# Endorsement for App Development
# Evaluation and Report - AbcCo

An analysis of AQuA Member AbcCo was carried out by AQuA, following a request from the organisation to be granted Endorsement for App Development.

The evidence AQuA collected has led to the approval of AbcCo's request.

## Evidence Gathered

- Online evidence of quality assurance focus at [URL].
- A copy of the organisation's Standard Project Test Case (Testing Criteria).
- The organisation's client list.
- Evidence of documented and maintained QA process which needed to include:
  - Usual process for development and testing; covering unit, module and system and integration testing.
  - Source code control process with version management.
  - Backup and disaster recovery schemes.
  - Bug control and tracking and user query processes.
  - Release process including updates, fixes and regression testing.
  - Device compatibility testing and maintenance processes.
  - Server based component management and assurance processes.

## Summary of investigation into AbcCo's QA process

### Development Lifecycle

The development process starts with the presales discussion with the client, during which they will start to establish the client requirements, drafting and estimating and discussing possible solutions. Once presales negotiations are completed, they'll establish and sign contracts, and begin development.

They then progress to planning & designing the proposed solution, creating prototypes for which they will gain customer approval. With these and the data gathered from requirements gathering, they collaborate with the customer to establish what acceptance criteria will be used for the project.

The best solution architecture will be selected and they will move to creating a working program with some outline functionality, to enable the customer to see and approve the essentials of the initial design. Using a continuous delivery model, they will work with the customer feedback to progress through multiple iterations to reach a solution that meets the acceptance criteria. Within the cost and timescale limits already agreed with the customer, they will adapt development to quickly respond to customer feedback for the most efficient use of resources.

## Customer pressure for feature additions or reductions in testing

Customers may wish to introduce new features or change functionality as a result of experiencing real-world use of the project as it moves through development cycles. AbcCo uses a formal change request procedure to ensure that all requests are properly recorded and estimated, so that the customer can see the effect of such changes on the overall project cost and timescales. It's not unusual for a customer to push for reduced testing, or propose cutting acceptance testing, where cost or timescales are under pressure. AbcCo will argue against compromising the testing part of the development cycle, but if unable to negotiate agreement to retaining the preferred level of testing they will make clear to the customer that AbcCo can't take responsibility for any impact on quality that may result.

## Coding Standards and Documentation

AbcCo have documented internal coding standards that are followed on all projects, and which require all code to be commented. Project documentation may or may not be required by the client: where it has not been specified AbcCo's internal standards will ensure code clarity and commenting, and document generation programs will be used to create documentation for internal use.

## Platform & Device spread

All of AbcCo's development work has been done on the Android platform at present, although they are looking at expanding into iOS development in the near future. For optimum efficiency, they will work with the client to understand the Android versions and devices used by the largest segment of their potential users, and target development on those. They find that widening the scope of the application to cover older versions of the OS or devices that are only used by a small proportion of the userbase can disproportionately increase the depth and reach of testing required to achieve optimum quality, so they encourage the client to accept a limitation on the targeted devices and OS versions for best results.

## Testing for good app behaviour

The company's testing procedure uses full functional testing to ensure the specification is met, and uses the AQuA Testing Criteria for Android to cover all the non-functional areas that AQuA recommends to identify good behaviour by apps and a good user experience.

*(Copies of the testing criteria used internally by AbcCo were supplied to confirm their normal testing process).*

## App Update Process

The same development processes are used for the creation of updates. Regression testing is used to identify whether the original acceptance criteria are still valid, or need to be amended to suit the updated application.

### Bug Fix Process

They have a post-release process for dealing with any issues found, which is well documented and consistently applied. This is used for both work undertaken during the warranty period (normally 12 months). Where the client requires bug fixing to be undertaken beyond the warranty period, a formal service level agreement is put in place to establish expectations and obligations, and the same post-release process used to manage work undertaken. The normal timescale commitment is to fix bugs in 1 to 7 days depending on the level of severity agreed with the client.

### Native Language vs. Frameworks in Development

At present all of AbcCo's work is native but they expect to be making use of frameworks in the future as they expand into different platforms, especially so if they have an application that requires release on multiple platforms simultaneously.

### Handling User Feedback

They undertake regular reviews of user feedback provided through the app store, and during the lifetime of a project they will also review all feedback from the client continuously. Their aim is to make use of knowledge gained through feedback on previous projects to improve future execution. They employ analytics to measure user behavior and usage on projects with ongoing support, which will be used not only to improve support of the current project, but also to identify lessons learned which can benefit future projects.

### Handling Customer Requirements that negate Quality

Where stated client requirements would make it impossible to achieve acceptable quality and the client is unwilling to compromise, AbcCo will prefer to decline to proceed to contract finalization rather than risk producing something which could be harmful to their reputation. This shows that they have an uncompromised commitment to quality in all their work.

*[Name] on behalf of AQuA*
*[Date]*