

Annex A

Upgrading Man, Machine, Method Capabilities for Air Navigation Services

Air navigation services provided by CAAS are set for a major S\$4 billion “man-machine-method” upgrade over the next 15 years as Singapore gears up to meet rising demand for air travel, better serve passengers and airlines, and strengthen Singapore’s position as a global air hub.

CAAS will strengthen its workforce, enhance systems, upgrade infrastructure, and leverage technology to build the capacity and capabilities needed to meet rising demand and support the continued growth of aviation.

Man <i>Growing ATCO Workforce, Deepening Engineering and R&D Capability</i>	Machine <i>Developing Cutting Edge Systems; Upgrading Infrastructure</i>	Method <i>Augmenting ATCO Workforce; Mitigating Impact of Weather; Optimising Regional Traffic Flows</i>
• Grow ATCO workforce from 500 today to around 700 by mid-2030s; Attract Singaporean talent: ○ Sign-on Bonus ○ Undergraduate Degree with ATC specialisation ○ ATC Undergraduate Scholarship ○ ATC Management Associate Programme • Deepen engineering and R&D capability: ○ Engineering Development Centre ○ Support researchers at Air Traffic Management Research Institute pursuing PhD Degree	• Replace or upgrade over 30 ANS systems to leverage new technology and equip ATCOs with enhanced tools. Key systems include: ○ NexGen Air Traffic Management System ○ Integrated Digital Tower System ○ Info-Centric Air Traffic Management ○ Open Platform for Air Navigation Services • Upgrade Infrastructure: ○ Singapore Air Traffic Control Centre ○ Changi Control Tower ○ Three-Runway Operations	• Augment ATCO workforce: ○ Multi Sector Planner ○ Digital ATCO Assistant ○ Automated Read-back Error Detection • Mitigate impact of weather • Optimise regional traffic flows ○ AI-enabled Air Traffic Flow Management tool ○ Daily operational coordination calls with ANSPs in the region