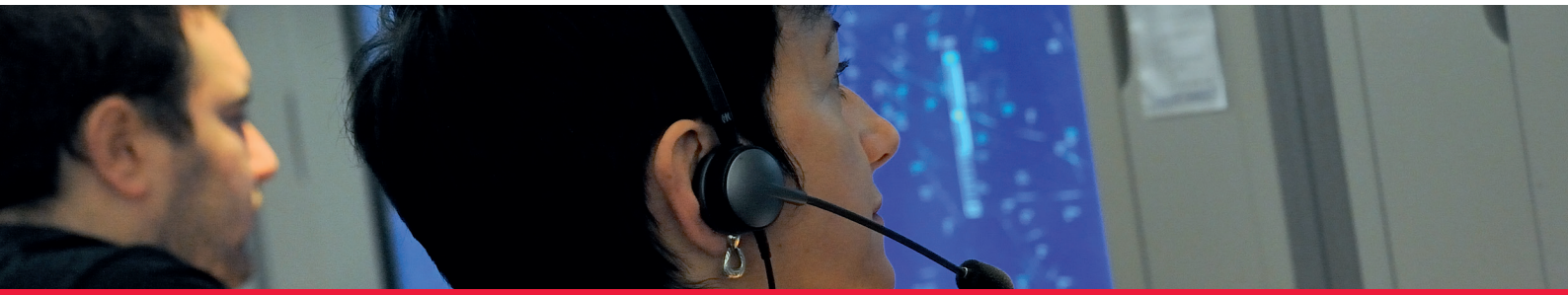


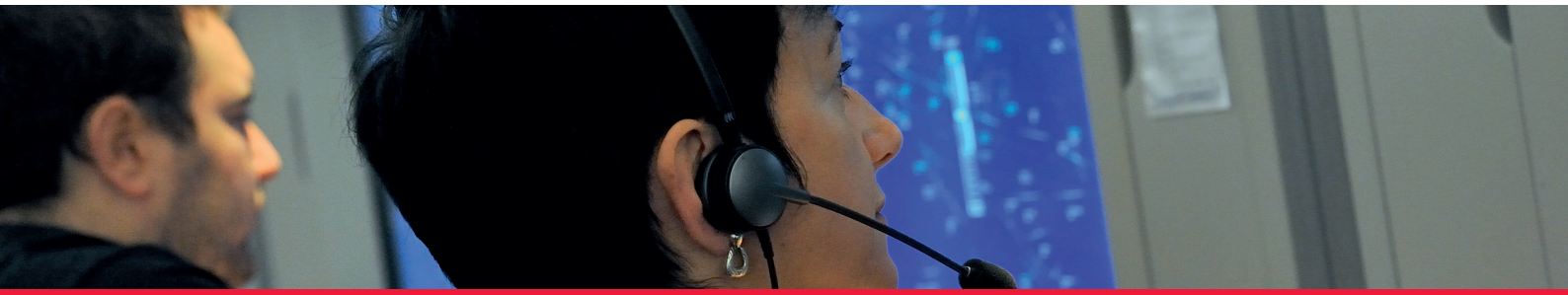
AVOIDING UNSTABLE APPROACHES

Important Tips for ATCOs

There are many contributing factors that may lead to a landing incident/accident, but one that ATC can have a major influence on is the development of an unstable approach. In general terms, if an arriving aircraft is too high or too fast, the approach will most likely become unstable.

- **Allow the arrival/approach procedure to be flown as published.** If at all possible, minimise or avoid the use of vectoring.
- **Avoid routine vectoring** of aircraft off an arrival course to shorten the flight path. Unexpected shortcuts may lead to insufficient time and distance remaining to maintain the desired descent profile, and cause the aircraft to be high on the approach. Avoid close-in turns to final.
- **When aircraft are being vectored, issue track miles to the airport** or approach fix in a timely manner, as appropriate.
- **Keep the pilot informed** regarding runway assignment, type of approach and descent/speed restrictions. That will allow for proper planning and execution of the approach. Stable approaches require predictability and planning. Avoid last minute changes and advise the pilot as early as possible when changes are anticipated.
- **Ensure the runway assignment is appropriate for the wind.** Wet or contaminated runways, combined with cross/tail winds are often associated with runway excursions.
- **Issue accurate and timely information** related to changing weather, wind and airport/runway conditions.
- **Apply appropriate speed control/ restrictions.** Assigning unrealistic speeds (too fast or slow) may lead to unstable approaches.
- **Give preference to precision approaches** over non-precision approaches. Precision approaches have vertical guidance which assists the pilot in maintaining the proper descent profile, resulting in stable approaches.
- **Avoid instructions that combine a descent clearance and a speed reduction.** Many aircraft can't descend and slow down simultaneously.
- **Comply with operational flight requirements** related to capturing the glide slope from below. Vectoring for an approach that places an aircraft on the final approach course above the glide slope is a leading cause of unstable approaches.
- **Avoid close-in, last second runway changes,** even to a parallel runway. To comply with the company's operational procedures and requirements, the flight crew must have time to properly brief the approach and missed approach procedure to the runway being utilised. Even though a pilot may accept a runway change, the result may be an unstable approach.

These tips do not override recognised international standards, recommended practices and/or standard operating procedures.
Please send your feed-back on the usability of those tips at **runwaysafety@canso.org**



AVOIDING UNSTABLE APPROACHES

Important Tips for PILOTS

"Keep it standard, keep it simple, keep it safe"

Maintain a mental picture of the required descent profile.

- Request distance updates from ATC if required.

Advise ATC as soon as possible if descent is required or additional track miles are needed to execute a stable approach.

- The sooner ATC knows, the greater is the probability that the request can be accommodated.

Be aware of published local ATC procedures/airspace restrictions that impact the approach.

- Airspace constraints may result in route and altitude restrictions.

Make requests for operational requirements, not for convenience.

- The earlier you tell ATC the easier it is to accommodate any request.
- Understand that you are part of a tightly integrated system with lots of arriving/departing aircraft and many operational variables (traffic patterns, airspace and airport design restrictions, noise restrictions, possible emergency operations on a different frequency), so ATC may not always be able to accommodate requests.

If you can't comply with an instruction, let ATC know early.

- Don't accept clearances that could put you into a situation leading to an unstable approach. The worst thing to do is to accept an instruction and then not comply with it.
- It's OK to say "UNABLE". Better still, say "UNABLE" and suggest an alternative.
- Use extreme caution when accepting visual approaches at unfamiliar airports.

Be predictable,

As far as possible, minimise differences (ATC can't be aware of all the variables e.g. aircraft performance, airline SOPs, etc).

When departing,

- Tell ATC if you're likely to need further time on the runway, before accepting a clearance to enter the runway. ATC might be making their plans for the arriving aircraft around you starting your take-off roll without delay.

If you have an emergency situation,

- Let ATC know as soon as is practicable, either by selecting the appropriate Mode A or using the standard phraseology. Once ATC are aware of your situation, they will **LEAVE YOU ALONE** and can start making preparations to accommodate whatever **YOU** may request, when **YOU** are ready.

According to IATA, an unstable approach was identified as a contributing factor for 17% of accidents between 2008 and 2012.

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