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AI Opportunity Assessment Report

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Prerequisites:	None

PREREQUISITES

None - This is a foundational document. This template is typically the starting point for AI project analysis. However, you should have access to organizational strategy documents, stakeholder input, and relevant business context before beginning.

1. PURPOSE

The AI Opportunity Assessment Report serves as a foundational document for evaluating potential AI initiatives within an organization. This report provides a structured approach to identifying, analyzing, and prioritizing AI opportunities that align with strategic business objectives.

This assessment enables business analysts to make data-driven recommendations about which AI opportunities warrant further investment, prototyping, or full-scale implementation. It bridges the gap between high-level business strategy and tactical AI project execution.

Key Objectives:

- Identify viable AI use cases that address specific business problems or opportunities
- Evaluate the feasibility, value, and risk of potential AI initiatives
- Prioritize AI opportunities based on strategic alignment and ROI potential
- Establish clear success criteria and metrics for proposed AI solutions
- Build stakeholder consensus around AI investment decisions
- Create a foundation for detailed solution design and implementation planning

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2. WHEN TO USE THIS TEMPLATE

2.1 Project Phase

The AI Opportunity Assessment is typically conducted during the early stages of AI project planning, specifically during:

- Strategic Planning: When exploring how AI can support organizational goals
- Innovation Discovery: During ideation sessions or innovation workshops
- Digital Transformation Initiatives: As part of broader technology modernization efforts
- Problem-Solving: When seeking technology solutions to persistent business challenges
- Post-POC Review: After completing initial AI experiments to determine next steps

2.2 Trigger Events

Consider conducting an AI Opportunity Assessment when:

- Leadership requests exploration of AI capabilities
- Competitive pressure drives need for AI-enabled capabilities
- New data sources become available that could unlock AI value
- Process inefficiencies suggest automation opportunities
- Customer feedback indicates need for enhanced capabilities (recommendations, personalization, etc.)
- Technology trends suggest new AI applications in your industry
- Budget becomes available for innovation or technology investments

2.3 BABOK Knowledge Areas

This template aligns with the following BABOK 3.0 Knowledge Areas:

- Strategy Analysis: Identifying strategic opportunities and assessing organizational readiness
- Requirements Analysis and Design Definition: Understanding business needs and solution options
- Solution Evaluation: Assessing value, feasibility, and risks of proposed solutions

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3. KEY COMPONENTS & STRUCTURE

This section outlines the main sections you should complete in your AI Opportunity Assessment Report. Use these headings to structure your document.

3.1 Executive Summary

Brief overview of findings and recommendations

- Key AI opportunities identified (2-3 sentence summary each)
- Top recommendations with justification
- Expected business impact and timeline
- Required next steps and resource needs

3.2 Business Context & Current State

Background information establishing the need for AI exploration

- Organizational goals and strategic objectives
- Current business challenges or opportunities
- Existing technology landscape and capabilities
- Market and competitive context
- Previous AI initiatives (if applicable)

3.3 AI Opportunity Identification

Detailed description of each identified AI opportunity

For each opportunity, document:

- Opportunity Name: Clear, descriptive title
- Business Problem/Goal: What business need does this address?
- AI Solution Approach: High-level description of how AI would be applied
- Target Users/Stakeholders: Who will use or benefit from this solution?
- Expected Outcomes: What measurable improvements are anticipated?
- Data Requirements: What data is needed? Is it available?
- AI Techniques Considered: ML models, NLP, computer vision, etc.

3.4 Feasibility Analysis

Assessment of technical, operational, and economic feasibility

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Technical Feasibility:

- Data availability, quality, and volume
- Required AI capabilities vs. current state-of-the-art
- Integration complexity with existing systems
- Technical skills and resources needed

Operational Feasibility:

- Organizational readiness and change management needs
- Process changes required
- Training and adoption requirements
- Ongoing maintenance and support needs

Economic Feasibility:

- Estimated implementation costs (development, infrastructure, licensing)
- Ongoing operational costs
- Expected benefits and ROI timeline
- Break-even analysis

3.5 Value Assessment

Quantitative and qualitative evaluation of business value

- Financial Benefits: Cost savings, revenue generation, cost avoidance
- Operational Benefits: Efficiency gains, quality improvements, speed enhancements
- Strategic Benefits: Competitive advantage, market positioning, innovation capability
- Customer/User Benefits: Improved experience, new capabilities, better outcomes
- Risk Mitigation: Reduced errors, compliance improvements, enhanced security

3.6 Risk Assessment

Identification and evaluation of potential risks

- Technical Risks: Model performance, accuracy, scalability concerns
- Data Risks: Quality issues, privacy concerns, bias in training data
- Operational Risks: Integration challenges, user adoption, process disruption
- Ethical Risks: Bias, fairness, transparency, accountability concerns
- Compliance Risks: Regulatory requirements, data governance, audit needs
- Business Risks: ROI uncertainty, market changes, competitive response

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3.7 Success Criteria & Metrics

Define how success will be measured

- KPIs: Specific, measurable metrics for business outcomes
- Technical Performance Metrics: Accuracy, precision, recall, latency, etc.
- Adoption Metrics: User engagement, usage rates, satisfaction scores
- Timeline Metrics: Implementation milestones and delivery targets
- Financial Metrics: ROI, payback period, cost savings achieved

3.8 Recommendation & Prioritization

Clear recommendation on how to proceed

- Recommended Action: Proceed, conduct POC, further research, or deprioritize
- Prioritization Rationale: Why this ranking based on value, feasibility, and strategic fit
- Implementation Approach: Phased rollout, pilot program, full deployment
- Resource Requirements: Team composition, timeline, budget
- Dependencies: Prerequisites, related initiatives, external factors
- Next Steps: Immediate actions needed to move forward

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4. INSTRUCTIONS FOR COMPLETION

4.1 Preparation Phase

Before starting the assessment:

1. Gather relevant business strategy documents and objectives
2. Interview key stakeholders to understand pain points and opportunities
3. Review existing data landscape and technology inventory
4. Research AI capabilities and industry use cases in your domain
5. Assemble cross-functional input (business, IT, data science, operations)

4.2 Discovery & Analysis

Conduct thorough discovery:

6. Conduct stakeholder interviews using BABOK elicitation techniques (interviews, workshops, surveys)
7. Perform current state analysis using process mapping and data flow diagrams
8. Identify AI opportunity candidates through brainstorming and research
9. Validate data availability and quality for each opportunity
10. Assess organizational readiness using maturity models
11. Research technical feasibility with data science/ML engineering teams
12. Calculate preliminary ROI estimates using standard business case methods

4.3 AI-Specific Considerations

When evaluating AI opportunities, consider:

Data Requirements:

- Volume: Do you have sufficient training data (typically 1000s-1000000s of examples)?
- Quality: Is the data clean, labeled (if supervised learning), and representative?
- Access: Can you legally and technically access the required data?
- Bias: Are there potential biases in the data that could lead to unfair outcomes?

Model Selection:

- Supervised vs. Unsupervised: Do you have labeled data, or are you looking for patterns?
- Accuracy Requirements: What level of accuracy is acceptable vs. aspirational?
- Interpretability: Do decisions need to be explainable (regulatory, user trust)?
- Real-time vs. Batch: What are the latency requirements?

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- Pre-trained vs. Custom: Can you leverage existing models or need to build from scratch?

Ethical & Responsible AI:

- Fairness: Will the model treat all groups equitably?
- Transparency: Can you explain how the model makes decisions?
- Privacy: Are you protecting user data and complying with regulations (GDPR, CCPA)?
- Accountability: Who is responsible when the AI makes mistakes?
- Human Oversight: What human-in-the-loop controls are needed?

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5. EXAMPLE CONTENT & GUIDANCE

5.1 Sample Opportunity Description

Opportunity Name:

Customer Churn Prediction Model

Business Problem/Goal:

The company is losing 15% of customers annually, costing $2.3M in lost revenue. Customer service teams lack early warning signals to proactively engage at-risk customers. Goal is to reduce churn by 3-5% through predictive intervention.

AI Solution Approach:

Develop a machine learning classification model that predicts customer churn risk based on usage patterns, support interactions, payment history, and engagement metrics. The model will score customers monthly and trigger proactive outreach workflows for high-risk accounts.

Expected Outcomes:

- Reduce churn rate from 15% to 11-12% (20-27% reduction)
- Save $450K-690K in annual recurring revenue
- Improve customer satisfaction scores through proactive service
- Enable data-driven resource allocation for retention efforts

Data Requirements:

Customer demographic data (CRM), product usage logs (data warehouse), support ticket history (Zendesk), payment/billing records (financial system), NPS survey responses. Historical data spanning 3+ years available. Requires data integration across 4 systems.

5.2 Sample Feasibility Summary

Technical Feasibility: HIGH

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Data is available across systems with API access. Standard classification algorithms (Random Forest, XGBoost) should achieve 75-85% accuracy based on similar industry benchmarks. Cloud ML platform can be leveraged. Estimated 3-4 month development timeline.

Operational Feasibility: MEDIUM

Requires new customer success workflow and CRM integration. Team needs training on interpreting model outputs. Change management program needed for 15-person retention team. Monthly model retraining and monitoring required.

Economic Feasibility: HIGH

Estimated $180K development cost (3 data scientists x 4 months + infrastructure). Ongoing $30K/year operational costs. Expected ROI of 250-380% in year one. Payback period: 4-6 months.

5.3 Sample Risk Assessment

Key Risk: Model Bias

Likelihood: MEDIUM | Impact: HIGH

Historical data may reflect biased treatment of certain customer segments. Mitigation: Conduct fairness audit using demographic parity and equalized odds metrics. Implement bias correction techniques. Regular monitoring of predictions across segments.

Key Risk: Data Quality

Likelihood: MEDIUM | Impact: MEDIUM

Legacy systems have incomplete records for ~8% of customers. Mitigation: Implement data validation pipeline. Use imputation techniques for missing values. Exclude records with >30% missing features.

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6. RELATED DOCUMENTS

The AI Opportunity Assessment Report connects to other templates in the Business Analysis framework. Depending on your recommendation, you may need to proceed with one or more of the following documents:

6.1 If Proceeding with Multiple Opportunities

- 1.2 Use-Case Prioritization Matrix: Rank and compare multiple AI opportunities
- 1.4 Feasibility & ROI Analysis Report: Deep-dive financial and technical analysis
- 1.5 AI Implementation Roadmap: Multi-phase implementation planning

6.2 If Proceeding with Solution Design

- 1.3 High-Level AI Solution Architecture: Technical architecture and component design
- 1.6 Stakeholder Requirements Summary: Detailed requirements documentation
- 1.8 Proof-of-Concept (POC) Design Brief: Experimental validation planning

6.3 Supporting Analysis

- 2.1 Data Quality Assessment Report: Detailed evaluation of data readiness
- 3.1 Model Requirements Specification: Technical requirements for AI models
- 5.1 Stakeholder Communication Plan: Change management and communication strategy
- 6.1 AI Risk Assessment Report: Comprehensive risk analysis and mitigation planning

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7. BABOK & PMBOK REFERENCES

7.1 BABOK 3.0 Knowledge Areas & Techniques

Strategy Analysis:

- Analyze Current State (5.1): Understanding existing capabilities and challenges
- Define Future State (5.2): Envisioning AI-enabled future capabilities
- Assess Risks (5.3): Evaluating threats to value realization
- Define Change Strategy (5.4): Planning the transformation approach

Requirements Analysis & Design Definition:

- Specify and Model Requirements (3.4): Documenting AI solution requirements
- Define Solution Options (4.5): Evaluating different AI approaches
- Analyze Potential Value (4.1): Quantifying benefits of AI solutions

Solution Evaluation:

- Measure Solution Performance (8.1): Defining success metrics
- Analyze Performance Measures (8.2): Evaluating solution effectiveness
- Assess Solution Limitations (8.3): Identifying constraints and risks

Recommended BABOK Techniques:

- Brainstorming (9.4): Generating AI opportunity ideas
- Business Case (9.6): Building economic justification
- Financial Analysis (9.13): ROI and cost-benefit analysis
- Interviews (9.16): Stakeholder discovery and validation
- Risk Analysis and Management (9.27): Assessing and mitigating risks
- SWOT Analysis (9.32): Evaluating strengths, weaknesses, opportunities, threats

7.2 PMBOK 5th Edition Process Groups

- Initiating Process Group: Project Charter development, Stakeholder identification
- Planning Process Group: Scope planning, Risk planning, Cost estimation
- Knowledge Area - Project Integration Management: Benefits realization planning
- Knowledge Area - Project Stakeholder Management: Stakeholder analysis and engagement

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8. TIPS & BEST PRACTICES

8.1 General Best Practices

- Start with Business Value: Always lead with business outcomes, not AI capabilities. AI is a means, not an end.
- Validate Data Early: Data quality and availability are the #1 predictor of AI project success. Assess this upfront.
- Set Realistic Expectations: AI models are probabilistic, not deterministic. Communicate accuracy limitations clearly.
- Think End-to-End: Consider the entire workflow from data collection to model deployment to user adoption.
- Include Diverse Perspectives: Engage technical, business, and ethical stakeholders to identify blind spots.
- Document Assumptions: Make your assumptions explicit so they can be validated or challenged.
- Quantify When Possible: Use data to support claims about problems, opportunities, and expected benefits.
- Plan for Maintenance: AI models degrade over time. Factor in ongoing monitoring and retraining costs.

8.2 Common Pitfalls to Avoid

- Solution Before Problem: Don't start with 'we need AI' - start with business problems worth solving
- Ignoring Data Limitations: Perfect data rarely exists. Be honest about quality gaps and their impact.
- Underestimating Integration: Model development is often 20% of effort; integration and adoption is 80%.
- Skipping Ethics Review: Address bias, fairness, and privacy concerns early - not after deployment.
- Overengineering: Sometimes a simple rule-based system outperforms complex ML. Choose appropriate complexity.
- "Increase accuracy" is not a business metric: Define clear KPIs tied to business outcomes.
- No Change Management: Technical success does not equal business success. Plan for organizational change from day one.
- Vendor Over-Promises: Be skeptical of AI vendor claims. Validate with POCs and reference customers.

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8.3 Stakeholder Engagement Tips

- Executive Stakeholders: Focus on business value, strategic alignment, and ROI. Keep technical details high-level.
- Technical Teams: Dive into data requirements, model architecture, and integration challenges. They need specifics.
- End Users: Emphasize how AI will make their jobs easier, not replace them. Address concerns transparently.
- Compliance/Legal: Engage early on data privacy, regulatory requirements, and audit needs. They can veto projects.
- Data Owners: Build relationships with those who control data access. Their cooperation is critical.

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APPENDIX A: ASSESSMENT CHECKLIST

Use this checklist to ensure completeness:

☐ Executive summary completed with clear recommendations
☐ Business context and strategic alignment documented
☐ All identified AI opportunities described in detail
☐ Technical feasibility assessed with data science input
☐ Operational feasibility evaluated with stakeholder interviews
☐ Financial analysis completed with ROI calculations
☐ Value assessment quantifies expected benefits
☐ Risk assessment identifies and rates key risks
☐ Success criteria defined with specific KPIs
☐ Recommendations prioritized based on objective criteria
☐ Data quality and availability validated
☐ Ethical considerations (bias, fairness, privacy) addressed
☐ Integration requirements with existing systems identified
☐ Resource requirements (team, budget, timeline) estimated
☐ Stakeholder buy-in obtained from key decision-makers
☐ Next steps and dependencies clearly documented
☐ Related documents identified for follow-up work
☐ Document reviewed by technical and business stakeholders
☐ Assumptions and limitations explicitly stated
☐ Decision points and approval requirements defined

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