

Deployment Scenario Title	Enhanced safety nets
Deployment Scenario Description	Enhanced safety nets: this deployment scenario includes improvements associated with short-term conflict alert (STCA), a ground-based system designed and deployed as a safety net to prevent collisions in both en-route and TMA environments. Improving on existing STCA technology, the enhanced algorithms for STCA support controllers in identifying possible conflicts between aircraft, ensuring earlier warnings and lower rates of false and nuisance alerts. The system also makes use of downlinked aircraft parameters, available through mode S enhanced surveillance.
Essential Operational Change	Trajectory Based Operations
Maturity	In deployment phase: Key SESAR Solution

Applicable Operating Environment			
Airport	Terminal Airspace	En-Route	Network

Timeline																					
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Deployment																					
Benefit																					

Performance Contribution of the DS				
Capacity	Safety	Environment	Cost-efficiency	Operational efficiency

Stakeholders affected (at least one enabler to be deployed)						
ANSP		AO		AU		Network Manager
Civil	Military	Civil	Military	Civil	Military	
APP, ENR						

SESAR Solutions			
Solution Code	Solution Title	Solution Description	Related Elements
#60	Enhanced Short Term Conflict Alert (STCA) for Terminal Manoeuvring Areas (TMAs)	Enhanced algorithms for a Short Term Conflict Alert (STCA) prototype ensures earlier warning and...	OI OBJ DS EOC ICAO
#69	Enhanced STCA with down-linked parameters	STCA (Short Term Conflict Alert) is a ground-based system designed and deployed to act as a...	OI OBJ DS EOC ICAO

Operational Improvement Steps			
OI Step Code	OI Step Title	OI Step Description	Related Elements
CM-0807-A	Enhanced Short Term Conflict Alert using Mode S EHS data	Short Term Conflict Alert (STCA) using the following Aircraft Derived Data via Mode S Enhanced...	SOL OI EN OBJ DS ICAO A-A
CM-0811	Enhanced STCA for TMA specific operations	STCA enhancements aim at reducing nuisance alert rate while maintaining or increasing the genuine...	SOL EN OBJ DS ICAO A-A

Enablers						
Required/ Optional	New/ Inherited	Develop/ Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
🔒			APP ATC 136	Adapt STCA for Operation in TMA	Enhance STCA functionality to provide automated alerting of conflicts to approach controller...	STK OI EN DS
🔒			ER APP ATC 14	Enhance Short Term Conflict Alert (STCA) to use Downlinked Aircraft Parameters	STCA is to be enhanced through the use of parameters downlinked via Mode-S (so called Downlinked...	STK OI EN DS