



Customer Objectives

Over time your product or design might suffer from electronic components become End-of-Life (EoL). In many of such cases a redesign of a Board is required to extend the lifetime of your product or system. When programmable devices are involved, like FPGAs, you also need your software/firmware to be adapted to fit.

The main challenge of a redesign is in most cases the result of a combination of requests:

- > An FPGA device needs to be replaced with a new family of FPGA devices.
- > Replacement of a list of critical components because they are end-of-life or soon to be phased-out.
- > Improvements of the design; better yield or reliability.
- > Solving known design issues.
- > New DfX rules and analysis.
- > Reduce cost where reasonably possible.

The redesign often includes the development of a new electronic board which is Form, Fit and Function compatible with the previous board. This means that no additional functionality shall be included in the design in order to mitigate risk on design and product.

Often the firmware should be fitted to a new FPGA device family and compatible with the previous board. This requires that we develop & build tooling to support the design qualification of the board.

And of course, all without impacting the existing product and guarantee of an expected lifetime of 10 or more years.

For AimValley this is Business as Usual!

AimValley Solution

One way of working is our structured approach to take your redesign from wish-list to production successfully.

Phased Approach

AimValley can take care of the entire sequence from specification, design, design qualification, development and prototype manufacturing in your redesign process. We can do this based on your requirements or as a joint redesign project. AimValley has a broad experience in supporting customers during all of the following stages of a redesign project:

- Feasibility Study
- [System Designer](#)
- Detailed Design & Realisation
- [Factory Introduction](#)
- Maintaining the Status Quo

Joint Development

Based on your requirements, we design solutions and ways to jointly implement them, while achieving your redesign goals.

Ownership

AimValley is used to take full ownership of the complete board redesign.

Design Tools and Way-of-Working

Depending on your need and preference, the redesign can be based on our design tooling and ways-of-working or our customer's.

Key Technologies

- > Electrical board and FPGA (re)design
- > Design reviews
- > Verify/simulate design changes
- > Environmental qualifications and reports: [temperature, shock and vibration](#).
- > Risk analysis and mitigation; design, manufacturing, supply chain.
- > Component obsolescence management.
- > Prototype manufacturing and qualification.

Results and Added Value

 **Efficient**

Fast lane prototypes delivered through customer process and way-of-working for early integration.

**Partnership**

Combined customer and AimValley way of working to deliver the best result.

**Successful**

First-time-right approach; no PCB changes required after qualification of prototype.

**Innovation**

AimValley has helped companies by creating and FPGA that precisely mimics the obsolete chip.