# The Digital National X-Ray Competency Test (DNXCT)

# Overview

**CAP 1171**

| Document Outline | |
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| Title | The Digital National X-ray Competency Test - Overview |
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# Acronyms and Terminology

AvSec – Aviation Security
CAA – Civil Aviation Authority
CIN – Certificated Instructor Number
DfT – Department for Transport
DNXCT – Digital National X-ray Competency Test

## Purpose of this document

This document provides an overview of the Digital National X-ray Competency Test (DNXCT) and is intended for people working in the aviation security sector with responsibility for managing and/or delivering the certification of X-ray/explosive detection system (EDS) screeners.

## What is the DNXCT?

The Digital National X-ray Competency Test is a standardised image interpretation test and acts as the final element of the national certification of X-ray/EDS screeners in the UK. The purpose of the certification is to provide assurance and risk mitigation at a national level against the human element of the aviation security screening process, where X-ray and/or EDS is used.

### Test overview

The DNXCT in the UK is a browser based test, which is completed in a dedicated location, such as the workplace or a training facility, under the supervision of a test manager.

Access to the test is limited to persons with a DNXCT user account.

### Types of tests

There are 7 different tests available within the DNXCT platform, to provide for the certification of different categories of X-ray/EDS screeners. To establish which test must be used, please see the section on Certification Categories.

## Who needs to be certificated (initial and re-certification)

Persons undertaking X-ray/EDS screening in order to make screening decisions must successfully complete the DNXCT as part of their certification. This is primarily likely to be the role of the screener, however, where a supervisor is required to make a screening decision as part of their role, they would also require certification.

Certification cannot be obtained speculatively by a personwho is not already in the employment of an entity undertaking aviation security screening activities.

## Context and Regulatory provision

The certification of X-ray and EDS screeners in the UK is undertaken by aviation security instructors and test managers, on behalf of the CAA. CAA in turn discharge this function on behalf of the DfT as the National Appropriate Authority, in line with the CAA-DfT Memorandum on Aviation Security[1].

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[1] https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=7226

The DNXCT replaces an existing, locally deployed test, the National X-ray Competency Test (NXCT), which was in use in the UK until 2023.

The certification of screeners is required under Chapter 11 of the UK National Aviation Security Programme, in respect of UK (EU) 2015/1998 and the Single Consolidated Direction Part A.

This requires the initial and re-certification of X-ray and EDS screeners, including a standardised image interpretation test. In the UK at present the only test to meet the requirements of a standardised image interpretation test is the DNXCT.
For the certification of the screener to be valid, they must also meet other components, including:
- Theoretical training and assessment under the relevant NASP syllabus;
- Practical training and assessment under the relevant NASP syllabus;
- On the job training (as part of initial or top up training);
- Ongoing image recognition training, known in the UK as '6 x 6' (recertification only);
- An operational performance evaluation (recertification only), including meeting the performance criteria for Threat Image Projection (TIP) where required.

## Initial and Re-Certification

Following initial certification, re-certification must take place no later than 13 months from the initial certification date.

The DNXCT may be completed at a different point in time to the recurrent training and performance evaluation.

## Screener certification categories

An X-ray/EDS screener may be certificated for a single or a combination of categories. There are 7 tests available within the DNXCT:

Cabin Baggage (test also used for Airport Supplies)
- A 2D cabin baggage test, required for certification of screeners utilising 2D equipment to screen cabin baggage; and
- A 3D cabin baggage test, required for certification of screeners utilising 3D equipment to screen cabin baggage.

Hold Baggage
- A 2D hold baggage test, required for certification of screeners utilising 2D equipment to screen hold baggage; and
- A 3D hold baggage test, required for certification of screeners utilising 3D equipment to screen hold baggage.

Cargo and Mail

- A 2D cargo and mail test, required for certification of screeners utilising 2D equipment to screen cargo and mail and
- A 3D cargo and mail baggage test, required for certification of screeners utilising 3D equipment to screen cargo and mail.

In-Flight Supplies

- A 2D In-flight Supplies test, required for certification of screeners utilising X-ray/EDS equipment to screen IfS.

## Certification categories

Where a screener requires certification in more than one category, they will need to sit each applicable DNXCT as required by their function. No test supersedes another.

## Dual transmission equipment

Where screening equipment in use conveys a 2D image in addition to the 3D image, provided that the 2D image is used as a secondary enhancement/tool, this does not require specific certification for 2D. If the screener only operates 3D equipment, including dual transmission, they may be certificated only for 3D.

## Certification categories

| Person screening: | | Certification required |
|---|---|---|
| IfS | 2D (single view and dual view) | IfS 2D |
| Cabin | 2D only | Cabin 2D |
| | 3D only | Cabin 3D |
| | 3D with secondary 2D image | Cabin 3D |
| | 2D and 3D | Cabin 2D and 3D |
| Hold | 2D only | Hold 2D |
| | 3D only | Hold 3D |
| | 3D with secondary 2D image | Hold 3D |
| | 2D and 3D | Hold 2D and 3D |
| Cargo | 2D only | Cargo 2D |
| | 3D only | Cargo 3D |
| | 3D with secondary 2D image | Cargo 3D |
| | 2D and 3D | Cargo 2D and 3D |

## Delivering the DNXCT

### Getting access to the DNXCT for entities

Entity registration

If you have responsibility for the certification of aviation security screeners, you must ensure that you have put in place arrangements for screeners to complete the DNXCT.

There are three primary scenarios that were established in the initial registration process – entities will likely fall into one of the following:

- They are a screening entity who employs screeners and certificates them in house;
- They are a screening entity who employs screeners but uses an external certification provider; or
- They are a third-party entity who employs and supplies screeners to one or more entities and certificates them.

If you fall into one of the scenarios above and you do not already have access to a DNXCT account, please complete the registration form available on the CAA website.

Please note, external training providers who undertake the certification of screeners on behalf of an entity will not be able to register for their own account, but they can be added to the account of a screening entity.

Within the DNXCT, each entity is set up with their own account. The CAA will provide access to the first organisational admin user for the entity, who can then add test managers and users as required, with one exception.[2]

In all the above scenarios, the entity responsible for screening will have access to the certification results in the DNXCT system and test managers can be provided with access to facilitate the test.

Who should not register as an entity?

If you do not fall into one of the above scenarios, please check with the CAA before you complete a registration form.

External certification/training providers should not register – please request that the screening entity registers themselves and adds you in the DNXCT system as a test manager(s).

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[2] Where an entity uses external test managers, these must be set up by the CAA. You will be contacted if this is required based on your registration form.

## Cost

The DNXCT is chargeable per test – this is invoiced in arrears. The test charge is included in the annual CAA charges consultation.[3] You will have access to a finance report in the system that is used to calculate the invoice, with a breakdown of the number and type of tests, as well as who undertook them.

As part of the registration process, the finance details for each entity were collected and these will be shared with the CAA finance team to allow for the invoicing process.

## Minimum IT system requirements for the DNXCT

- Minimum Internet connection speed: 5Mbit/s – the software is optimised for [this?]speed
- Minimum hardware specs: modern, current web-browser (Chrome, Edge, Firefox etc.)
- Minimum 2Gb RAM (4Gb preferred) graphics card capable of running WebGL and a minimum screen resolution of 1200 pixels wide to cater for the 3D interface (1000px for 2D interface)
- The recommended screen resolution is 1920x1080 for 3D and a minimum of 1024x768 for 2D
- IP range used for accessing DNXCT must be allow-listed by CAA
- You must not use a mobile device/tablet device – the laptop/PC you use must be of sufficient size to allow for a fair and valid test.
- A mouse should be used for the test.

# The role of the DNXCT test manager

The facilitation of the DNXCT must be undertaken in person by a DNXCT Test Manager. This includes the delivery and invigilation of the DNXCT and the confirmation of the results of the test. The DNXCT cannot be delivered and/or invigilated remotely.

The DNXCT test manager may also be a certificated instructor but there is no requirement for this – their primary role is the facilitation and invigilation of the test.

Please note there is no requirement for a DNXCT test manager or a Certificated Instructor to have valid screener certification, unless they also perform the role of a screener. Test managers who are also screeners must not invigilate their own DNXCT.

There may be persons who require access to DNXCT for administration purposes and data management (administrators) but who do not facilitate the test itself – this is permitted.

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[3] The 2023/24 Consultation document and response provide details on the introduction of the charge: https://consultations.caa.co.uk/finance/caa-charges-23-24/

Entities may only add an individual to the DNXCT system who are either approved DNXCT test managers and appear on the list of DNXCT test managers on the CAA website or are acting as administrators for the entity.

## Recruitment and Vetting of those with access to the DNXCT system

Individuals who have been provided with a user account to their DNXCT account by and entity (test managers and administrators) must have:

- A valid and current standard background check; and
- A valid and current Counter Terrorist Check (CTC).

The background check will be undertaken by the employer – the CTC will be completed by the CAA. Certificated Instructor and those who already meet both requirements set out above do not need to repeat these if both the background check and the CTC are still valid.

## Invigilation and malpractice

It is the responsibility of the DNXCT test manager to ensure that the test is delivered in such a way that it produces a fair, reliable and valid result.

This means that the test is delivered under their direct supervision in person and that the environment and the conduct of the test does not allow malpractice to be committed. The DNXCT must not be delivered and/or invigilated remotely.

Malpractice with regards to the DNXCT may be by the candidate, test manager or a third person – it includes but is not limited to:

- Completing the DNXCT in such a way that the result does not present the work of the screener alone (coaching/another person sitting the test etc.);
- Knowingly compromising the integrity of the image bank (image counting, sharing of images etc.);
- Sharing of or providing access to test results to unauthorised persons.

The DNXCT is not a training tool – its sole purpose is to provide a pass/fail certification test to assess whether a screener meets the minimum standards. Using the test for purposes other than this is considered to be malpractice.

## Nomination process

Entities may nominate any individual they deem suitable as a DNXCT test manager. The individual should primarily be willing and able to facilitate and invigilate the DNXCT, have a good basic understanding of computers and be able to understand how malpractice can be prevented and put in place suitable mitigation.

They must:

- Work for either a directed entity or an external provider who undertakes the certification of screeners on behalf of directed entities;
- Be in an role that requires them to have access to the DNXCT for the purposes of DNXCT test invigilation;
- Comply with the Recruitment and Vetting requirements set out above;
- Agree to the confirmation of responsibilities statement on the application form.

Individuals who were nominated NXCT test managers at the point where the transition to DNXCT occurred in 2023 have been contacted directly and asked to complete a new application form.

If an entity wishes to nominate a new DNXCT test manager, they should ask the individual to complete the **application form available on the CAA website**. A bulk form is available on request for entities with large amounts of test managers.

If an entity wishes to add an existing internal DNXCT test manager to their system they can do this themselves through their organisational administrator. The exception to this is where an entity uses external test managers, these must be set up by the CAA. You will be contacted if this is required based on your registration form.


## Communication with CAA and DfT

Your first point of contact for any regulatory queries should be the CAA Aviation Security Training Team. If you have a query on the DNXCT, please contact us at:

Avsec.training@avsec.caa.co.uk

We aim to respond to any queries within 5 working days. If you require an urgent response, please mark your query accordingly and it will be prioritised for triaging.

### Where to find more information

This document only contains non-restricted information. Entities and individuals with roles and responsibilities under the UK NASP can obtain more detailed information on the DNXCT from the CAA AvSec Training team at the contact above.