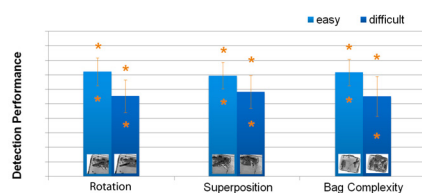# X-RAY ORT

Object Recognition Test

Assessment test for the selection of potential X-ray screeners

The **X-Ray Object Recognition Test (X-Ray ORT)** has been developed to provide a fair and comparable assessment method to reliably measure the visual abilities of an applicant.

SCIENTIFICALLY PROVEN BENEFITS

Human factors are key issues in X-ray screening. The most expensive X-ray machine is of little value if the security officer who operates it does not have the necessary ability to interpret X-ray images.

Various scientific studies have shown that there are substantial individual differences in visual abilities, such as mental rotation, figure ground segregation and visual search, which are crucial in X-ray screening.

HIGHLY ECONOMICAL AND EFFICIENT
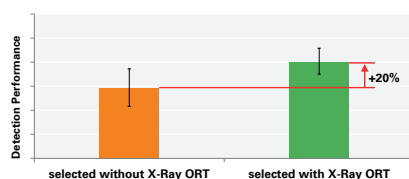
Employees with distinctive visual abilities can learn faster and generally achieve a 20% higher level of threat detection performance in certification tests compared to X-ray operators hired without a previous pre-employment assessment.

Choosing the right person thus helps to minimize training costs while, at the same time, increasing security and efficiency at the checkpoint.

NO PREVIOUS KNOWLEDGE REQUIRED
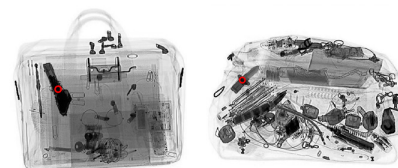
The X-Ray ORT is a fast, easy-to-use and reliable tool in the employment procedure of potential X-ray operators.

CASRA security experts designed the X-Ray ORT for people with no previous knowledge of how items are displayed on an X-ray machine. The test therefore only contains grayscale images of commonly known items, such as guns and knives.

CASRA

human technology for your security

LEVEL OF DIFFICULTY SYSTEMATICALLY VARIED

ROTATION   SUPERPOSITION   BAG COMPLEXITY
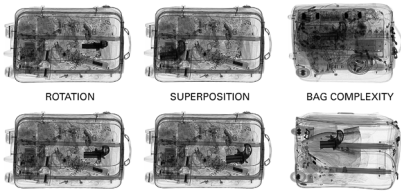
The items selected for this test systematically vary in their level of difficulty, based on object rotation, superposition and bag complexity. These are the image-based factors that highly influence threat detection performance.
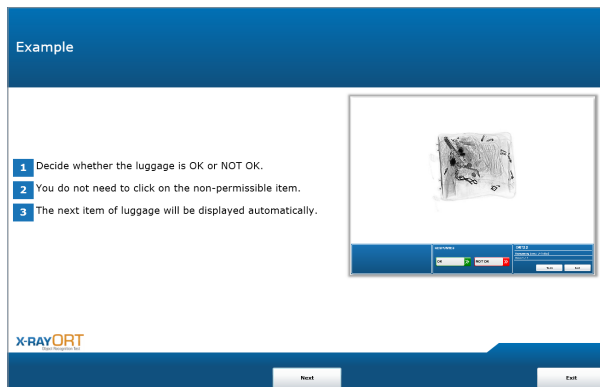
HIGH RELIABILITY AND VALIDITY

The images for the test were created and pre-validated by security experts and psychologists. Therefore, the X-Ray ORT features excellent reliability coefficients with both Cronbach's Alpha and split-half values above .90 (.85 is considered as the minimum standard).

WIDE RANGE OF APPLICATIONS
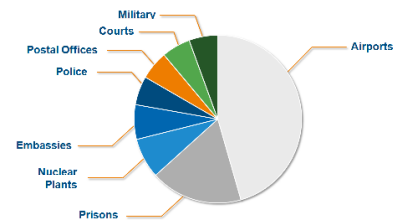
The X-Ray ORT can be applied wherever X-ray machines are used, that is at airports, prisons, nuclear power plants, courts, military, event locations, etc.

SOFTWARE INTERFACE

Example

1 Decide whether the luggage is OK or NOT OK.
2 You do not need to click on the non-permissible item.
3 The next item of luggage will be displayed automatically.

LEARN MORE

> For system requirements and further information on the X-Ray ORT please visit our **FAQ**.
> You can find a summary of a study involving our X-Ray ORT in the CASRA newsletter **issue 1**.
> If you would like to receive short and understandable articles summarizing our research results and security trends please **subscribe to our newsletter**.