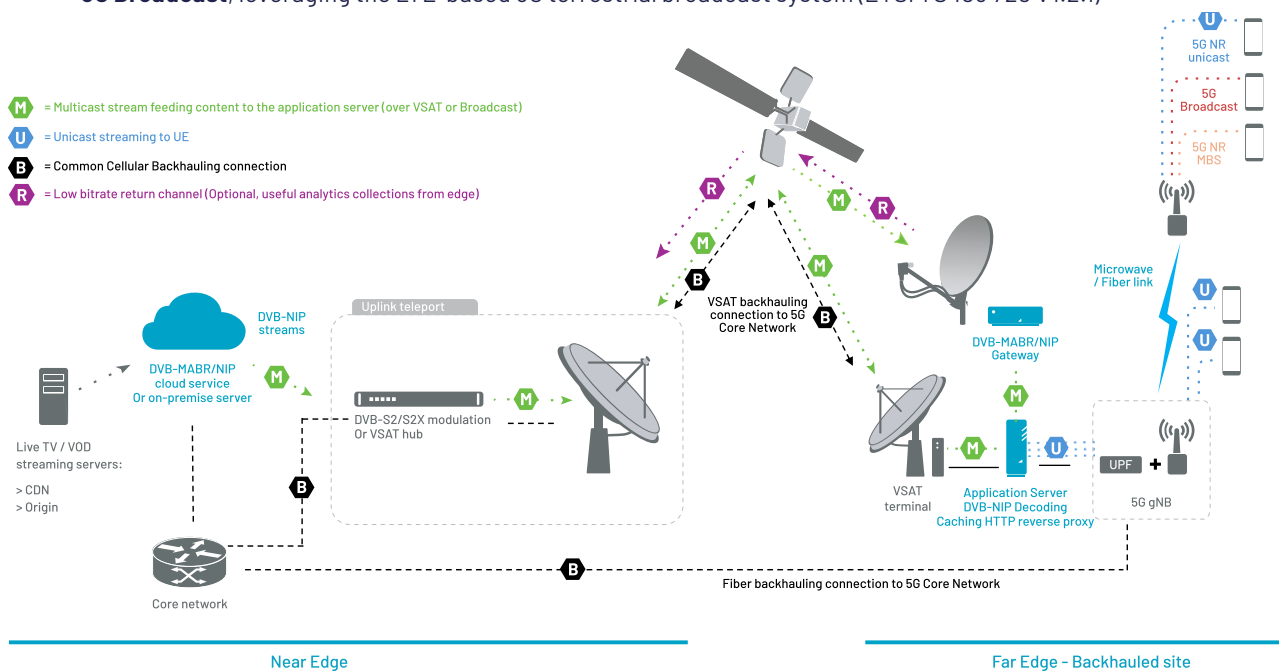


Figure 1: The end-to-end 5G-EMERGE solution for MNO video streaming services delivery

### Featured demos at MWC25

The 5G-EMERGE demos at MWC25 are all powered by the 5G-EMERGE consortium members and enabled by **ESA, the European Space Agency**.

- MinWave’s portable satellite antenna in Hall 8.1 - 4YFN Stand 8.1D20.6. Contact: Mr Khosrow (m.khosrow@minwave.ch)
- EBU’s Direct-to-Edge integrating 5G-MAG Reference tools at GSMA pavillion H4F30, ESA Stand. Contact: Mr Sami (sami@ebu.ch) or Mr Bru (bru@ebu.ch). Time schedule of demos:
  - 3 March at 12:00-15:00 CET
  - 4 - 6 March at 8:30-11:00 CET and 13:00-15:00 CET

Outside the above time slots, EBU’s demo is available at the MinWave’s stand at Hall 8.1 - 4YFN Stand 8.1D20.6.

## Consortium partners present at MWC25

Our **consortium partners present at MWC25** are excited to meet and discuss how the 5G-EMERGE platform benefits service providers in the Video streaming, Entertainment, Education, Enterprise and Government applications:

- **CYSEC** – Securing the edge servers and gateways and providing Trusted Execution Environments for the network applications – Contact: Mr Felk (yacine.felk@cysec.com)
- **Eutelsat Group** – LEO/GEO Satellite & Teleport– Hall 2.1 Stand 2.1B2Ex – Contact: Ms Recchia (arecchia@eutelsat.com)
- **Humans Not Robots** – HNR to ZERO: Sustainability focused workflow observability and analytics platform measuring and reducing energy consumption, carbon footprint and financial costs of technology and infrastructure – Contact: Mr Amit (amit@humansnotrobots.com)
- **Inverto** – MABR Cloud Service, Edge MABR Server, Edge/Home/Vehicle Gateways and mobile applications – Contact: Mr Laifer (gil.laifer@inverto.tv)
- **Nextworks** – Management and Orchestration in 5G/6G networks, IoT/edge/cloud platforms and AI/ML solutions for network automation – Contact: Ms Landi (g.landi@nextworks.it)
- **ViaSat** – Low-cost land mobile terminal based on phased array technology – Contact: Ms Vigano (maria.vigano@viasat.com)

## About 5G-EMERGE

5G-EMERGE is an **industry-led partnership** led by **EBU** and sponsored by **ESA ARTES**. Phase I (2022–2024) included 25 partners, while Phase II (2024–2026) has 33. The consortium partners represent stakeholders in the full delivery chain: Arctic Space, Brightcove, British Forces Broadcasting Service, BroadcastCritical, CYSEC, EBU, Eutelsat, Gcore, Hewlett Packard Enterprise, Human Not Robots, FTA Inverto, Keysight Finland & UK, Fondazione LINKS, Magister solutions, MBI, MediaTek Finland & UK, MinWave, Nextworks, NorthBase, RAI, ROMARS, SES, SixSq, SnT, SwissTXT, Telenor ASA, TNO, University of Oulu, Varnish Software, Verkotan, Viasat, VTT.

5G-EMERGE integrates mobile and satellite technologies using **open standards** (DVB-S2/S2X, DVB-NIP, 5G Media Streaming, etc.) and native IP infrastructure for seamless, interoperable content delivery across networks and devices. The architecture is based on five System Functions (SFs), as shown in Figure 2. See the **5G-EMERGE White Paper** for details ([www.5g-emerge/resources](http://www.5g-emerge/resources)).

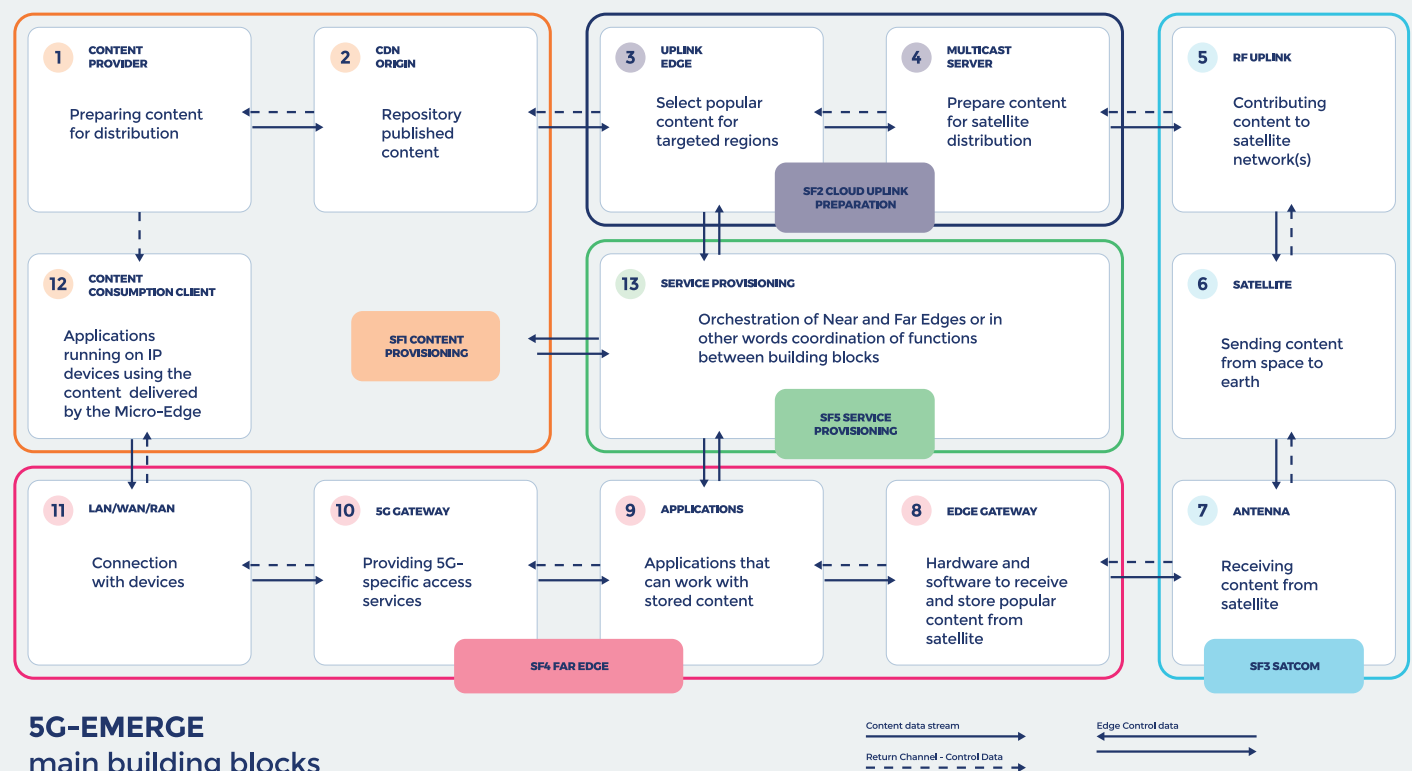


Figure 2: 5G-EMERGE ecosystem high-level system architecture diagram