

5 practices to reduce certification surprises before the lab

The KELD operating model

How compliance enters the design — and stops being a salvage operation.

01 Schematic review with compliance lens 🔍

WHAT IT IS

Every schematic we review goes through a compliance lens before a functional lens. We ask first whether the design carries the seeds of a known pattern — ErP standby, EMC margin, target-market component — and address it before the next iteration.

WHAT CHANGES

The most common causes of re-test are identified earlier. Each one prevented saves weeks of project time.

02 BOM cross-referenced against target markets 🌐

WHAT IT IS

Every critical component in the BOM is verified against every target market for the product, not just the closest one. A 30-minute exercise at schematic stage, repeated as the design evolves.

WHAT CHANGES

Components are selected with all certifications in hand. No mid-project discovery that a part has no UL listing. The technical file works for every market from day one.

03 Margin documentation 📈

WHAT IT IS

Pre-test results are documented with explicit margins. We do not just record that the prototype passed — we record by how much, and what margin is required to absorb real-world variation in the official lab.

WHAT CHANGES

The 'pass with margin' criterion replaces the 'pass' criterion. Lab surprises from temperature swings, supply variations or different chambers stop happening — the design was built to absorb them.

The last two — and what stands behind them

04 Target-market documentation from day one

WHAT IT IS

The technical file is structured for every target market from the first prototype shipment. UL data, construction details, test configurations — all on the supplier deliverables list from day one, not requested retroactively when the project crosses borders.

WHAT CHANGES

When the project moves to a new market, the documentation is already there. No retroactive requests, no incomplete files. The second market is days of work, not months.

05 Supplier change protocols

WHAT IT IS

Explicit agreements with component suppliers on what changes require notification, what documentation arrives with each change, and how regulatory impact is evaluated before substitution. No silent BOM changes.

WHAT CHANGES

When a component goes EOL or a substitution is proposed, the customer is part of the conversation from the start. Technical files always match what is actually being manufactured.

WHAT STANDS BEHIND THE METHODOLOGY

Five practices. Backed by a team and a plant that grow with our customers.



METHODOLOGY

The 5 practices above — applied across every project, refined every year, validated in every certification.



TEAM

Engineers trained in ErP, EN 60335, IEC 61800 and UL as part of onboarding. Compliance is a transversal layer, not a separate department.



PLANT CAPACITY

Recently doubled. Not because we wanted to be bigger — because we wanted to build longer relationships. Capacity that grows with our customers.