# Design review checklist

Four reviews most products go through, each with the questions to ask in the room. Answer every question **Yes**, **No** or **N/A**. Every No is a finding: write it on page 2, rate it, and give the fix **one owner and one date**.

PROJECT _____ REVIEW _____ DATE _____ CHAIR _____

## PRELIMINARY DESIGN REVIEW

The concept is right before detail design starts.

| | | | |
|---|---|---|---|
| Requirements are complete and agreed | Yes | No | N/A |
| The concept meets every requirement, or the gaps are named | Yes | No | N/A |
| Key risks are in the DFMEA | Yes | No | N/A |
| Make-or-buy decisions are made for the main parts | Yes | No | N/A |
| Cost estimate is within target | Yes | No | N/A |

Must be there: Engineering, Quality, Manufacturing

## CRITICAL DESIGN REVIEW

The design is ready to release for tooling and the prototype build.

| | | | |
|---|---|---|---|
| Drawings are complete and checked | Yes | No | N/A |
| Tolerance stack-up is done for the critical fits | Yes | No | N/A |
| Analysis (FEA, thermal…) supports the design | Yes | No | N/A |
| The DFMEA is current and its High rows have actions | Yes | No | N/A |
| The DV test plan covers every requirement | Yes | No | N/A |
| The bill of materials is released | Yes | No | N/A |
| Suppliers have confirmed they can make the parts | Yes | No | N/A |

Must be there: Engineering, Quality, Manufacturing, Supplier quality

## DFM REVIEW

Can it be made, assembled and checked well at the planned volume?

| | | | |
|---|---|---|---|
| Every part can be made with the planned process | Yes | No | N/A |
| Assembly order and access are checked | Yes | No | N/A |
| Special characteristics are marked on the drawings | Yes | No | N/A |
| The PFMEA covers the new process steps | Yes | No | N/A |
| Gauging is defined for the critical dimensions | Yes | No | N/A |

Must be there: Manufacturing, Quality

## DRAWING RELEASE REVIEW

A drawing is right before it is released.

| | | | |
|---|---|---|---|
| Title block and revision are right | Yes | No | N/A |
| Every dimension needed to make and inspect it is there | Yes | No | N/A |
| Tolerances match the stack-up | Yes | No | N/A |
| Materials and finishes are called out | Yes | No | N/A |
| It matches the 3D model | Yes | No | N/A |

Must be there: Checker

# Who was there, findings, decision

| Team | Name | There for it? | If nobody came: why |
|---|---|---|---|
| Engineering | | | |
| Quality | | | |
| Manufacturing | | | |
| Supplier quality | | | |
| Checker | | | |

| # | What's wrong (one problem per line) | Minor · Major · Critical | Owner of the fix | Due | Fix signed by |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |

The person who raised a finding signs its fix, so the one who saw the problem confirms it's gone. Major and Critical findings hold the gate until they're fixed.

**DECISION** ☐ Approved ☐ Approved with actions ☐ Not approved, re-review

Approved can't be chosen while a Major or Critical finding is still open. Approved with actions needs at least one finding. Not approved needs a note: what must change before it's reviewed again.

NOTE

**Running reviews from a shared drive?** In Vector Engineer a formal design review runs from your own templates: the checklist (a No raises a finding by itself), who was there for each team, a package that locks the versions looked at, and the decision on the record. Every finding becomes work with an owner and a date, and holds its gate until it's fixed. Ask for a demo at **support@vectorxpro.com**.