

The Environment Agency Case Study

Asset Condition Grading

Introduction

The Environment Agency has over 12,000 employees and is the leading public body for protecting and improving the environment in England and Wales. It has a duty for ensuring flood defence assets, a diverse range of natural and man-made structures, are fit for purpose.

The Asset Inspectors role therefore is a vital one and so it is critical that the training of Asset Inspectors is of the highest standard. Can Studios were commissioned to devise a software based training scheme to improve as far as possible the logistical overheads of the existing class room training.

Can Studios Limited were asked to design and deliver an e-learning course that would meet certain stated objectives, namely it would:

- Reduce financial and environmental costs.
- Enable training to begin at short notice through a self learning package within the delegates regional location.
- Allow support staff to gain an understanding of the role.
- Strengthen the quality of assessment by utilising a high number and variety of asset types.
- Provide a consistent scoring model with accurate reporting to an external training assessment body.
- Replicate real-life to a sufficiently high standard.

There were certain key observations from the needs analysis that led us towards a particular approach to the learning design:

- The delegates would need to access an electronic copy of the Condition Assessment Manual (CAM).
- It was vital that they could accurately assess the condition of an asset by comparing it to the benchmark criteria set out in the CAM.
- The course needed to replicate the detail available from a on-site inspection.
- Staff in support roles to the Asset Inspection teams would gain benefit from undertaking the course but would not be required to undertake the assessment.

- The assessment needed to be robust and cover the wide variety of asset types that exist. The assessment results also needed secure transfer to the external course assessor.

This led to a number of decisions about the design approach:

- The use of 3 dimensional virtual scenes to accurately represent the details of an asset would be required.
- The media utilised to deliver the course and assessment would be USB stick. This would ensure that the large VR files could be run at acceptable speeds with out installing any file on the client machine.
- USB sticks would allow maximum flexibility over where the course and assessment could be undertaken and over what time frame. All delegates were supplied with their own branded copy of the course on USB stick.
- Only the external training assessment body would be able to extract and analyse a delegate assessment scores.
- The course has been developed to be directly accessible. This means that no third party software is required to operate the software for users with limited vision or hearing, and the entire package can be navigated via the keyboard.

The Asset Condition Grading course has been a ground breaking piece of e-Learning for the Environment Agency:

- It has demonstrated that VR modelling can be effectively utilised to replicate detailed physical structures as evidenced in the testimonials from the Environment Agency managers.
- The number of people taking the course per year has increased from 48 to approximately 100. This number includes the support staff who were unable to access the previous course.
- The assessment has proven to be far more robust resulting in the failure rates increasing from 0.5% to 2%, but anecdotal evidence so far suggests that the level of consistency of approach from inspectors has increased.
- Average cost per delegate has been reduced from £1,500 to £1000, as such the course will have paid for itself within 12th months of use and continues to save the Environment Agency money.
- Average travel time per accreditation has been reduced from 1.5 days per delegate to zero.

- Estimated average mileage per course place has been reduced from 200 miles to zero.

The following comments summarise the Environment Agency's conclusions:

- This learning initiative has earned the respect of the delegates, their managers, internal and external subject experts and the accrediting organisation.
- The quality of training has increased; financial and environmental costs have decreased.
- This solution has convinced business partners that innovative training can have a positive individual, team, department and organisational impact.