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1. The third generation rocket ^{(GSLV Mk-III) of ISRO} has transformed India into the commercial launch services market for heavier satellites. Analyze.

India's heavy lift launch vehicle GSLV Mk-III, was approved in 2002, with the mandate to lift upto 4 tonnes heavy lift to the geosynchronous transfer orbit.

Configuration of the Launch vehicle.

GSLV Mk-III is a '3' stage launch vehicle - 2 solid strapon boosters, liquid stage + cryogenic upper stage. Has length of 43 m and weight of 640 tonnes. It made its maiden lift in 2017, and proved its capacity to lift 10,000 tonnes to low earth orbit and 4 tonnes to Geosynchronous Transfer orbit.

Mission under GSLV-Mk-III

First major mission with GSLV-Mk-III is chandrayaan-2 in 2019 - highly complex mission with perigee - 169 km + apogee 45000 km.

Second one recently, 'one web' satellite launch - heavy lifting of satellite. With this, ISRO proved India as one of the cost efficient destination for heavy satellite launch market.

Next major mission is gaganyaan - mission where '3' crew members will be transferred to Low earth orbit and return back safely to Earth through GSLV Mk-III.

India's capacity - satellite launch market

ISRO - has been launching commercial satellites since 1999 - for over 30 countries, through PSLV.
with recent OneWeb launch - GSLV Mk-III - ISRO has entered into commercial market for heavy lift launches.

Way forward:

India has recently entered into the market of commercial launches of heavy lift satellites.
But ISRO, yet to prove GSLV-Mk-III as reliable destination for heavy lift satellites. Focus must be at that area. next major challenge, is the use of re-usable launch vehicle which can further reduce the cost for launches.