Remote Tower Operations

**Objective:**
To study the Remote Tower Operations (RTO) concept and explore the feasibility of its implementation in Changi Airport.

**What is a Remote Tower Operation?**
A concept that allows air traffic control (ATC) to be provided from a location other than a manned tower at the aerodrome. The RTO will consist of an integrated package of subsystems which facilitates the provision of a range of conventional Air Traffic Systems (ATS).

**BENEFITS:**
- Reduced cost of building a control tower without compromising safety.
- Enhanced situational awareness in low visibility conditions through use of available technology such as object tracking and alerting, night vision and image enhancement.

**FEASIBILITY IN CHANGI AIRPORT:**
With Changi Airport looking to build its third runway outside the range of the current tower, a comparative study was made based on establishing a RTO for London’s Heathrow Airport.

**COMPARISON OF LONDON HEATHROW AND SINGAPORE CHANGI AIRPORT:**
- Both have two parallel runways and both are well known for being one of the world’s busiest international airports.
- Both airports manage multiple areas of responsibility simultaneously through their dedicated teams of highly experienced air traffic controllers.
- RTO ensures that Heathrow Airport can still operate at up to 70% of its flights if the main control tower could not be used.

**Conclusion**
- Provide a cost-effective, safe and alternate solution for Changi Airport compared to the construction of a new control tower.
- However, remote tower systems available on the market today have not been developed for busy airports and launching it at an airport like Changi Airport is unlikely.
- On the other hand, remote tower systems can still act as a contingency arrangement to ensure the continuity of the flight operations in Changi Airport in case of emergencies.