Use-Cases of 5G

1) 5G-powered service bot for IP broadcasting

Serial digital interface (SDI) is a standard for digital video and audio transmission over coaxial or Fiber optic cabling. Speeds currently range from 270 megabits per second (Mbps) up to 12 gigabits per second (Gbps) for the latest standard released in 2015.**The shift from SDI to IP network has been a discussion in the broadcasting industry for a long time. Yet it wasn't until recently that the technologies enabled a swift transition between the two. Currently, many major broadcasting companies worldwide are nearing the transition to using IP-based systems.**

The broadcasting industry is currently looking at whether 5G technology can deliver both linear, and nonlinear broadcasts, whilst supporting them with enhanced media services (EMS), which are a combination of both. ('Linear media' refers to conventional TV or radio channels where programmes such as news, sport, entertainment and documentaries are scheduled by a service provider to be viewed at the time of transmission; whereas 'nonlinear media' is a type of media content that is offered on-demand at the request of the user.) In 2019, a consortium of European broadcasting companies – led by virtualized media production company, Nevion – received a grant of €2 million from the European Union to create a remote production studio, powered by 5G technology. The project, known as VIRTUOSA, (VIRTUOSA will enable virtual connections of any studio, control room and onsite production across multiple locations, and live feedback from the audience straight into the production chain via 5G acquisition. It will allow media production facilities, equipment, resources, and talent to be shared across locations, supporting Cooperative Live Media Production with realtime transport and processing of live media over IP with up to 100Gbit/s.
As a result, live media production costs will be reduced by 30-40%, and more Live content can be easily be produced in parallel and at the same cost level).

2) To establish a communication between airport authorities and the pilot

Article on why airlines donot use 5G : https://www.alternativeairlines.com/airlines-5g-network

C-Band operates in the **3.7-3.98GHz** frequency, which is close to the 4.2-4.4GHz frequency used by altimeters on airlines. Altimeters are devices that can tell how high above the ground the aircraft is flying. Altimeters are especially useful on a cloudy day or over mountainous terrain where visibility is limited.