



Use Case Prioritization Framework

A Systematic Approach to Identifying and Ranking AI Opportunities

Overview

Not all AI opportunities are created equal. Some deliver massive value with minimal effort, while others consume resources without meaningful impact. This framework helps you systematically evaluate and prioritize AI use cases based on three critical dimensions: **Business Impact**, **Technical Feasibility**, and **Strategic Alignment**.

Why You Need This Framework

Common Challenges:

- Too many AI ideas, limited resources
- Pressure to "do something with AI" without clear direction
- Competing priorities across departments
- Uncertainty about where to start
- Risk of pursuing flashy projects that don't deliver value

What This Framework Provides:

- Objective evaluation criteria
- Transparent decision-making process
- Stakeholder alignment tool
- Portfolio view of AI opportunities
- Clear prioritization for resource allocation

The Three-Dimensional Evaluation Model



Dimension 1: Business Impact (40% weight)

Business impact measures the potential value an AI use case can deliver to your organization.

Evaluation Criteria:

1. Revenue Impact (Weight: 30%)

- Direct revenue generation potential
- Revenue protection or loss prevention
- Market share growth
- New revenue streams

Scoring:

- **10 points:** >\$1M annual revenue impact or >20% increase
- **7-8 points:** \$500K-\$1M or 10-20% increase
- **4-6 points:** \$100K-\$500K or 5-10% increase
- **1-3 points:** <\$100K or <5% increase

2. Cost Reduction (Weight: 25%)

- Operational cost savings
- Efficiency improvements
- Resource optimization
- Waste reduction

Scoring:

- **10 points:** >\$500K annual savings or >30% cost reduction
- **7-8 points:** \$200K-\$500K or 15-30% reduction
- **4-6 points:** \$50K-\$200K or 5-15% reduction
- **1-3 points:** <\$50K or <5% reduction

3. Customer Experience (Weight: 25%)

- Customer satisfaction improvement
- Retention rate impact
- NPS score increase
- Customer effort reduction

Scoring:

- **10 points:** Transformational improvement, >15 NPS point increase



- **7-8 points:** Significant improvement, 10-15 NPS point increase
- **4-6 points:** Moderate improvement, 5-10 NPS point increase
- **1-3 points:** Minor improvement, <5 NPS point increase

4. Scale of Impact (Weight: 20%)

- Number of users/customers affected
- Frequency of use
- Breadth across organization

Scoring:

- **10 points:** Organization-wide impact, daily use, thousands of users
- **7-8 points:** Multi-department, weekly use, hundreds of users
- **4-6 points:** Single department, monthly use, dozens of users
- **1-3 points:** Limited scope, occasional use, few users

Dimension 2: Technical Feasibility (35% weight)

Feasibility assesses how realistic it is to successfully implement the use case with current technology and resources.

Evaluation Criteria:

1. Data Availability & Quality (Weight: 35%)

- Existence of required data
- Data quality and completeness
- Data accessibility
- Labeling requirements

Scoring:

- **10 points:** High-quality data readily available, properly labeled
- **7-8 points:** Good data exists, needs minor cleaning/labeling
- **4-6 points:** Data exists but requires significant preparation
- **1-3 points:** Limited or poor-quality data, major collection effort needed

2. Technical Complexity (Weight: 30%)

- Algorithm complexity
- Integration requirements
- Infrastructure needs
- Scalability challenges



Scoring:

- **10 points:** Simple ML models, minimal integration, existing infrastructure
- **7-8 points:** Standard ML approaches, moderate integration effort
- **4-6 points:** Complex models, significant integration, some new infrastructure
- **1-3 points:** Cutting-edge/experimental AI, extensive integration, major infrastructure investment

3. Team Capabilities (Weight: 20%)

- In-house expertise availability
- Skills gap size
- Learning curve
- External resources needed

Scoring:

- **10 points:** Team has all required skills and experience
- **7-8 points:** Most skills in-house, minor upskilling needed
- **4-6 points:** Moderate skills gap, training or hiring required
- **1-3 points:** Significant skills gap, heavy reliance on external expertise

4. Time to Implementation (Weight: 15%)

- Development timeline
- Testing and validation period
- Deployment complexity
- Time to value

Scoring:

- **10 points:** <3 months to production
- **7-8 points:** 3-6 months to production
- **4-6 points:** 6-12 months to production
- **1-3 points:** >12 months to production

Dimension 3: Strategic Alignment (25% weight)

Strategic alignment evaluates how well the use case fits with your organization's broader goals and AI strategy.

Evaluation Criteria:

1. Strategic Priority (Weight: 40%)



- Alignment with business strategy
- Executive sponsorship
- Strategic initiative support
- Long-term vision fit

Scoring:

- **10 points:** Core strategic priority, strong executive sponsorship
- **7-8 points:** Supports key strategic goals, leadership support
- **4-6 points:** Aligned with strategy, moderate support
- **1-3 points:** Tangential to strategy, limited sponsorship

2. Competitive Advantage (Weight: 25%)

- Market differentiation potential
- Competitive positioning
- Innovation leadership
- Barrier to competition

Scoring:

- **10 points:** Significant competitive differentiation, hard to replicate
- **7-8 points:** Clear competitive advantage, moderate barrier
- **4-6 points:** Some differentiation, easily replicable
- **1-3 points:** Competitive parity, no differentiation

3. Organizational Readiness (Weight: 20%)

- Change management capability
- Cultural readiness
- Process maturity
- Stakeholder buy-in

Scoring:

- **10 points:** Organization ready and eager, processes in place
- **7-8 points:** Good readiness, minor change management needed
- **4-6 points:** Moderate readiness, significant change management required
- **4-6 points:** Low readiness, major organizational challenges

4. Risk Profile (Weight: 15%)

- Regulatory/compliance risk
- Reputational risk
- Ethical considerations

- Failure impact

Scoring:

- **10 points:** Low risk, minimal compliance/ethical concerns
- **7-8 points:** Moderate risk, standard compliance requirements
- **4-6 points:** Elevated risk, careful compliance management needed
- **1-3 points:** High risk, significant regulatory/ethical concerns



Scoring Methodology

Step 1: Score Each Criterion

Rate each criterion on a scale of 1-10 based on the scoring guidelines above.

Step 2: Calculate Weighted Scores

Multiply each criterion score by its weight within the dimension.

Example for Business Impact:

- Revenue Impact: $8 \times 30\% = 2.4$
- Cost Reduction: $6 \times 25\% = 1.5$
- Customer Experience: $9 \times 25\% = 2.25$
- Scale of Impact: $7 \times 20\% = 1.4$
- **Dimension Total: 7.55**

Step 3: Calculate Overall Priority Score

Multiply each dimension score by its overall weight:

Overall Priority Score = (Business Impact $\times$ 0.40) + (Technical Feasibility $\times$ 0.35) + (Strategic Alignment $\times$ 0.25)

Example:

- Business Impact: $7.55 \times 0.40 = 3.02$
- Technical Feasibility: $6.80 \times 0.35 = 2.38$
- Strategic Alignment: $8.20 \times 0.25 = 2.05$
- **Overall Score: 7.45**

Step 4: Interpret Results



Priority Levels:

- **9.0-10.0:** Highest Priority - Immediate action recommended
- **7.5-8.9:** High Priority - Schedule for near-term implementation
- **6.0-7.4:** Medium Priority - Consider for future waves
- **4.0-5.9:** Low Priority - Defer or require significant improvements
- **<4.0:** Do Not Pursue - Fundamental issues prevent success

The Prioritization Matrix

Plot your use cases on a 2x2 matrix for visual prioritization:

X-Axis: Technical Feasibility (1-10) **Y-Axis:** Business Impact (1-10) **Bubble Size:** Strategic Alignment (1-10)

Quadrant Interpretation:

Quick Wins (High Impact, High Feasibility)

- Pursue immediately
- Low-hanging fruit
- Build momentum and confidence
- Example: Chatbot for FAQ responses

Strategic Bets (High Impact, Low Feasibility)

- Long-term investment opportunities
- Require significant resources
- High potential payoff
- Example: Predictive maintenance with IoT integration

Fill-Ins (Low Impact, High Feasibility)

- Nice-to-have improvements
- Pursue if resources available
- Don't let these distract from high-impact projects
- Example: Email auto-categorization

Avoid (Low Impact, Low Feasibility)

- Not worth pursuing
- Drain resources with minimal return

- Revisit only if circumstances change significantly
- Example: Complex recommendation engine for small user base



How to Use This Framework

Phase 1: Preparation (1-2 weeks)

1. Assemble Evaluation Team

- Business stakeholders
- Technical experts
- Data leaders
- Strategic planners

2. Gather Use Case Candidates

- Department brainstorming sessions
- Customer feedback analysis
- Competitive research
- Pain point identification

3. Create Initial Use Case List

- Document each use case clearly
- Define scope and boundaries
- Identify key stakeholders
- Gather preliminary information

Phase 2: Evaluation (2-4 weeks)

1. Individual Scoring

- Team members score independently
- Use the spreadsheet template provided
- Document assumptions and rationale
- Identify information gaps

2. Group Calibration Session

- Present individual scores
- Discuss significant discrepancies
- Align on interpretation of criteria
- Reach consensus scores



3. Data Collection

- Fill information gaps identified
- Validate assumptions
- Conduct stakeholder interviews
- Review technical requirements

4. Final Scoring

- Update scores with new information
- Calculate weighted results
- Plot on prioritization matrix
- Generate priority ranking

Phase 3: Decision Making (1 week)

1. Review Results

- Present findings to leadership
- Highlight top opportunities
- Discuss trade-offs
- Consider portfolio balance

2. Make Decisions

- Select use cases to pursue
- Allocate resources
- Set timelines
- Assign ownership

3. Document and Communicate

- Share prioritization results
- Explain decision rationale
- Set expectations
- Plan for quick wins

Phase 4: Ongoing Management



1. Quarterly Reviews

- Reassess active projects
- Evaluate new opportunities
- Adjust priorities based on learnings
- Update scoring as conditions change

2. Portfolio Management

- Balance quick wins with strategic bets
- Monitor resource allocation
- Track success metrics
- Learn and iterate

Tips for Effective Use

Do's:

✓ Involve diverse stakeholders in scoring ✓ Be honest about constraints and challenges ✓ Document your assumptions ✓ Revisit scores as you learn more ✓ Balance short-term wins with long-term bets ✓ Consider portfolio diversification ✓ Use this as a discussion tool, not just a scorecard ✓ Update regularly as conditions change

Don'ts:

✗ Let the highest-paid person's opinion dominate ✗ Score based on what you wish were true ✗ Ignore organizational readiness ✗ Pursue only easy projects ✗ Set scores in stone without review ✗ Use this as the only decision factor ✗ Let perfect be the enemy of good ✗ Ignore qualitative factors not captured in scores

Common Pitfalls to Avoid

1. Analysis Paralysis Don't spend months perfecting scores. Good enough is better than perfect but too late.

2. Overconfidence in High Scores A 9.5 score doesn't guarantee success. Execute well and manage risks.



3. Ignoring Organizational Politics Even the highest-scoring project can fail without stakeholder support.

4. Underestimating Data Challenges Poor data quality is the #1 reason AI projects fail. Be brutally honest here.

5. Forgetting About Maintenance AI models require ongoing monitoring and retraining. Factor this into feasibility.

6. Neglecting Quick Wins Strategic bets are important, but quick wins build momentum and credibility.

7. Scoring in a Vacuum Talk to people who will be affected. Their insights are invaluable.

Customizing This Framework

This framework provides a solid starting point, but you should adapt it to your context:

Industry-Specific Adjustments:

- Add criteria relevant to your sector (e.g., patient safety for healthcare)
- Adjust weights based on industry priorities
- Include regulatory considerations specific to your domain

Organization-Specific Modifications:

- Align weights with strategic priorities
- Add custom criteria that matter to your business
- Adjust scoring scales to your context
- Integrate with existing project evaluation processes

Maturity-Based Variations:

- **AI Beginners:** Weight feasibility higher (40-45%)
- **AI Intermediate:** Use the standard model
- **AI Advanced:** Weight strategic alignment higher (30-35%)

Using the Spreadsheet Template

The accompanying spreadsheet includes:



1. Use Case Input Sheet

- Enter all use case details
- Document assumptions
- Track stakeholders

2. Scoring Matrix

- Score each criterion
- Automatic weighted calculations
- Visual indicators for scores

3. Prioritization Dashboard

- Overall rankings
- 2x2 matrix visualization
- Priority categorization
- Portfolio view

4. Comparison View

- Side-by-side use case comparison
- Strength/weakness analysis
- Trade-off evaluation

5. Decision Log

- Document decisions made
- Track rationale
- Record next steps

Case Study Example

Use Case: AI-Powered Customer Support Triage

Business Impact: 8.1

- Revenue Impact (7): Reduce churn, improve retention - estimated \$750K impact
- Cost Reduction (8): 25% reduction in support costs - \$400K savings
- Customer Experience (9): Faster response times, 24/7 availability
- Scale of Impact (8): Affects all 50,000 customers daily



Technical Feasibility: 7.2

- Data Availability (8): 3 years of support tickets, well-documented
- Technical Complexity (7): Standard NLP, moderate integration
- Team Capabilities (6): Need to upskill support team, hire ML engineer
- Time to Implementation (8): 4-month timeline to MVP

Strategic Alignment: 8.5

- Strategic Priority (9): Customer experience is top-3 strategic goal
- Competitive Advantage (8): Leading competitor already doing this
- Organizational Readiness (8): Support team eager, change management in place
- Risk Profile (9): Low risk, no regulatory concerns

Overall Score: 7.95 (High Priority)

Decision: Greenlit for Q2 implementation. Allocated 2 data scientists, 1 ML engineer, budget of \$250K.

Next Steps

1. **Download the spreadsheet template** and start listing your AI use cases
2. **Assemble your evaluation team** with diverse perspectives
3. **Schedule a scoring session** - plan for 2-4 hours
4. **Score your use cases** using this guide as reference
5. **Review results** and make prioritization decisions
6. **Start with a quick win** to build momentum

Additional Resources

- AI Readiness Guide - Assess if you're ready before you start
- AI Project Canvas - Plan your selected use cases
- ROI Calculator - Quantify expected returns
- Risk Assessment Template - Identify and mitigate risks

About This Framework



This Use Case Prioritization Framework has been refined through dozens of AI strategy engagements across industries. It provides a balanced approach that considers both short-term value and long-term strategic positioning.

Remember: This framework is a tool to facilitate good decisions, not a replacement for judgment. Use it to structure discussions, surface assumptions, and build alignment—but don't let it override common sense or deep domain expertise.

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