ChecklistGuro

Value Engineering Checklist

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Project Definition & Goals

Ensuring a clear understanding of project objectives, constraints, and key performance indicators (KPIs) is paramount for effective value engineering.

Project Goals & Objectives (Detailed)

Write something...

Initial Budget Estimate

Enter a number...

Projected ROI (Return on Investment)

Enter a number...

Key Stakeholder Expectations & Priorities

Write something...

Project Delivery Method (e.g., Design-Bid-Build, Design-Build, CM at Risk)

- [ ] Design-Bid-Build
- [ ] Design-Build
- [ ] CM at Risk
- [ ] Integrated Project Delivery (IPD)

Original Project Completion Date

Enter date...

Primary Performance Indicators (KPIs) for Success

Write something...

Constraints & Limitations (e.g., Site Restrictions, Regulatory Requirements)

Write something...

Design & Planning

Reviewing design decisions, specifications, and planning processes to identify potential areas for optimization and simplification.

Describe the initial design concept and its key assumptions.

Write something...

Were BIM (Building Information Modeling) techniques utilized in the design phase?

- [ ] Yes
- [ ] No
- [ ] Partially

Estimate of initial design hours spent.

Enter a number...

Which design alternatives were considered (if any)?

- [ ] Alternative Foundation Designs
- [ ] Alternative Structural Systems
- [ ] Different Material Choices
- [ ] Modified Architectural Layout
- [ ] Pre-engineered components
- [ ] None

Summarize the rationale for the chosen design approach compared to alternatives.

Write something...

Were standard or repetitive design elements leveraged?

- [ ] Yes
- [ ] No

Document any areas where design simplification was initially resisted, and why.

Write something...

Date of latest design review

Enter date...

Materials & Components

Analyzing material selections, considering alternatives, and assessing their cost, performance, and sustainability impact.

Standard Concrete Mix Design?

- [ ] Yes - Meets Requirements
- [ ] No - Potential for Optimization

Current Steel Grade (e.g., ASTM A36)

Enter a number...

Alternative Steel Grades Considered?

- [ ] No
- [ ] Yes - Investigated for Cost Savings

Description of Alternative Material Options

Write something...

Estimated Cost Savings (Alternative Materials)

Enter a number...

Material Specification Sheets (Alternatives)

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Which materials could be substituted for cost or performance improvements?

- [ ] Concrete
- [ ] Steel
- [ ] Wood
- [ ] Insulation
- [ ] Roofing

Construction Methods

Evaluating construction sequencing, techniques, and equipment to identify opportunities for efficiency and reduced labor costs.

Construction Sequencing Review

- [ ] Current Sequencing Reviewed
- [ ] Alternative Sequencing Considered
- [ ] No Changes Required

Describe Potential Prefabrication Opportunities

Write something...

Estimated Labor Hours Savings (if applicable)

Enter a number...

Construction Techniques Evaluated

- [ ] Lean Construction Principles
- [ ] Building Information Modeling (BIM)
- [ ] Modular Construction
- [ ] 3D Printing
- [ ] Improved Site Logistics
- [ ] None

Equipment Utilization Review

- [ ] Optimal Equipment Utilization
- [ ] Equipment Rental Cost Analysis
- [ ] Alternative Equipment Considered
- [ ] Equipment Efficiency Improvements Implemented

Document any changes in Construction Methodology

Write something...

Subcontractor Selection & Management

Reviewing subcontractor bids, contracts, and performance to ensure value and mitigate risks.

Bidding Process Adequacy?

- [ ] Fully Competitive Bidding
- [ ] Limited Bidding
- [ ] Sole Source Justification Required

Number of Bids Received

Enter a number...

Justification for Sole Source Selection (if applicable)

Write something...

Subcontractor Pre-Qualification Status?

- [ ] Fully Pre-Qualified
- [ ] Requires Further Review
- [ ] Not Pre-Qualified

Subcontractor Insurance Certificates

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Summary of Subcontractor's Past Performance

Write something...

Subcontractor's Bid Price

Enter a number...

Contract Type?

- [ ] Fixed Price
- [ ] Cost-Plus
- [ ] Time and Materials

Systems Integration

Examining the interaction of different building systems (HVAC, electrical, plumbing, etc.) for potential synergies and cost savings.

Describe current coordination practices between HVAC, Electrical, and Plumbing systems.

Write something...

Are BIM (Building Information Modeling) tools being utilized for systems coordination? If so, which ones?

- [ ] Yes, Revit
- [ ] Yes, ArchiCAD
- [ ] Yes, Navisworks
- [ ] Yes, Other (Specify in Long Text)
- [ ] No

Estimated reduction in clashes/conflicts through improved systems coordination (percentage).

Enter a number...

Which potential integration challenges have been identified?

- [ ] Space Constraints
- [ ] Equipment Accessibility
- [ ] Noise & Vibration
- [ ] Aesthetics
- [ ] Code Compliance
- [ ] Other (Specify in Long Text)

Describe any proposed alternative routing or integration methods for utilities to minimize conflicts.

Write something...

Is a centralized systems coordination meeting schedule in place? If so, how often?

- [ ] Weekly
- [ ] Bi-weekly
- [ ] Monthly
- [ ] No defined schedule

Life Cycle Cost Analysis

Considering the total cost of ownership, including initial cost, maintenance, operations, and eventual decommissioning.

Estimated Initial Construction Cost

Enter a number...

Estimated Annual Maintenance Cost (Year 1)

Enter a number...

Estimated Annual Operating Cost (Energy, Water, etc. - Year 1)

Enter a number...

Estimated Annual Insurance Cost

Enter a number...

Estimated Annual Property Tax Cost

Enter a number...

Estimated Discount Rate (for Present Value Calculation)

Enter a number...

Projected Life Span (Years)

Enter a number...

Assumptions Used for Life Cycle Cost Estimates (e.g., Inflation Rates, Future Operating Costs)

Write something...

Sustainability & Environmental Impact

Identifying opportunities to reduce environmental impact, improve energy efficiency, and enhance building performance.

Are recycled content materials prioritized?

- [ ] Yes
- [ ] No
- [ ] Partial/Considered

Target U-value for building envelope (W/m²·K)

Enter a number...

Which sustainable strategies are being considered?

- [ ] Solar Panel Integration
- [ ] Rainwater Harvesting
- [ ] Green Roof Implementation
- [ ] Passive Ventilation Design
- [ ] Low-VOC Materials

Description of efforts to minimize construction waste.

Write something...

Is a LEED or other green building certification being pursued?

- [ ] Yes
- [ ] No
- [ ] Considering

Estimated reduction in energy consumption (percentage)

Enter a number...

Details regarding the sourcing of sustainable materials (e.g., local suppliers, certifications).

Write something...

Risk Assessment & Mitigation

Identifying potential risks that could impact cost, schedule, or quality, and developing strategies to mitigate them.

Identify Potential Risks (Cost, Schedule, Quality, Safety)

Write something...

Estimated Cost Impact of Each Risk (€)

Enter a number...

Risk Category (Cost, Schedule, Quality, Safety, Environmental)

- [ ] Cost
- [ ] Schedule
- [ ] Quality
- [ ] Safety
- [ ] Environmental

Potential Mitigation Strategies

- [ ] Contingency Planning
- [ ] Value Engineering
- [ ] Alternative Materials
- [ ] Improved Communication
- [ ] Phased Construction
- [ ] Early Procurement

Risk Priority (High, Medium, Low)

- [ ] High
- [ ] Medium
- [ ] Low

Target Mitigation Completion Date

Enter date...

Detailed Description of Proposed Mitigation Action

Write something...

Responsible Party for Mitigation

Write something...

Risk Status (Open, In Progress, Closed)

- [ ] Open
- [ ] In Progress
- [ ] Closed

Procurement & Contract Management

Evaluating procurement strategies, contract terms, and payment schedules to optimize value and minimize disputes.

Procurement Strategy Selected?

- [ ] Competitive Bidding
- [ ] Negotiated Bid
- [ ] Design-Build
- [ ] Fast-Track

Summary of Bidder Evaluation Criteria

Write something...

Number of Bids Received

Enter a number...

Contract Type

- [ ] Fixed Price
- [ ] Cost-Plus
- [ ] Time & Materials
- [ ] Unit Price

Key Contractual Risks Identified & Mitigation Plans

Write something...

Bid Due Date

Enter date...

Upload Key Bid Documents (e.g., Bid Sheets, Qualification Statements)

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Payment Schedule Type?

- [ ] Progress Payments
- [ ] Milestone-Based
- [ ] Lump Sum