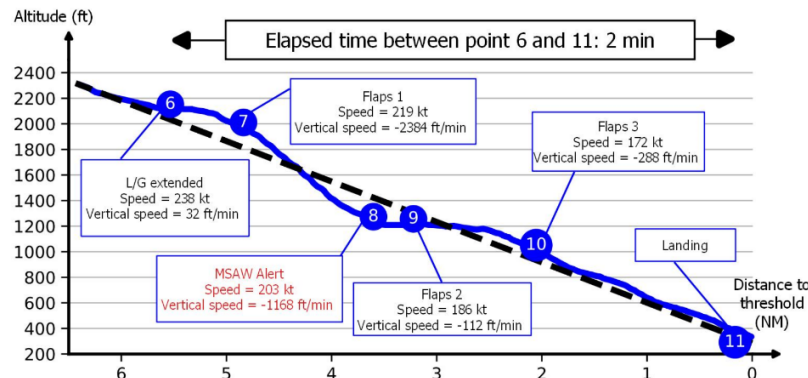


Non-stabilized approach, activation of MSAW and G/S warnings

SCENARIO

- Low activity (COVID-19) → shortened flight path for ILS approach
- Base leg: in descent, high speed (250 kt selected) + interception from above anticipated
- Established on LOC (AP + A/THR ON): 3,000 ft armed → altitude capture → N1 increase
- When G/S captured → managed SPD + LDG down + FLAPS 1 as soon as below VFE
- RWY in sight, 220 kt, pitch down action by PF (- 2,800 ft/min)
- Late FMS change to LDG CONF 3 by PM (not monitoring anymore)
- Below glide path: ATM MSAW and EGPWS Glide Slope warnings
- At 1,000 ft: VAPP +78 kt
- At 500 ft: VAPP +26 kt and thrust idle
- Approach continued until landing



CONTRIBUTING FACTORS

to the non-stabilization of the approach

- Decision to perform a high speed approach on a shortened flight path/without specific briefing
- Absence of callouts by the PM (flight path and speed deviation)

Decisions that led to time pressure to the detriment of safety margins, without any operational justification

to the approach being continued below 500 ft AAL

- crew's lack of knowledge about the risks associated with continuing non-stabilized approaches (RWY overrun, go-around initiated with low N1, etc.)

SAFETY LESSONS

@Pilots: Adherence to SOPs on approach

- Significant resources required to manage a high energy approach
- No resources to identify and assess all the associated risks
- No resources to deal with an unforeseen event
- SOPs are designed to provide safety margins

@Operations managers: FDM and crew training

- FDM to be set to detect SOPs deviations (→ e.g.: from stabilization altitude to ground)...
- ... to understand why approaches are not stabilized (→ e.g.: energy management issues during intermediate/final approach)
- ... and to feed the operator's EBT

