

# TRAINING VS. EFFICIENCY & SAFETY

## WHEN TOO LITTLE IS JUST NOT ENOUGH



by **Fernando Marián de Diego, ATCO in Canarias ACC and Head of APROCTA Technical and Safety Department**

*Translated by Iván Pérez González, ATCO in Barcelona ACC*

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Following a very serious incident in 2011, the Spanish CIAIAC recommended “that AENA makes sure that air traffic controllers have sufficient knowledge about the type and likelihood of failure in the auxiliary systems that they normally use to perform their tasks, and how these failures can be detected or tackled”.

### General overview

As a certified training provider, the Spanish ATS provider AENA is supposed to meet the legal requirements set by AESA (Spanish Air Safety Agency) and to comply with the legislation in force. These requirements are defined in a Spanish Royal Decree 1516/2009 and EC Regulation 805/2011. As the professional association of Spanish Controllers, APROCTA has identified serious deficiencies in the training of AENA's air traffic controllers. Multiple safety recommendations with regard to

air traffic controller training, issued by the two Spanish commissions for the investigation of incidents and accidents dependent of the Spanish Ministry of Development, CIAIAC and CEANITA, confirm our analysis.

Besides these deficiencies, there is a lack of clear and recurring training plans. In absence of general guidelines from the training managers, it is left up to local managers, and their motivation, availability and knowledge, to schedule refresher training. They need to invest their time and resources in creating training material without basic guidelines or reference information.

As the professional association of the Spanish Air traffic controllers, APROCTA published an “Analysis of Training of AENA's Air traffic controllers” distributed in September 2013. This article is a summary of that report.

### General knowledge of emergencies and unusual situations

AENA's training for emergencies and unusual situations consists of a 6 hour session during which the following topics should be addressed: special complexity sectors, emergencies, unusual situations, crisis management, ATS contingency plans, and incidents. Each regional ATS unit decides annually which of these topics are addressed and how. In some cases, the trainers are unfamiliar with the subject and/or they are unable to adequately prepare a subject, in absence of the necessary documentation.

Eurocontrol has regularly highlighted the importance of air traffic controller training when it comes to TCAS. However, this is not covered in the refresher-training programme provided to AENA's air traffic controllers. Instead, AENA overuses information circulars, which are typically distributed after a particular safety incident. They do not have any mechanism to monitor the effect of the information submitted.

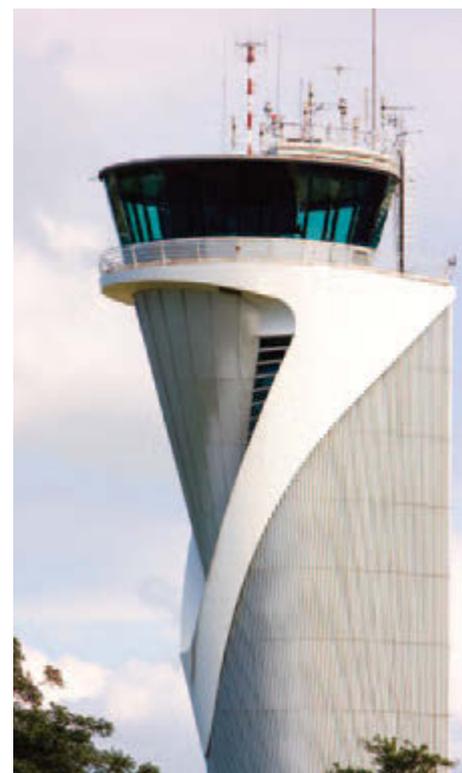
Another Eurocontrol best practice recommends regular meetings between pilots and air traffic controllers to discuss operational procedures. Unfortunately, AENA does not schedule such exchanges on a regular basis, and although efforts have been made, there is no integration within the training schedule for air traffic controllers, thereby greatly reducing the impact.

### Human factors training

Within the scope of the training on Human Factors, APROCTA considers that special attention should be paid to aspects regarding Team Resource Management (TRM), cognitive skills, Critical Incident Stress Management (CISM) and stress management, none of them being included on AENA's training plans.

→ *Tower at Bilbao airport.*

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However, and despite the fact that training on Human Factors is currently included in the programme, AENA has not provided any training on these aspects, neither in the "refresher" courses nor in the 2013 Training Plan, as reflected in the Local Single Sky Implementation Plan (LSSIP). AENA reports that there is no plan implemented for the integration of Human Factors into the cycle of ATM systems.

### Instructors, examiners and supervisors

Currently, there are no control processes in place to determine the quality of training/assessment. The training of AENA's teachers, instructors and examiners is very poor, as there are no guidelines or standards for the training/assessment process. These people are usually not provided with appropriate working guidelines, goals or expected learning curves. Their personal methodology (or the department's methodology) is not monitored. In addition, a significant bulk of classroom-based OJTI training content has absolutely no practical application to an ATC environment. Without adequate training (e.g. in the use of office automation), it is left exclusively to the resourcefulness and background of the teacher to make the best use of equipment and tools.

Throughout the training process, there are no defined phases for the OJT training program. This means that students do not know how close they are to fulfilling the learning objectives. The general impression is that the main goal during the learning process is reaching a sufficient training level so that students are able to minimally provide a safe ATC service, but there is no aspiration whatsoever to train and prepare truly effective and efficient professionals who have enough resources to solve complex scenarios.

AENA provides an online training module and a classroom-based course, which lacks the required practical focus. It is just a theoretical course with a flawed assessment pro-

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cedure in which the candidate is allowed to try as many times as necessary until he/she hits the correct answer.

Instructors have no common established criteria. When they complete their progress reports, they do so interpreting a form, the meaning of which has not previously been clarified.

OJTI instructors do not receive regular refresher training, but they are required to pass an OJTI competence assessment every three years in order to renew their OJTI endorsement. Instructors are also included in regular working rosters in control rooms and towers. As a result, they often change sectors/positions within a single work shift, making it practically impossible for them to brief and debrief students.

Examiners get an online course that explains their functions. Although this specifies the operational competence goals to be assessed, they are simply given a 20-question quiz at the end, which is not enough to evaluate all the content and to demonstrate that examiners know the goals that are being assessed. The quiz doesn't even distinguish between TWR and ACC While AENA has offered a more comprehensive training, based on a Eurocontrol course, it has yet to offer this training to all examiners...

Even if the supervisor function is currently not a specific endorsement, they are a key figure in running an operations room, even more so in crisis situations.

Despite this, AENA's supervisor course contains an elaborate online theoretical module, which doesn't differentiate between a tower supervisor and radar control supervisor. Candidates are asked to complete this first module unsupervised. They can retake the assessment test as many times as is needed, without penalties.

This is followed by a classroom-based course, by an HR expert without any links to the specificities of ATC nor to the specific functions and tasks performed by a tower supervisor or a radar control supervisor. Both modules add up to a total duration of 25 hours without any OJT at all.

The contrast is extremely high, when compared to the supervisor course offered by the German ANSP (DFS): their supervisors need to pass a 4-week course in the training academy followed by a 5-month OJT training phase.

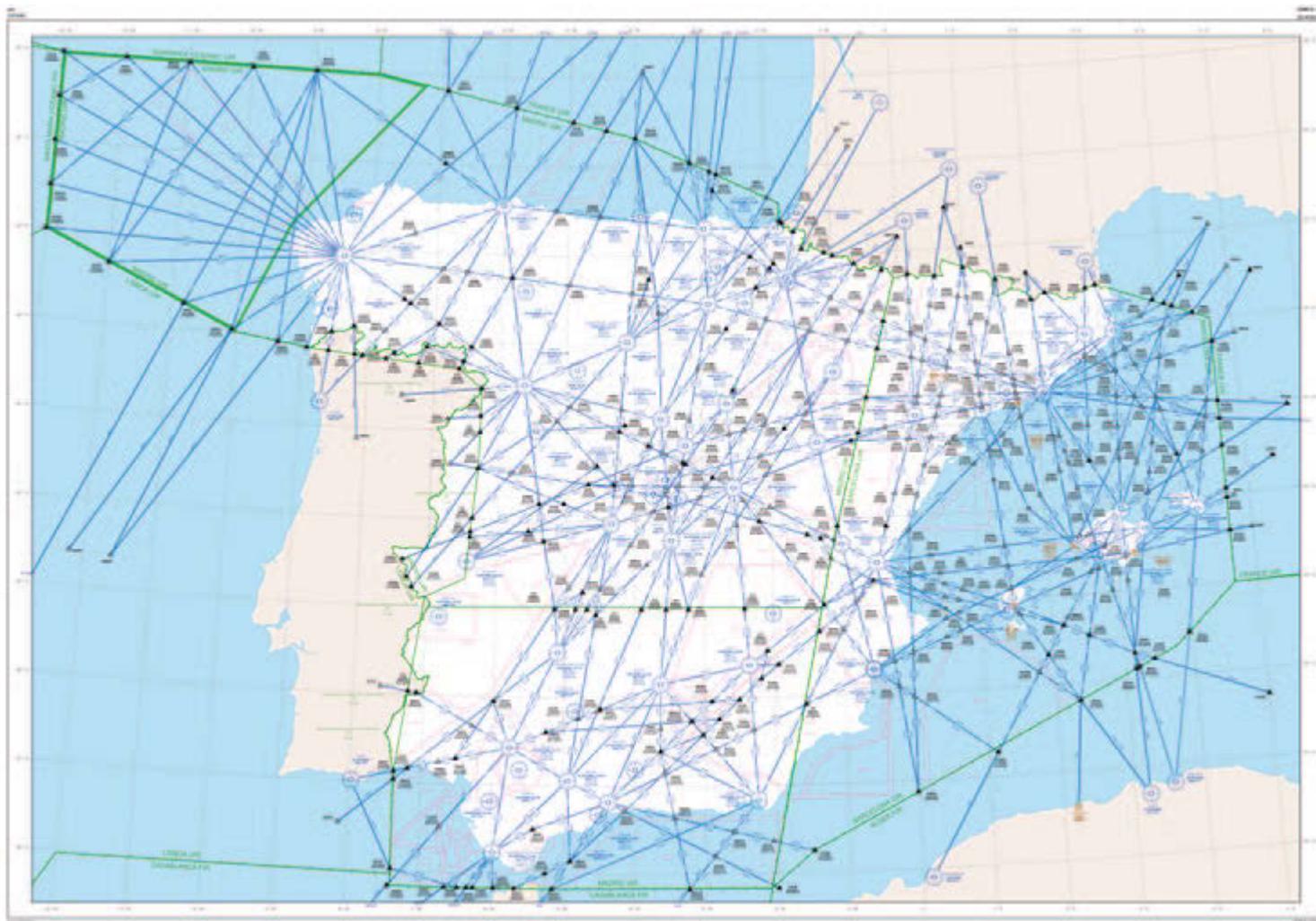
### English language proficiency training

AENA's current language proficiency training programme does not meet ICAO specifications and is, therefore, quite inadequate. It consists exclusively of an online course without any additional specialized supplementary training nor any classroom-based training, as stipulated by ICAO in Doc. 9835.

### Conclusion

Our main conclusion is that AENA's control staff receive a low quality and deficient training, regarding both content and quantity.

AENA makes little use of the wide range of Eurocontrol and ICAO training programmes and contents, in a regulated, formal way. Instead, a mix of different programmes is gen-



erated, which are divergent both in the content provided, and in how it is provided to air traffic controllers.

While AENA provides at least the minimum number of training hours required by the Spanish Air Safety Agency (AESA), the amount of time devoted to training is clearly insufficient to effectively cover the proposed content. What's more, in the more than 180 safety recommendations that Spanish certified commissions for the investigation of aviation accidents and incidents (CEANITA and CIAIAC) have issued since 2010, quite a number are aimed at AENA's training departments. In other words, these commissions are both reporting deficiencies in AENA's training programmes for air traffic controllers, which is supposedly regulated by the Spanish Ministry of Development and the Spanish Air Safety Agency (AESA).

APROCTA first addressed this issue in December 2012, when they published **"General Analysis of the Perceived Quality Survey 2011 - AENA NA"**. In this report, APROCTA already considered that the main reason for low perceived quality levels was the insufficient training of AENA's air traffic controllers, and recommended that *regular, strict training plans should be designed in the short, medium and long term, including theoretical and refresher training, as well as simulator training sessions that allow air traffic controllers to practice emergencies and unusual situations. Also, continuation training plans covering language proficiency and standard phraseology should be provided. In addition, the training should always be adapted to the specific job characteristics.*

Regarding operational safety of ATC services, APROCTA argued that the number of air traffic incidents reported in Spain is unacceptable, especially when compared with neigh-



bour ANSPs in the European environment. We have passed our concerns on to the relevant aviation authorities and we can see our arguments have raised a significant degree of concern in certain circles. Let's hope that this will result in concrete improvements to the training of air traffic control personnel in Spain. ☺

[sedecentral@aprocta.es](mailto:sedecentral@aprocta.es)