
Precision Parts Works

As of September 21, 2026

BUSINESS PROFILE

High-mix low-volume CNC job shop producing precision components for aerospace and medical device subcontractors. 65 employees across machining, quality, and programming. Quotes require manual review of drawings, material specs, and cycle-time estimates.

BUSINESS TYPE

Private Company

INDUSTRY

Manufacturing – Industrial & Heavy

LOCATION

United States

OPERATING REGIONS

North America

COMPANY SIZE

Medium (51–250 employees)

CUSTOMER TYPES

Small & Medium Businesses, Enterprise

BUSINESS MODEL

Fee-for-Service

REGULATORY CONTEXT

Other

STRATEGIC PRIORITIES

Operational Efficiency, Compliance, Cost Reduction, Revenue Growth

KEY SYSTEMS

ERP, HRIS, Custom / Proprietary

DATA SENSITIVITY

Personally Identifiable Information (PII), Financial Records

CURRENT BUSINESS AI POSTURE

MARKETING

Avoiding

New customer outreach is relationship-driven; no AI in prospecting.

SALES

Experimenting

Estimating team trials ChatGPT for internal memo drafts only — not customer quotes.

DELIVERY

Avoiding

CMM inspection reports are manually written in Excel templates.

CUSTOMER SUCCESS

Avoiding

Customer quality reports are assembled by hand from lot records.

OPERATIONS

Experimenting

Production planner uses ChatGPT for shift handoff email drafts.

GROWTH

Avoiding

Operator training uses paper setup sheets at each machine.

IT / TECHNOLOGY

Avoiding

LOGISTICS

Avoiding

Precision Parts Works FULL STAKEHOLDER REPORT

ERP and CAM software are managed by the IT coordinator. No AI tooling in systems administration.

Material purchasing is handled via distributor phone and web portals. No AI in procurement or inventory planning.

CURRENT AI USE

Internal estimating memo drafts	
BUSINESS FUNCTION	TOOL / VENDOR
Sales	ChatGPT
WHO IS USING	WORK SUPPORTED
Estimating coordinator	Drafting internal notes on complex quote assumptions for estimator review
PROCESS DOCUMENTED	IS IT HELPING?
Informal / primarily in one person's head	Partly
CREATING REWORK / PROBLEMS?	
No	
INFORMATION SHARED	
De-identified part descriptions only — no customer names or drawing numbers.	
APPROVED?	
Partly	
NOTES	
Engineering manager discourages uploading customer drawings to external tools.	

Shift handoff summary emails	
BUSINESS FUNCTION	TOOL / VENDOR
Operations	ChatGPT
WHO IS USING	WORK SUPPORTED
Production planner	Summarizing open jobs and machine exceptions for next shift
PROCESS DOCUMENTED	IS IT HELPING?
Informal / primarily in one person's head	Yes
CREATING REWORK / PROBLEMS?	
No	
INFORMATION SHARED	
Internal job numbers and machine IDs only.	
APPROVED?	

Yes

NOTES

Does not include customer-identifying information.

Vendor RFQ cover letter drafts

BUSINESS FUNCTION

Operations

TOOL / VENDOR

ChatGPT

WHO IS USING

Purchasing agent

WORK SUPPORTED

Standard material RFQ correspondence

PROCESS DOCUMENTED

Documented and repeatable

IS IT HELPING?

Yes

CREATING REWORK / PROBLEMS?

No

INFORMATION SHARED

Material specs without customer part linkage.

APPROVED?

Yes

NOTES

Approved for vendor communication templates.

Machine Downtime Root Cause Notes

Operations · In Progress

OPPORTUNITY BEING ASSESSED

TITLE	
Machine Downtime Root Cause Notes	
BUSINESS FUNCTION	OWNER
Operations	Luis Ramirez, Maintenance Lead
STATUS	
Deferred	
VALUE PROPOSITION	
Reduce operational risk	
CURRENT FRICTION	
Downtime events are logged in ERP, but operator notes and maintenance findings are inconsistent across shifts.	
DESIRED CHANGE	
Standardize root-cause notes and summarize downtime patterns so maintenance leads can target recurring machine issues.	
SUCCESS INDICATOR	
90% of pilot downtime events use the structured capture format; maintenance lead review completed within 48 hours; repeat unclassified downtime reduced.	
AI'S ROLE	
AI organizes structured operator notes, ERP downtime timestamps, and maintenance findings into draft root-cause summaries. Maintenance leads approve before actions are assigned.	

ASSESSMENT

STATUS	VERSION
In Progress	LIGHTNING_1.0
STARTED	
9/21/2026	

READINESS PROFILE

Dimension	Status	Key Observation
Process	NEEDS ATTENTION	Downtime events are logged, but the root-cause narrative is inconsistent by shift and supervisor. A useful AI workflow first requires a common failure-code taxonomy and a clear maintenance review step.
Data & Information	NEEDS ATTENTION	ERP downtime timestamps and machine IDs exist, but operator notes and maintenance findings live in separate systems or informal handoffs. The pilot should reconcile those sources before summarizing trends.
People & Training	READY TO INVESTIGATE	Production planners and maintenance leads can review summaries, but operators need a short, structured capture format so AI is not asked to infer root cause from vague shift notes.
Risk & Security	NEEDS ATTENTION	The primary risk is operational: polished but wrong root-cause summaries could misdirect preventive maintenance and hide repeat machine issues. Maintenance lead approval should be required before actions are assigned.
Technology & Vendor	NEEDS ATTENTION	ERP logs can provide downtime events, but there is no integrated maintenance knowledge base. A CSV/export-based pilot is appropriate before considering live ERP or CMMS integration.

OVERALL INTERPRETATION

Machine downtime root-cause notes are operationally useful once basic data discipline is in place. The value depends on standardizing failure codes and maintenance-review workflow first; otherwise AI would simply turn inconsistent shift notes into polished but unreliable summaries.

QUESTION RESPONSES

PROCESS

We can explain how the current work is performed from beginning to end.	YES
The people involved generally perform the work in a consistent way.	YES
We understand what a good result looks like.	YES
We know where judgment, exceptions, or escalation are required.	YES
The process is documented well enough to support testing or improvement.	YES
We know who owns the process and who can approve changes to it.	YES

DATA & INFORMATION

We know what information the AI would need to perform this work.	PARTLY
We know where that information comes from and who owns it.	PARTLY
The information is accurate, complete, and usable enough for the intended purpose.	NO
We know what information would be shared with the AI and understand whether it is appropriate and permitted to share that information with the specific tool being considered.	NO
We understand whether customer, employee, financial, confidential, proprietary, regulated, or restricted information is involved.	PARTLY
We know what information should not be provided to the AI.	PARTLY

PEOPLE & TRAINING

The people involved are willing to try AI for this use case.	YES
They can learn how to provide useful instructions and context.	YES
The proposed AI use fits reasonably into how the work is performed.	YES
Someone involved has enough subject-matter expertise to evaluate the AI output.	PARTLY
We know what quality or accuracy is acceptable for this use case.	PARTLY
People understand that AI output may need to be challenged, corrected, or rejected.	PARTLY
It is clear who remains responsible for the final work or decision.	PARTLY
People understand when human review is required.	PARTLY

RISK & SECURITY

We know whether this use is internal, employee-facing, customer-facing, vendor-facing, or public.	YES
We know who will see, use, or rely on the AI output.	YES
We understand what could happen if the AI is wrong.	YES
We know when human review is required before the output is used.	PARTLY
We have or can establish acceptable-use boundaries for this use case.	PARTLY
We can document, when appropriate, what the AI did, what information it used, who reviewed it, and what action was taken.	PARTLY

We know who is responsible for identifying and responding to security or privacy concerns.	PARTLY
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TECHNOLOGY & VENDOR

We know which technology platforms and vendors touch this process or its information.	PARTLY
We know whether those vendors use AI in relevant features or services.	PARTLY
We understand what information may be sent to or processed by the AI service.	NO
We understand how information is stored, retained, or shared.	NO
We know whether information may be used to train or improve models or services.	NO
We know what controls are available, including whether AI features can be disabled or configured.	NO
We understand who has access to the data and what happens to it if we stop using the vendor.	NO
The proposed technology is a reasonable fit for the intended business use.	NO

OPEN QUESTIONS

Which failure-code taxonomy will supervisors use consistently across shifts?	MEDIUM	OPEN
Where should maintenance findings be captured so they can be reconciled with ERP downtime events?	MEDIUM	OPEN
Who approves an AI-assisted root-cause summary before preventive-maintenance actions are assigned?	MEDIUM	OPEN

ASSUMPTIONS

Operators can complete a short structured downtime note without slowing restart work.	UNVERIFIED
Maintenance leads will review AI summaries before any action is assigned.	UNVERIFIED
ERP downtime timestamps and machine IDs can be exported weekly for a pilot.	UNVERIFIED

RISKS

AI summary assigns the wrong root cause and misdirects maintenance effort	OPEN
LIKELIHOOD	DECISION
Medium	Reduce
Operators enter vague notes that AI turns into overconfident summaries	OPEN
LIKELIHOOD	DECISION
High	Reduce

Repeat machine issues remain hidden because findings are not reconciled with ERP events		OPEN
LIKELIHOOD	DECISION	
Medium	Reduce	

CONSTRAINTS

Root-cause taxonomy must be agreed before AI summaries can be trusted.	OTHER	IDENTIFIED
Maintenance notes and ERP downtime events are not yet integrated in a CMMS.	OTHER	IDENTIFIED

ACTION ITEMS

Define common downtime failure-code taxonomy	GOVERNANCE	OPEN
Create one-page structured operator downtime note template	PILOT PREPARATION	OPEN
Run weekly CSV reconciliation of ERP events and maintenance findings	PILOT PREPARATION	OPEN
Assign maintenance lead review for every AI-generated downtime summary	GOVERNANCE	OPEN

BUSINESS OBJECTIVES

Classify 90% of pilot downtime events with an approved failure code within 48 hours EXPECTED VALUE Quality Improvement
Identify the top three repeat downtime causes for preventive-maintenance planning within 60 days EXPECTED VALUE Other

TEAM READINESS

Name	Role	AI Familiarity	Business Knowledge	Process Knowledge	Review Capability	Risk Awareness	Notes
Kim Ortiz	Quality Manager	—	—	—	—	—	—
Luis Ramirez	Maintenance Lead	—	—	—	—	—	—

Name	Role	AI Familiarity	Business Knowledge	Process Knowledge	Review Capability	Risk Awareness	Notes
Pat Nguyen	Production Planning Lead	—	—	—	—	—	—

AI ROLE ASSIGNMENTS

Role	Person	Notes
AI Sponsor	Chris Dalton	—
AI Champion	Luis Ramirez	—
AI Reviewer	Kim Ortiz	—

OPERATING GUARDRAILS

AI-generated downtime summaries cannot assign maintenance actions until a maintenance lead approves them.	HUMAN REVIEW	PROPOSED
Operator notes must use the structured downtime template before inclusion in AI summaries.	OTHER	PROPOSED
Summaries must cite ERP event IDs and maintenance-note sources so planners can validate them.	OTHER	PROPOSED

PILOT CHARTERS

Downtime events are tracked, but inconsistent shift notes prevent the team from seeing repeat root causes and prioritizing preventive maintenance. USERS Maintenance lead, production planner, and supervisors for two bottleneck machine cells IN SCOPE Structured downtime notes, ERP event exports, weekly root-cause summary drafts	DRAFT
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OUT OF SCOPE

Automated maintenance work orders, safety-critical shutdown decisions, live ERP integration

INFORMATION

ERP downtime timestamps, machine IDs, structured operator notes, maintenance findings

WORKFLOW

1. Operator completes downtime template. 2. Maintenance records findings. 3. Weekly export is summarized by AI. 4. Maintenance lead approves causes. 5. Planner assigns follow-up.

HUMAN REVIEW APPROACH

Maintenance lead approval required before any root cause is accepted or action assigned.

SUCCESS MEASURES

90% events classified within 48 hours; top three repeat causes identified; no action assigned from unapproved AI summary

RISKS SUMMARY

Wrong root cause, vague operator notes, missing maintenance-source linkage

CONTROLS

Failure-code taxonomy; structured note template; source citation; maintenance lead sign-off

OWNER

Luis Ramirez

DURATION

60 days

STOP CONDITIONS

Any safety-impacting recommendation from AI; repeated summaries without cited sources; maintenance lead confidence below 3/5

DECISION POINT

Day 30: adjust capture template or continue. Day 60: integrate with CMMS, extend to more cells, or stop.

CMM Inspection Report Drafts

Delivery · In Progress

OPPORTUNITY BEING ASSESSED

TITLE

CMM Inspection Report Drafts

BUSINESS FUNCTION

Delivery

OWNER

Luis Ramirez, Maintenance Lead

STATUS

Assessing

VALUE PROPOSITION

Save staff time

CURRENT FRICTION

Quality techs transcribe CMM exports into customer report templates, adding 30-45 minutes per lot and creating variation in exception notes.

DESIRED CHANGE

Draft inspection narratives and exception summaries from controlled CMM exports while preserving quality-manager sign-off.

SUCCESS INDICATOR

Report prep reduced by 20 minutes per lot; zero released reports with unreviewed AI text; quality-manager rework rate does not increase.

AI'S ROLE

AI drafts narrative notes and exception summaries from exported measurement data. Quality techs verify tolerance language and the quality manager approves every released report.

ASSESSMENT

STATUS

In Progress

VERSION

LIGHTNING_1.0

STARTED

9/21/2026

READINESS PROFILE

Dimension	Status	Key Observation
Process	READY TO INVESTIGATE	CMM inspection reporting follows a repeatable path from measurement export to customer-facing report. The best AI touchpoint is drafting narrative notes and exception summaries after raw measurements are exported, before quality manager sign-off.
Data & Information	NEEDS ATTENTION	CMM exports are structured, but reports often include customer part numbers, drawings, and acceptance criteria. The pilot needs a controlled template and a rule for stripping customer identifiers from any external AI workflow.
People & Training	NEEDS ATTENTION	Quality techs would benefit from draft narratives, but they must be trained to verify tolerance language and not treat AI output as an inspection decision. Quality manager review remains the accountability point.
Risk & Security	SIGNIFICANT CONCERN	An incorrect pass/fail statement or omitted out-of-tolerance condition could create a customer quality escape. Drafting can be assisted, but disposition and report release must stay human-approved.
Technology & Vendor	NEEDS ATTENTION	CMM data and customer templates are not integrated with an approved AI workflow. Start with exported repeat-part measurement files and a locked report template before evaluating deeper QMS integration.

OVERALL INTERPRETATION

CMM inspection report drafts are a credible second pilot because the source data is structured, the report burden is repetitive, and quality-manager sign-off is already accepted. The main risk is preserving dimensional context, tolerance interpretation, and customer-specific reporting language without weakening the release gate.

QUESTION RESPONSES

PROCESS

We can explain how the current work is performed from beginning to end.	YES
The people involved generally perform the work in a consistent way.	YES
We understand what a good result looks like.	YES
We know where judgment, exceptions, or escalation are required.	YES
The process is documented well enough to support testing or improvement.	YES
We know who owns the process and who can approve changes to it.	YES

DATA & INFORMATION

We know what information the AI would need to perform this work.	PARTLY
We know where that information comes from and who owns it.	PARTLY
The information is accurate, complete, and usable enough for the intended purpose.	NO
We know what information would be shared with the AI and understand whether it is appropriate and permitted to share that information with the specific tool being considered.	NO
We understand whether customer, employee, financial, confidential, proprietary, regulated, or restricted information is involved.	PARTLY
We know what information should not be provided to the AI.	PARTLY

PEOPLE & TRAINING

The people involved are willing to try AI for this use case.	YES
They can learn how to provide useful instructions and context.	YES
The proposed AI use fits reasonably into how the work is performed.	YES
Someone involved has enough subject-matter expertise to evaluate the AI output.	PARTLY
We know what quality or accuracy is acceptable for this use case.	PARTLY
People understand that AI output may need to be challenged, corrected, or rejected.	PARTLY
It is clear who remains responsible for the final work or decision.	PARTLY
People understand when human review is required.	PARTLY

RISK & SECURITY

We know whether this use is internal, employee-facing, customer-facing, vendor-facing, or public.	YES
We know who will see, use, or rely on the AI output.	YES
We understand what could happen if the AI is wrong.	YES
We know when human review is required before the output is used.	PARTLY
We have or can establish acceptable-use boundaries for this use case.	PARTLY
We can document, when appropriate, what the AI did, what information it used, who reviewed it, and what action was taken.	PARTLY

We know who is responsible for identifying and responding to security or privacy concerns.	PARTLY
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TECHNOLOGY & VENDOR

We know which technology platforms and vendors touch this process or its information.	PARTLY
We know whether those vendors use AI in relevant features or services.	PARTLY
We understand what information may be sent to or processed by the AI service.	NO
We understand how information is stored, retained, or shared.	NO
We know whether information may be used to train or improve models or services.	NO
We know what controls are available, including whether AI features can be disabled or configured.	NO
We understand who has access to the data and what happens to it if we stop using the vendor.	NO
The proposed technology is a reasonable fit for the intended business use.	NO

OPEN QUESTIONS

Which CMM export fields can be used without including customer-controlled drawing identifiers?	MEDIUM	OPEN
Which customer report templates are stable enough for a controlled draft pilot?	MEDIUM	OPEN
What audit trail proves the quality manager reviewed every AI-assisted narrative before release?	MEDIUM	OPEN

ASSUMPTIONS

Raw dimensional measurements remain the system of record and are never altered by AI.	UNVERIFIED
Quality techs review every draft narrative before quality-manager approval.	UNVERIFIED
Pilot starts with repeat-part inspection reports where templates and tolerance language are stable.	UNVERIFIED

RISKS

Draft report omits or softens an out-of-tolerance condition	OPEN
LIKELIHOOD	DECISION
Medium	Reduce
Customer-specific acceptance language is applied to the wrong part family	OPEN
LIKELIHOOD	DECISION
Medium	Reduce
Customer drawing or part identifiers are sent to an unapproved AI service	OPEN

LIKELIHOOD	DECISION
High	Reduce

CONSTRAINTS

Customer quality agreements require controlled templates and named approvers on released inspection reports.	CONTRACTUAL	IDENTIFIED
Disposition decisions must remain outside the AI drafting workflow.	OTHER	IDENTIFIED

ACTION ITEMS

Select two repeat-part CMM report templates for draft testing	PILOT PREPARATION	OPEN
Define customer-identifier stripping rules for CMM exports	GOVERNANCE	OPEN
Create quality-manager review checklist for AI-assisted inspection narratives	GOVERNANCE	OPEN
Run 10 draft reports in shadow mode before any customer release	PILOT PREPARATION	OPEN

BUSINESS OBJECTIVES

Reduce inspection report narrative prep by 20 minutes per lot without increasing quality-manager rework
EXPECTED VALUE
Time Savings
Maintain zero customer quality escapes from pilot inspection reports
EXPECTED VALUE
Quality Improvement

TEAM READINESS

Name	Role	AI Familiarity	Business Knowledge	Process Knowledge	Review Capability	Risk Awareness	Notes
Kim Ortiz	Quality Manager	—	—	—	—	—	—
Avery Brooks	CMM Technician Lead	—	—	—	—	—	—

Name	Role	AI Familiarity	Business Knowledge	Process Knowledge	Review Capability	Risk Awareness	Notes
Chris Dalton	General Manager	—	—	—	—	—	—

AI ROLE ASSIGNMENTS

Role	Person	Notes
AI Sponsor	Chris Dalton	—
AI Champion	Avery Brooks	—
AI Reviewer	Kim Ortiz	—

OPERATING GUARDRAILS

AI may draft report narrative only after CMM measurements are exported and locked.	HUMAN REVIEW	PROPOSED
Customer identifiers must be removed unless the customer has approved the AI workflow in writing.	DATA HANDLING	PROPOSED
Quality manager approval is required before any AI-assisted inspection report is released.	HUMAN REVIEW	PROPOSED

PILOT CHARTERS

Quality techs spend 30-45 minutes per lot converting CMM exports into customer-ready inspection narratives, reducing capacity for in-process inspection. USERS 2 quality technicians and the quality manager for repeat-part inspection reports IN SCOPE Drafting narrative notes and exception summaries from locked CMM exports for two repeat-part templates OUT OF SCOPE	DRAFT
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Pass/fail disposition, customer release without quality-manager approval, uncontrolled drawing upload

INFORMATION

Locked CMM export fields, approved customer report template, non-identifying part family metadata

WORKFLOW

1. Tech exports locked CMM results. 2. AI drafts narrative and exception summary. 3. Tech verifies tolerance language. 4. Quality manager approves release.

HUMAN REVIEW APPROACH

Quality tech review plus quality-manager sign-off on every pilot report.

SUCCESS MEASURES

Narrative prep time reduced by 20 minutes per lot; zero unreviewed AI text in released reports

RISKS SUMMARY

Tolerance misstatement, customer template misuse, customer data handling

CONTROLS

Locked measurement exports; approved templates; identifier stripping; two-step human review

OWNER

Kim Ortiz

DURATION

60 days

STOP CONDITIONS

Any released report with unreviewed AI text; any missed out-of-tolerance condition; customer objection to AI-assisted documentation

DECISION POINT

Day 30: continue or narrow templates. Day 60: expand repeat-part coverage, revise controls, or stop.

AI-Assisted Quote Worksheet Drafts

Sales · Completed

OPPORTUNITY BEING ASSESSED

TITLE	
AI-Assisted Quote Worksheet Drafts	
BUSINESS FUNCTION	OWNER
Sales	Chris Dalton, General Manager
STATUS	
Ready for Pilot	
VALUE PROPOSITION	
Reduce cycle time	
CURRENT FRICTION	
Complex RFQs require 4–8 hours of estimator time to translate drawings into cycle-time and material assumptions before customer pricing is calculated.	
DESIRED CHANGE	
Cut worksheet prep to ≤3 hours using AI drafts from structured metadata. Estimators validate all assumptions before customer quotes are issued.	
SUCCESS INDICATOR	
Worksheet prep ≤3 hours on pilot RFQs; quote turnaround improved by 1 business day; win rate within baseline band.	
AI'S ROLE	
AI drafts internal worksheets from de-identified part metadata. Licensed estimators set final pricing and approve every customer quote.	

ASSESSMENT

STATUS	VERSION
Completed	LIGHTNING_1.0
STARTED	COMPLETED
9/21/2026	9/21/2026

READINESS PROFILE

Dimension	Status	Key Observation
Process	READY TO INVESTIGATE	The RFQ-to-quote worksheet path is documented: estimator intake, metadata review, cycle-time assumption, material check, and pricing approval. AI should assist only with internal worksheet assumptions before estimator review.
Data & Information	NEEDS ATTENTION	Customer drawings and part numbers are export-controlled or confidential. AI workflows must use de-identified metadata or on-prem tools — not public cloud with full drawings.
People & Training	NEEDS ATTENTION	Estimators are skeptical of automated assumptions and need explicit review rules. Clear guidance that AI drafts worksheet inputs only — while estimators set final pricing — is essential.
Risk & Security	SIGNIFICANT CONCERN	Incorrect cycle-time, material, or routing assumptions could produce unprofitable awarded work. ITAR and customer confidentiality rules also constrain what RFQ metadata can leave approved systems.
Technology & Vendor	NEEDS ATTENTION	ERP quote history and estimator worksheets are not integrated with an approved AI workflow. Vendor selection must support metadata-only inputs and customer-approved data paths before production rollout.

OVERALL INTERPRETATION

Quote worksheet drafting is the highest-value entry point because the workflow is repeatable, the bottleneck is measurable, and the AI role can stop at internal worksheet assumptions rather than final pricing. The go/no-go issues are specific: prove a metadata-only input path, document customer data permissions, and make estimator approval non-negotiable before any customer quote leaves the building.

QUESTION RESPONSES

PROCESS

We can explain how the current work is performed from beginning to end.	YES
The people involved generally perform the work in a consistent way.	YES
We understand what a good result looks like.	YES
We know where judgment, exceptions, or escalation are required.	YES
The process is documented well enough to support testing or improvement.	YES
We know who owns the process and who can approve changes to it.	YES

DATA & INFORMATION

We know what information the AI would need to perform this work.	PARTLY
We know where that information comes from and who owns it.	PARTLY
The information is accurate, complete, and usable enough for the intended purpose.	NO
We know what information would be shared with the AI and understand whether it is appropriate and permitted to share that information with the specific tool being considered.	NO
We understand whether customer, employee, financial, confidential, proprietary, regulated, or restricted information is involved.	PARTLY
We know what information should not be provided to the AI.	PARTLY

PEOPLE & TRAINING

The people involved are willing to try AI for this use case.	YES
They can learn how to provide useful instructions and context.	YES
The proposed AI use fits reasonably into how the work is performed.	YES
Someone involved has enough subject-matter expertise to evaluate the AI output.	PARTLY
We know what quality or accuracy is acceptable for this use case.	PARTLY
People understand that AI output may need to be challenged, corrected, or rejected.	PARTLY
It is clear who remains responsible for the final work or decision.	PARTLY
People understand when human review is required.	PARTLY

RISK & SECURITY

We know whether this use is internal, employee-facing, customer-facing, vendor-facing, or public.	YES
We know who will see, use, or rely on the AI output.	YES
We understand what could happen if the AI is wrong.	YES
We know when human review is required before the output is used.	PARTLY
We have or can establish acceptable-use boundaries for this use case.	PARTLY
We can document, when appropriate, what the AI did, what information it used, who reviewed it, and what action was taken.	PARTLY

We know who is responsible for identifying and responding to security or privacy concerns.	PARTLY
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TECHNOLOGY & VENDOR

We know which technology platforms and vendors touch this process or its information.	PARTLY
We know whether those vendors use AI in relevant features or services.	PARTLY
We understand what information may be sent to or processed by the AI service.	NO
We understand how information is stored, retained, or shared.	NO
We know whether information may be used to train or improve models or services.	NO
We know what controls are available, including whether AI features can be disabled or configured.	NO
We understand who has access to the data and what happens to it if we stop using the vendor.	NO
The proposed technology is a reasonable fit for the intended business use.	NO

OPEN QUESTIONS

Can quote worksheets be drafted from drawing metadata without uploading full CAD to external cloud?	MEDIUM	OPEN
Which customers permit AI-assisted estimating support in their RFQ or supplier data policies?	MEDIUM	OPEN
Does on-prem or VPC deployment satisfy our aerospace customer data requirements?	MEDIUM	OPEN

ASSUMPTIONS

Licensed estimators approve all pricing before quotes leave the building.	UNVERIFIED
Engineering reviewers check complex routing assumptions before estimator pricing approval.	UNVERIFIED
Pilot uses de-identified part metadata only — no customer names or drawing files in external AI.	UNVERIFIED

RISKS

AI quote worksheet includes incorrect cycle time leading to unprofitable job award	OPEN
LIKELIHOOD Medium	DECISION Reduce
Customer drawing uploaded to unauthorized cloud tool	OPEN
LIKELIHOOD High	DECISION Reduce
AI worksheet recommends an operation sequence that misses a required routing step	OPEN

LIKELIHOOD	DECISION
Low	Reduce

CONSTRAINTS

Customer RFQ terms restrict external processing of drawings, part numbers, and technical metadata.	CONTRACTUAL	IDENTIFIED
Some aerospace customers impose ITAR or export control restrictions on technical data handling.	REGULATORY	IDENTIFIED

ACTION ITEMS

Survey top 5 customers on AI-assisted estimating data policies	INVESTIGATION	OPEN
Define de-identified metadata schema for quote worksheet pilot	GOVERNANCE	OPEN
Evaluate on-prem vs VPC AI options with IT and estimating	INVESTIGATION	OPEN
Pilot quote worksheets on 10 repeat-part RFQs	PILOT PREPARATION	OPEN

BUSINESS OBJECTIVES

Reduce average quote worksheet prep from 6 hours to ≤3 hours on pilot RFQs
EXPECTED VALUE
Time Savings
Win rate on quoted jobs maintained within 5% of 12-month baseline
EXPECTED VALUE
Quality Improvement

TEAM READINESS

Name	Role	AI Familiarity	Business Knowledge	Process Knowledge	Review Capability	Risk Awareness	Notes
Chris Dalton	General Manager	—	—	—	—	—	—
Pat Nguyen	Chief Estimator	—	—	—	—	—	—

Name	Role	AI Familiarity	Business Knowledge	Process Knowledge	Review Capability	Risk Awareness	Notes
Riley Fox	Engineering Reviewer	—	—	—	—	—	—

AI ROLE ASSIGNMENTS

Role	Person	Notes
AI Sponsor	Chris Dalton	—
AI Champion	Pat Nguyen	—
AI Reviewer	Riley Fox	—

OPERATING GUARDRAILS

No customer drawings or part numbers in external cloud AI tools without customer written approval.	DATA HANDLING	PROPOSED
Licensed estimator must approve all quote pricing before customer submission.	HUMAN REVIEW	PROPOSED
Engineering review is required on complex quote worksheets before pricing approval.	HUMAN REVIEW	PROPOSED

PILOT CHARTERS

Complex RFQs require 4–8 hours of estimator time to build assumptions from drawings. Quote turnaround loses time-sensitive aerospace work to faster competitors. USERS 2 estimators and 1 engineering reviewer for 90-day pilot IN SCOPE Internal quote worksheets from de-identified part metadata (material, tolerance class, ops count) OUT OF SCOPE	DRAFT
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Customer-facing quotes without estimator approval; CAD file upload to public cloud; auto-pricing

INFORMATION

De-identified RFQ metadata from ERP — no customer names, drawing numbers, or CAD files in phase 1

WORKFLOW

1. Estimator enters metadata checklist. 2. AI drafts worksheet assumptions. 3. Estimator validates cycle times and material. 4. Engineering review on complex jobs. 5. Customer quote issued.

HUMAN REVIEW APPROACH

Estimator approval on all worksheets; engineering review gate on jobs above complexity threshold.

SUCCESS MEASURES

Worksheet prep ≤3 hours; quote turnaround –1 business day; zero unprofitable awards in pilot set

RISKS SUMMARY

Pricing accuracy; confidential data handling; customer approval requirements

CONTROLS

Metadata-only inputs; estimator sign-off; engineering gate; customer policy survey results documented

OWNER

Chris Dalton

DURATION

90 days

STOP CONDITIONS

Any customer data handling violation; awarded job below margin threshold due to worksheet error; customer objection

DECISION POINT

Day 45: continue, narrow to repeat parts only, or stop. Day 90: expand, adopt, or discontinue.