PLANNING WORKSHEET

ML Discovery Checklist

Evaluate candidate use cases before approving model development or a pilot.

01 | USE CASE FIT

- [ ] Define the operational problem and business owner.
- [ ] Name the KPI and record its current baseline.
  Examples: downtime hours, scrap rate, forecast error.
- [ ] Specify the prediction the model would make.
- [ ] Identify the action, decision owner, and response window.
- [ ] Check whether rules or conventional analytics can solve the problem.

02 | BUSINESS CASE

- [ ] Estimate the current financial cost of the operational problem.
- [ ] Separate potentially avoidable costs from unavoidable costs.
- [ ] Test how missed predictions and false alarms affect value.
- [ ] Estimate data preparation, integration, build, and operating costs.
- [ ] Record conservative, expected, and optimistic value scenarios.

03 | DATA READINESS

- [ ] Identify required sources (ERP, MES, equipment, maintenance, etc.).
- [ ] Check historical coverage, missing records, and current relevance.
- [ ] Confirm target labels / outcome records for supervised ML.
- [ ] Verify access, permissions, identifiers, and timestamp alignment.

DECISION WORKSHEET

Feasibility & Investment Gate

Complete for each shortlisted ML opportunity. Document assumptions, not just scores.

04 | TECHNICAL & OPERATIONAL FEASIBILITY

- [ ] Map input systems, interfaces, and required data pipelines.
- [ ] Confirm how predictions reach operational users or applications.
- [ ] Identify workflow changes, integration risks, and system constraints.
- [ ] List unknowns that a feasibility study or pilot must test.

05 | COMPARATIVE PRIORITIZATION

- [ ] Assess business value separately from implementation feasibility.
- [ ] Compare candidates using the same criteria and evidence standard.
- [ ] Flag low-confidence assumptions and costly prerequisites.
- [ ] Shortlist candidates worth validating now versus later.

06 | DOCUMENTED DECISION

- [ ] Complete a use case card: KPI, prediction, owner, data, costs, risks.
- [ ] Assign a decision owner and a specific next action.
- [ ] Define pilot success criteria before authorizing pilot spend.

DECISION

☐ GO TO PILOT VALIDATION ☐ DEFER / CLOSE GAPS ☐ REJECT

Top unresolved assumption: _____

Use case: _____ Owner: _____

Next evidence or action: _____

Decision date: _____ Review date (if deferred): _____