AI Use Case Identification Worksheet

A practical planning tool for selecting high-value, responsible, and implementable AI opportunities

This worksheet helps organizations identify, compare, and prioritize AI use cases before committing resources to implementation. It is designed for startups, research teams, commercialization groups, operations leaders, and organizations exploring AI adoption in a rapidly changing business environment.

The goal is to move from vague interest in AI to a clearer set of use cases that are tied to real workflows, measurable value, user needs, available data, and responsible governance.

How to Use This Worksheet

Use this tool with leadership, operational users, technical staff, commercialization advisors, and other stakeholders. Start by documenting business objectives and current pain points, then list candidate AI use cases, score them, select one or two priorities, and define next steps for discovery, prototyping, adoption planning, and implementation.

Best-Fit Uses for This Worksheet

- Identifying practical AI opportunities inside existing workflows or operations.
- Evaluating whether AI can support commercialization, customer discovery, grant strategy, research productivity, or internal knowledge management.
- Prioritizing AI ideas before investing in development, software subscriptions, integrations, or consulting.
- Clarifying data, governance, training, user adoption, and risk considerations before implementation.
- Creating a more structured conversation between leadership, technical teams, and end users.

Organization and Planning Context

Organization / Team	
Worksheet Owner	
Date	
Business / Program Area	Example: proposal development, operations, customer support, commercialization, finance, research, product development
Primary AI Goal	Example: reduce manual work, improve decisions, analyze data, automate reporting, support customer discovery, strengthen internal knowledge systems

1. Strategic Objective and Business Need

Assessment Item	Ready / Clear	Partial / Unclear	Gap / Notes
The organization can explain why it is exploring AI now.	☐	☐	
The proposed AI work is tied to a specific business, research, operational, or commercialization objective.	☐	☐	
Leadership understands the difference between experimentation and implementation.	☐	☐	
The team has identified where current processes are slow, inconsistent, expensive, risky, or difficult to scale.	☐	☐	
The AI opportunity is connected to measurable outcomes rather than general interest in new technology.	☐	☐	
The organization has identified who would benefit if the AI use case succeeds.	☐	☐	

2. Workflow and Pain Point Review

Assessment Item	Ready / Clear	Partial / Unclear	Gap / Notes
The current workflow has been described clearly enough to understand where AI might help.	☐	☐	
Pain points have been validated by the people who actually perform or depend on the work.	☐	☐	
The team can identify which steps require judgment, review, creativity, analysis, or repetitive information handling.	☐	☐	
The team understands whether the process should be improved before AI is added.	☐	☐	
The potential AI use case supports a real workflow rather than creating an isolated tool no one will use.	☐	☐	
The organization has identified possible adoption barriers, including trust, training, role changes, and workflow disruption.	☐	☐	

Candidate AI Use Case Inventory

List possible AI use cases before deciding which ones deserve deeper planning. Include small internal productivity uses as well as larger workflow, product, service, research, or operations opportunities.

Use Case	Current Pain / Opportunity	Target Users	Expected Benefit	Data Needed	Priority

AI Use Case Prioritization Matrix

Score each candidate use case from 1 to 5 in each category. Higher scores indicate stronger potential. Risk should be scored as 1 = low risk and 5 = high risk, then considered carefully before selection.

Use Case	Business Value	User Need	Data Readiness	Technical Feasibility	Adoption Fit	Risk Level	Total / Decision
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	

3. Data, Systems, and Technical Fit

Assessment Item	Ready / Clear	Partial / Unclear	Gap / Notes
The data or content needed for the AI use case has been identified.	☐	☐	
Relevant data sources are accessible, reliable, and legally usable for the intended purpose.	☐	☐	
Sensitive data, intellectual property, privacy, cybersecurity, or confidentiality concerns have been reviewed.	☐	☐	
The team understands whether the use case requires a chatbot, automation, analytics model, document workflow, custom software, API integration, or off-the-shelf tool.	☐	☐	
Existing systems, databases, documents, and workflows have been considered as part of the technical plan.	☐	☐	
The organization understands what technical expertise may be required for prototyping or implementation.	☐	☐	

4. Governance, Risk, and Human Oversight

Assessment Item	Ready / Clear	Partial / Unclear	Gap / Notes
The team has identified where human review, approval, or judgment must remain part of the process.	☐	☐	
Potential risks related to accuracy, bias, hallucination, privacy, intellectual property, compliance, or overreliance have been discussed.	☐	☐	
The organization has considered whether AI outputs should be logged, reviewed, validated, or restricted to approved users.	☐	☐	
The use case has a clear owner who can make decisions and coordinate users, technical staff, and leadership.	☐	☐	
The team understands what policies, SOPs, or documentation may be needed before broader adoption.	☐	☐	
The organization can explain how it will monitor quality and make corrections over time.	☐	☐	

Selected Use Case Deep Dive

Complete this page for the highest-priority AI use case selected from the inventory and prioritization matrix.

Selected AI Use Case	Describe the use case in one sentence.
Problem or Opportunity	What current pain point, bottleneck, knowledge gap, or growth opportunity does this address?
Primary Users	Who will use the AI tool or output? Who will be affected by it?
Current Process	Briefly describe how the work is handled today.
Future AI-Enabled Process	Describe how the process would change if the AI use case is implemented.
Data / Inputs Needed	List documents, databases, systems, files, prompts, integrations, or user inputs required.
Expected Outputs	What will the AI system produce, recommend, summarize, classify, predict, or automate?
Human Oversight	Who reviews, approves, corrects, or monitors the output?
Success Metrics	Define measurable success: time saved, quality improved, revenue supported, risk reduced, adoption achieved.
Key Risks	List risks related to accuracy, privacy, IP, bias, compliance, user adoption, workflow disruption, or overreliance.
Next Step	What must be done before implementation planning begins?

Next-Step Roadmap

Use this roadmap to convert the selected use case into an initial implementation plan. Keep the first step small enough to test, learn, and revise before scaling.

Phase	Purpose	Owner	Target Date	Deliverable / Decision
Discovery	Confirm pain point, users, data sources, risks, and desired outcomes.			
Prototype / Pilot	Test a limited version with controlled users and review process.			
Adoption Planning	Prepare training, workflow changes, governance, and communications.			
Implementation	Deploy with human oversight, metrics, and support plan.			
Review and Scale	Assess value, risks, adoption, and opportunities for expansion.			

Decision Summary

Selected Use Case	Decision	Reason	Immediate Next Step

ScienceDocs AI and Change Management Support

ScienceDocs helps organizations identify practical AI use cases, evaluate readiness, align stakeholders, and plan responsible implementation. Our support connects AI strategy with grant writing, commercialization, optimization engineering, workflow redesign, and change management. Ready to get started? Contact ScienceDocs to discuss your AI planning priorities.