

## Application Development

E-days uses an agile development methodology with 2-week sprints involving regular backlog refinement meetings, sprint planning meeting and a sprint review and retrospective at the end. Testing is performed within the sprint so code updates and developments can be released on a regular basis.

### Separation of Development, Testing and Production Environments

The development and testing environments are kept entirely separate, both logically and physically from the production environment. This includes the underlying hosting solution and compute resources. The development and testing environments are logically separated, and each is completely self-contained. They may share the same underlying virtual or physical hosting resources but never share components such as credentials, code, applications, databases or file storage containers.

### Version control

E-days uses Azure DevOps to manage code which offers the following features:

- Fully audited change history
- Version labelling
- Mandatory commit messages
- Pull requests
- Branch naming
- Branch security to ensure that only authorised users have access to push changes to the master branch

Versions of the application are self-contained packages that can be deployed independently to each environment and easily rolled back to previous versions if necessary.

The version of the application is displayed on every page of the application and be visible to all users.

### Risk assessment

All potential developments, features and tasks are managed and recorded using an appropriate project management system. During the planning phase of any development, associated security risks will be assessed and discussed by the development team. Any identified risks, the resultant discussion and mitigation will be recorded against the specific development task. Developments that have associated risks without adequate mitigation will be discarded.

### Testing

All new developments are tested prior to releasing them to live.

Manual testing is carried out by a team of dedicated testers who are responsible for testing both functionality and security. Testers use the testing environment exclusively and do not use production data during the test phase.

Automated testing runs at the testing stage on the testing environment and covers the entire scope of the application. Security tests are incorporated into the automated testing process.