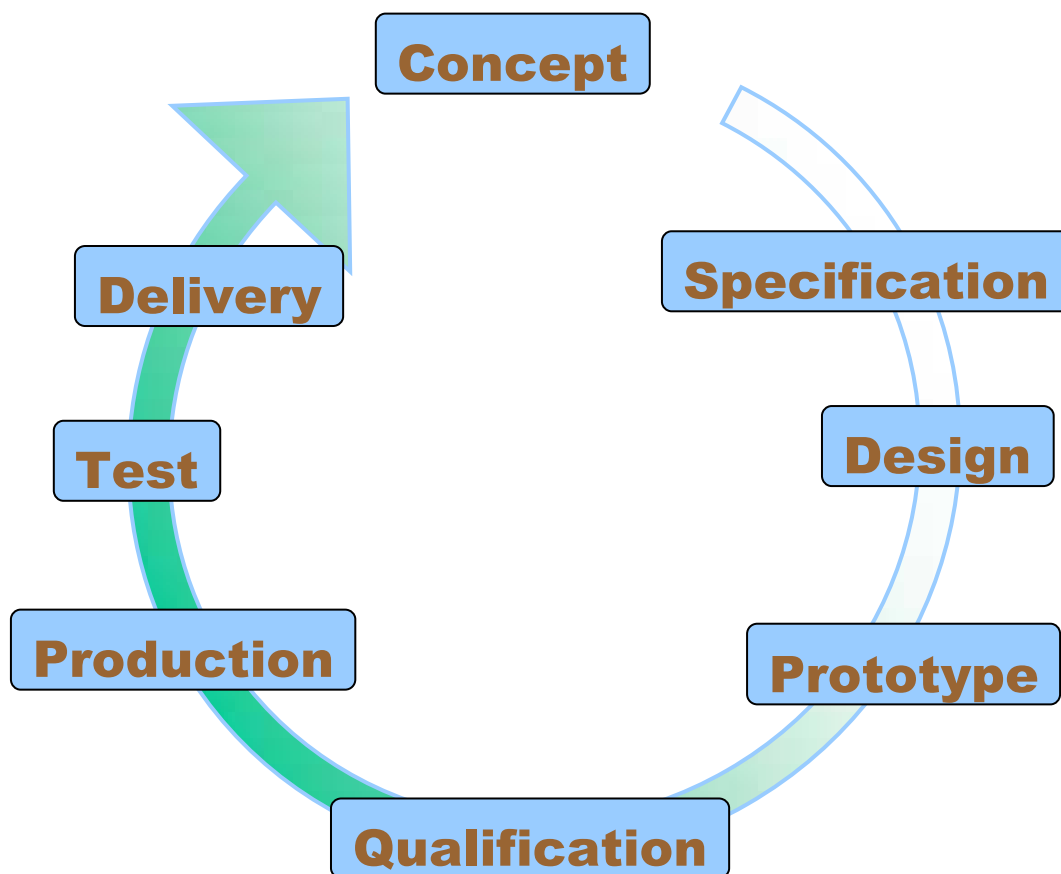




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CLIENT GUIDE TO DESIGN

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# 1 Overview

As an ISO9001:2000 certified company Trimerix have a documented design and development process that is used for all projects. While this procedure is subject to review and improvement the fundamental principles and objectives remain the same: to deliver the client a working product in a timely and cost effective manner. This brief guide outlines the design process to ensure a common understanding of the process that will be followed.

## 2 Application of standards

In order for designs to be of a high quality it is imperative that industry best practice is followed and one of the most efficient ways to ensure this is to apply industry standards relevant to the engineering discipline at hand. Trimerix have a library of standards which is continually growing, however the following key standards form a core part of our working practice:

- BS EN9001:2000 Quality Management Systems
- BS 7000:1:2008 Guide to Managing Innovation (Trimerix were a reviewing party to this release)
- BS7373-1:2001 Guide to Product specifications
- BS Tickit Guide to Software Development Issue 5.5
- MISRA Guidelines for the use of C in safety critical Systems 2004
- IPC-A-610 Printed Circuit board Assembly
- IPC-2xxx Printed Circuit board design
- IPC-325 Printed Circuit board Documentation standard

## 3 Data Policy

During development there is nothing “visible” to show for all the effort and time invested in the project as the design details are captured on our CAD systems. It is therefore critical that your data is handled with the utmost care and security. Trimerix have a contract with a leading online backup provider and our project files are backed up from our server on a daily basis using online backup protected by encryption.

In addition to this our engineering team use a combination of Revision Control Systems (RCS) for software and Product Data Management (PDM) systems for electronic CAD to enable the rolling back or reference to intermediate stages of the design process.

## 4 Review Process

Our design flow follows a “Stage gate” release process that is detailed in this guide, however we encourage clients to schedule regular review meetings with the Trimerix team where they can gather feedback and provide input to the development process. Face to face meetings at Trimerix are the most valuable usually on a fortnightly or monthly basis depending on the size of the project. We are of course setup for web-conferencing and tele-conferencing where a face to face visit is either not warranted or is inconvenient.

# Design Flow Stage Gate

## Design Process

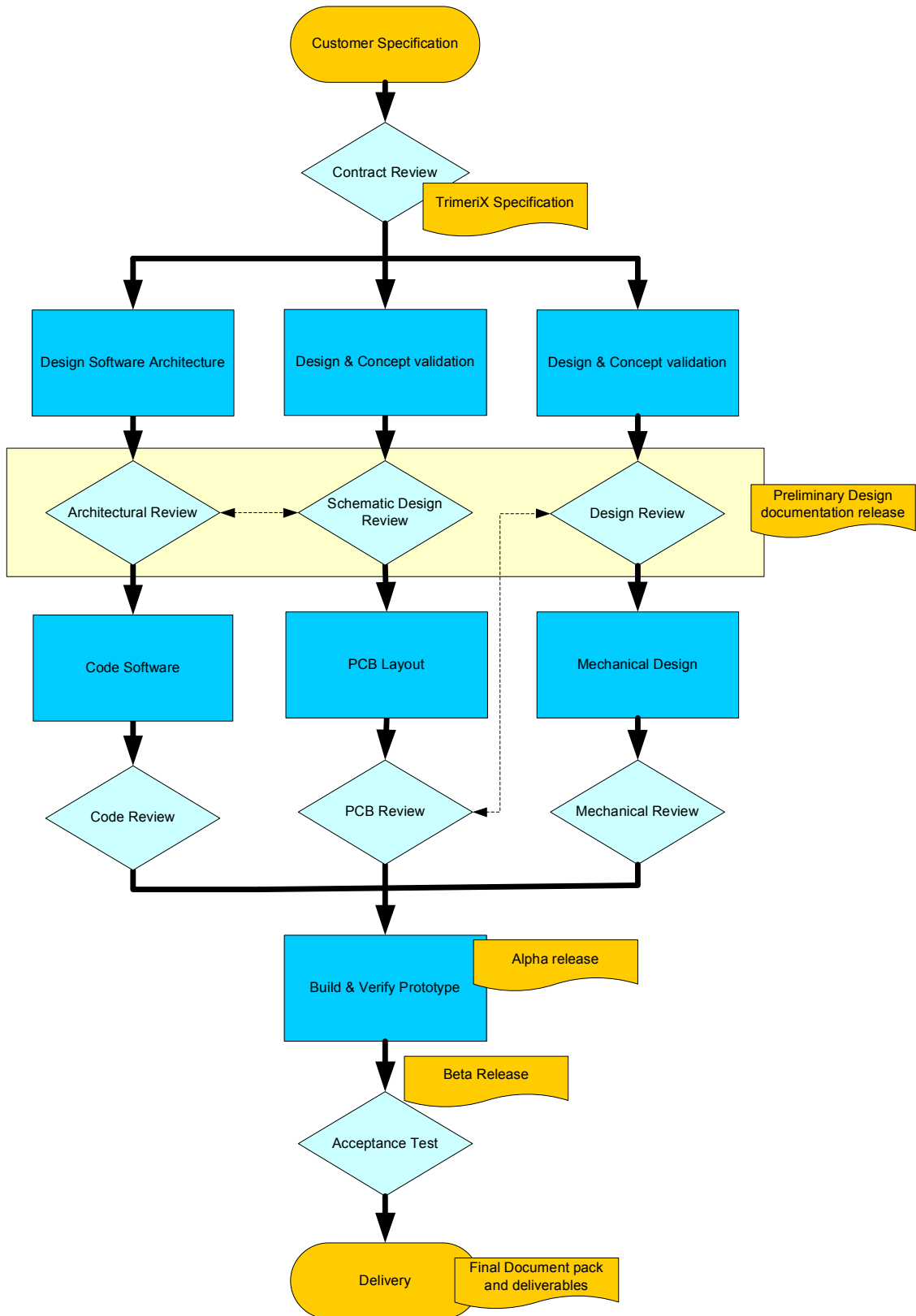


Figure 1: Design flow

## **5 Stage Details**

### **5.1 Trimerix Specification**

The specification on which a contract is based is usually driven by the client and as such is focused on the “features and benefits” of a product and is usually more of a Marketing based specification. Trimerix take this data and work with you to create an engineering specification that transforms your requirements into hard-engineering numbers that our team can work with.

### **5.2 Preliminary Design Documentation Release**

Based on the specification our team will work on implementing the design and creating the necessary CAD data to have the initial prototype built. As part of this process we carry out internal reviews, however it is important that you as the client have visibility of the design pack prior to the commitment to build the first unit. Trimerix are happy to work with the client to ensure that you are satisfied with the details of the documentation pack – regardless of the level of your technical expertise. Typically a client will receive a copy of the internal design reviews of the detailed design documents (for example schematics) that have been signed off by our quality manager. However if you would be very welcome to participate in the reviews of your product.

### **5.3 Alpha Release**

Trimerix aim to provide you with early visibility of the projects progression and we will usually aim to release an early prototype (Alpha release). While this prototype will lack full functionality and not be compliant to the full product specification in all areas it is intended to boost your confidence in the direction being taken while providing us with valuable feedback on the product direction and detail. On smaller or simpler projects this stage may be skipped directly into a Beta release.

### **5.4 Beta Release**

Trimerix will release a Beta version when we are confident that the product is close to completion from a development standpoint. This stage is always prior to any formal approvals and customer field trials and it is intended to be used as the platform that will be used for customer acceptance testing.

\*Note: the acceptance test criteria are normally specified as part of the Trimerix specification agreed with the client, however occasionally with mutual agreement it is necessary to adjust the criteria following the Alpha release.

### **5.5 Final Release**

Depending on the contract deliverables following successful completion of the acceptance testing a formal release of any outstanding deliverables is made. This normally consists of an updated document pack, that includes all software source code, updated CAD documents, design documentation and transfer of Intellectual property rights.