

CheckOpp Methodology

Public Methodology Summary

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The core CheckOpp principle: do not prove that an idea is valuable; reduce uncertainty until the next rational decision can be made.

What CheckOpp is

CheckOpp is a decision-analysis methodology for assessing technical projects, engineering developments, technologies and opportunities for practical application.

Its purpose is not to prove that an idea is “good” or to produce an impressive report. Its purpose is to establish what is actually known, what remains unknown or contradictory, which conclusions are supported, and what the next rational action should be.

Core principles

Decision before volume	Research goes only as deep as it can materially change the decision, project route, architecture, economics, safety or next action.
Evidence before conclusion	Facts, client statements, independent evidence, calculations, estimates, assumptions and hypotheses remain distinct.
Uncertainty stays visible	Missing data and conflicting sources remain part of the result instead of being hidden to make the analysis look complete.
Smallest decision-relevant next step	CheckOpp seeks the minimum additional action or evidence that can actually change the decision.
Do not repeat completed work	Previous analysis is preserved. Work is repeated only when new evidence, a conflict or another specific reason justifies it.
Safety and responsibility	For high-risk, regulated or safety-critical decisions, analysis does not replace professional approval, testing or responsible engineering judgement.

How the assessment works

- 1. Frame the problem** — Define the object, goal, boundaries and the decision that needs to be made.
- 2. Initial assessment** — Check applicability and identify material claims, constraints, contradictions and critical unknowns.
- 3. Research and verification** — Use client materials, public sources, standards, patents, scientific and technical literature, manufacturer information, commercial analogues and calculations only where they are decision-relevant.
- 4. Opportunity Map** — Build a structured picture of what is established, what needs verification, where the main bottleneck lies and which conditions could change the conclusion.
- 5. Choose the direction** — The next route may be a full Opportunity Assessment, a focused validation of one issue, or ARITZ engineering problem-solving.
- 6. Deep analysis** — Select only the workstreams that can materially change the decision. There is no universal long checklist.

7. Verify and conclude — Test conclusions against evidence, constraints and alternatives, then state the decision with conditions, uncertainty and next action.

Opportunity Assessment Framework

OAF is the main framework for deeper CheckOpp assessment. It is not a universal questionnaire; it is a set of workstreams selected according to the actual decision problem.

Depending on the case, work may cover technical feasibility, alternative architectures, analogues and substitutes, market/application context, manufacturing and supply chain, economics, patents and prior art, regulation, pilot design and commercialization.

The OAF rule is simple: go deep enough to obtain decision-grade evidence, but do not perform work that cannot change the decision.

ARITZ: engineering problem-solving

ARITZ is used when the main barrier is a concrete engineering problem or contradiction rather than a simple lack of information.

The process does not start with brainstorming. It starts by defining the required function, operating conditions, hard constraints and the conflict that prevents a satisfactory solution.

CheckOpp first looks for known solutions and assembles viable architectures from available principles and resources. Inventive search is used only when simpler paths do not resolve the core contradiction.

Every candidate must then be verified by an appropriate method: calculation, comparison with known solutions, test, supplier confirmation, risk analysis or another suitable form of evidence. A theoretical idea is not presented as a validated solution.

Evidence, calculations and uncertainty

For every material conclusion it should be clear what supports it.

Client data remain client-provided data until independently verified. Public values may be used as ranges or scenario assumptions, but not as facts about the specific project.

Material calculations should expose inputs, units, key assumptions and sensitivity. When one exact value is not justified, scenarios and ranges are preferred.

Failure to find an analogue does not prove novelty. Failure to find a requirement does not prove that no requirement exists. Conflicting sources are not mechanically averaged; the conflict is analysed.

Human role

CheckOpp performs reasonable desk research and calculations before assigning work to the client or an outside specialist.

Human expertise is introduced when there is a material conflict, high risk, a responsible professional decision, unresolved uncertainty or a need for expert review.

When client input is required, the request is limited to the minimum sufficient evidence bundle tied to the current decision. The goal is to close a specific bottleneck, not to create an endless questionnaire.

What the client receives

- The main conclusion and current bottleneck.
- What is established and the evidence supporting it.

- Material unknowns and contradictions that remain.
- Comparison of alternatives where required.
- Conditions that would change the conclusion or direction.
- One primary next-best evidence action most useful for the decision.
- A sequence of decision gates and, where needed, a precise question for a specialist.

What the methodology does not promise

- CheckOpp does not turn assumptions into facts or manufacture false precision.
- CheckOpp does not assign a universal “opportunity score”.
- CheckOpp does not replace testing, certification, legal opinion, formal patent FTO analysis or responsible engineering approval where these are required.
- A valid result may be: continue, continue under conditions, verify first, change architecture or segment, hold, or stop the current track.

**INTAKE → SCREEN → RESEARCH & VERIFY → OPPORTUNITY MAP → DIRECTION → ANALYSIS → REVIEW /
INPUT when needed → VERIFY → RESULT**

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