

AUTOMATED V1

Despite major safety improvements over the past 20 years, the risk of a Rejected Take-Off (RTO) leading to a runway overrun continues to be significant. The European Action Plan for the Prevention of Runway Excursions (EAPPRE) developed by the European Working Group for Runway Safety contains practical Recommendations and Guidance Material aiming at reducing the rate of runway excursions but focuses mainly on landings. Similarly, Runway Overrun Awareness and Alerting Systems (ROAAS) currently being developed by aircraft manufacturers (and supported by IFALPA) address the landing phase of the flight, and operators have also initiated specific action plans to prevent unstable approaches and long landings which have been identified as the two major contributing factors of runway overruns on landing.

With regards to the take-off phase of the flight, mitigation measures have already been applied, such as the “stop or go concept”, reinforced SOPs related to RTOs around V1 and the “V1” callout, which would normally have priority over all other callouts. However, RTOs after V1 continue to occur, and recent incidents reports have listed the distraction of the Pilot Monitoring responsible for the V1 callout as a contributing factor to such events.

Paragraph 2.3.6.9 of the FAA’s Take-Off Safety Training Aid (released in 1993), entitled “The VI Call” states that *“One important factor in avoiding RTO overrun accidents is for the crew to recognize reaching VI when the airplane does, in fact, reach VI — not after.”*

With technological improvements, this “automated V1” call is now widely available in the flight deck of most modern aircraft.

POSITION

Current technology can significantly enhance the flight crew’s ability to identify reaching the V1 speed (or equivalent decision speed designated by SOP), thereby improving the “stop or go” decision-making concept and reducing the risk of a runway overrun following a high-speed RTO. Commercial transport aircraft should be designed - or retrofitted, where feasible - with an automated “V1” callout. Such a system should always be activated unless equivalent mitigating measures have been taken following an appropriate risk assessment by the operator.