

Deployment Scenario Title	Safety support tools for runway excursions
Deployment Scenario Description	-
Essential Operational Change	Airport and TMA performance
Maturity	Additional R&D Activities in development

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

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	
TWR, APP, ENR, SWIM, AIS, MET	TWR, APP, AIS, MET	APT Operator	APT Operator	Scheduled, BA Fixed, GA, FOC	Transport, Light, WOC,	Network Manager

SESAR Solutions			
Solution Code	Solution Title	Solution Description	Related Elements
PJ.02-W2-25	Safety support tools for avoiding runway excursions	The key R&D activity aims at improving runway condition awareness to increase safety in order...	<b>PJ DS EOC</b>
PJ.03b-06	Safety support tools for avoiding runway excursions	Safety support tools for avoiding runway excursions.	<b>PJ OI DS EOC</b>

Operational Improvement Steps			
OI Step Code	OI Step Title	OI Step Description	Related Elements
AO-0107	Improved Airport Safety with Better Prevention of Runway Excursions for Tower Controllers	Safety of runway operations is improved thanks to the provision of support service to the...	<b>SOL OI EN DS</b>
AO-0216	Enhanced Runway Condition Awareness	Runway safety and resilience to adverse weather event are improved thanks to awareness on runway...	<b>SOL EN DS</b>
AUO-0616	Improved Safety with Better Prevention of Runway Excursions for Pilots	Safety of runway operations is improved thanks to the provision of support tools to the pilots in...	<b>SOL EN DS</b>

Enablers						
Required/ Optional	New/ Inherited	Develop/ Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
🔒			A/C-73	Energy monitoring system during approach and landing to avoid runway excursion for dry or wet runway	Aircraft total energy management from final approach to touch down followed by total energy...	STK OI DS
🔒			A/C-75	Take-off system monitoring to avoid runway excursion	Take-off system monitoring to avoid runway excursion	STK OI EN DS
🔒			AERODROME-ATC-31	Surface movement control workstation equipped with tools to better prevent runway excursions	Surface movement control workstation equipped with tools that provide indications or alerts to...	STK OI EN DS
🔒			AERODROME-ATC-32	Runway condition awareness management system based on weather-based runway condition model	Runway condition awareness management system that delivers runway conditions takes into account a...	STK OI EN DS
🔒			AIMS-16	Electronic Terrain and Obstacle Data (TOD)	The purpose is to ensure the availability of electronic Terrain and Obstacle Data .	STK OI EN OBJ DS
🔒			AIMS-23	Enhanced digital data chain to ensure Aeronautical Information data provision to meet full 4D trajectory management requirements	Enhanced aeronautical information data provision chain enabling the provision of high quality...	STK OI DS
🔒			METEO-03c	Provision and monitoring of real-time airport weather information for time-based separation and curved approaches	ATM-MET ground based sub-system dedicated to acquire, collect, combine, provide and monitor...	STK OI EN DS ⚙️
🔒			METEO-04c	Generate and provide MET information relevant for Airport and approach related operations at short notice ('time to decision' between 3 minutes and 7days) including rotorcraft and RPAS	The ATM-MET system is acquiring, generating, assembling and providing Meteorological (MET)...	STK OI EN DS ⚙️
➔			A/C-64	Dowlinked observed runway surface condition	From on-board aircraft equipment/sensors for measuring aircraft braking friction, with respect to...	STK OI EN
➔			A/C-74	Energy monitoring system during approach and landing to avoid runway excursion for any kind of contamination on runway surface	Aircraft total energy management from final approach to touch down followed by total energy...	STK OI
➔			A/C-84	Braking Action Computation Function in On-board Braking Action Computation System	Using the Aircraft as a sensor during landing to estimate runway Computed Braking Action with...	STK OI EN
➔			AERODROME-ATC-26	Runway condition awareness management system based on runway sensors	Runway condition awareness management system that delivers runway conditions takes into account...	STK OI EN

Enablers						
Required/ Optional	New/ Inherited	Develop/ Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
🔒			AERODROME-ATC-32	Runway condition awareness management system based on weather-based runway condition model	Runway condition awareness management system that delivers runway conditions takes into account a...	STK OI EN DS
➔			AERODROME-ATC-47	Airport ATC Subsystem to incorporate aircraft observed runway surface condition	Sharing current runway surface condition based upon near real-time reports from aircraft...	STK OI EN
➔			AERODROME-ATC-95	Runway condition awareness management system based on surveillance	Runway condition awareness management system that delivers runway conditions takes into account...	STK OI EN
➔			AERODROME-ATC-96	Runway condition awareness management system based on braking action data reported by flight crew	Runway condition awareness management system that delivers runway conditions takes into account...	STK OI EN
🔒			AERODROME-ATC-32	Runway condition awareness management system based on weather-based runway condition model	Runway condition awareness management system that delivers runway conditions takes into account a...	STK OI EN DS
➔			AERODROME-ATC-97	Runway condition awareness management system based on manual assessment of contamination	Runway surface information (contaminant type and depth, ground temperature, etc.) manual input...	STK OI EN
➔			AERODROME-ATC-98	Runway condition awareness management system providing predicted runway surface information	Runway condition awareness management system to provide forecast on runway surface information: -...	STK OI EN
➔			AIRPORT-55	Data transmission means supporting aircraft-airport exchange of information (airport side)	Airport side data transmission means between aircraft and airport which can support aircraft...	STK OI EN