



## Protect Your Investment: Why Upfront Engineering Ensures Your Project's Success - Your Vision, Our Commitment

You have a bold vision for a custom-engineered solution—whether it's cutting-edge automation, specialized equipment, or a unique process to propel your business forward. As a trusted system integrator, we're here to turn that vision into reality. But complex, custom projects come with risks: misaligned expectations, costly delays, or equipment that fails to deliver. Investing in upfront engineering is the smartest way to safeguard your investment and ensure your project's success.

This document outlines how our approach—starting with a no-cost budgetary proposal and followed by paid upfront engineering—minimizes your risks, maximizes your return on investment, and delivers equipment tailored to your needs, on time and within budget.

### Start with a No-Cost Budgetary Proposal

We understand that planning for capital equipment requires clear financial expectations. That's why we offer a no-cost budgetary proposal to help you get started. Here's what you can expect:

- **Tailored to Your Needs:** We'll investigate your project requirements and provide a high-level cost estimate based on our initial understanding of your needs.
- **For Budgeting Purposes:** This budgetary number is designed for your planning, such as securing funding, allocating capital for the next year, or evaluating project feasibility.
- **Risk Identification:** As part of the proposal, we'll highlight potential areas of risk, such as challenges in product handling, manipulation, or nuances related to your product's unique characteristics (e.g., size, weight, or material properties). These insights give you a clear picture of what needs to be addressed to ensure success.
- **No Commitment Required:** The budgetary proposal is provided at no cost and with no obligation, giving you the flexibility to plan without upfront investment.

**Important Note:** The budgetary proposal is a high-level estimate, not a detailed design or guaranteed price. It serves as a starting point to align expectations and inform your budgeting process. Once you're ready to move beyond budgeting and dive into project details, our paid upfront engineering phase begins.

### The Risks You Face Without Upfront Engineering

Moving forward without thorough engineering can expose your project to significant challenges. Here's what you risk if preliminary planning is skipped:

1. **Misaligned Expectations Can Derail Your Project:** Budgetary estimates provide a ballpark figure, but without detailed engineering, they may not reflect the true scope of your project. This can lead to cost overruns or equipment that doesn't meet your needs. A 2023 Automation World report found that 50% of custom automation projects fail to meet expectations due to insufficient early-stage engineering, leaving customers with underperforming solutions or costly rework.
2. **Low-Cost Bids Often Mean Low-Quality Results:** Some vendors offer low quotes by bypassing critical steps like prototyping or testing. While tempting, this often results in substandard equipment that compromises safety, reliability, or performance. A 2022 Manufacturing Technology Insights article noted that 35% of custom equipment failures stem from inadequate upfront planning, costing businesses millions in repairs or replacements.
3. **Unresolved Technical Risks Lead to Failure:** Custom projects often involve untested processes or unique configurations. Without validation, these risks can result in equipment that doesn't work as promised. For example, a manufacturer lost \$400,000 and 18 months on a failed project because a vendor skipped testing a critical vision-based system, assuming it would work. The result? Wasted resources and a strained vendor relationship.
4. **Hidden Costs of Rework and Delays:** Technical challenges discovered late in a project lead to unexpected costs—rework, extended timelines, or even complete failure. These setbacks can disrupt your operations, delay production, and erode your bottom line.



## How Paid Upfront Engineering Protects You

Once you're ready to move beyond the budgetary proposal, our paid upfront engineering phase ensures your project is built on a solid foundation. This phase is flexible and tailored to your needs, with clear negotiation to define the scope of engineering required—from resolving minor risks to designing a complete print set for your equipment. Here's what you gain:

- 1. A Clear Roadmap for Success:** We deliver a comprehensive specification document, including detailed drawings of major components, mechanical and electrical standards, and optional features. This blueprint ensures you know exactly what you're getting and serves as a robust tool for requests for proposals (RFPs), enabling you to compare vendor bids on an apples-to-apples basis.
- 2. Customized Product Lists to Match Your Needs:** If you have a standard product list, we'll incorporate it to ensure compatibility with your operations. If you don't, we'll provide one tailored to your project, drawing on our decades of experience in the automation marketplace. Our curated list prioritizes reliable, high-performance components, ensuring quality and longevity.
- 3. Risk Mitigation Through Targeted Testing:** We address the risks identified in the budgetary proposal, such as challenges in product handling, picking, or manipulation due to unique product characteristics. Through prototyping and testing, we validate critical elements—whether it's a new process, a vision system, or a material handling technique—eliminating uncertainties before production begins. The scope of this work is negotiated upfront, so you control the level of risk mitigation, from minor validations to comprehensive design.
- 4. Cost Savings in the Long Run:** While upfront engineering requires an initial investment, it prevents expensive overruns, rework, or substandard equipment. By resolving risks early, we keep your project on budget and on schedule, saving you from costly surprises.

## Our Promise to You

As a system integrator known for tackling sophisticated, custom projects, we're committed to delivering equipment that exceeds your expectations. We start with a no-cost budgetary proposal to align on high-level costs and risks, then offer flexible, paid upfront engineering to ensure your project is thoroughly planned and validated. Through transparent negotiation, we tailor the scope to your needs, ensuring you get the engineering you require without overpaying.

By investing in upfront engineering, you're securing a partnership dedicated to your success. Let's eliminate risks, align on your vision, and build equipment that drives your business forward.

## The Benefits You Gain

Investing in upfront engineering delivers clear advantages that protect your business and maximize your project's value:

- **Peace of Mind:** A detailed specification and validated design give you confidence that your equipment will meet your operational and safety requirements.
- **Superior Equipment:** Thorough engineering ensures a reliable, durable solution tailored to your needs, giving you a competitive edge.
- **Fair Vendor Selection:** Our comprehensive specification enables you to solicit comparable bids, so you choose a vendor based on value, not just price.
- **Protected Investment:** By mitigating risks early, you avoid costly failures or rework, ensuring long-term savings and project success.

## Industry Trends Support This Approach

You're not alone in prioritizing upfront engineering. A 2024 Design News survey found that 70% of manufacturers who experienced project failures now favor vendors who invest in structured R&D phases, citing fewer delays and higher success rates. A 2023 Control Engineering report showed that 62% of companies are willing to pay for preliminary engineering for complex projects, recognizing its value in preventing costly setbacks.

Leading industries like aerospace and pharmaceuticals routinely fund early-stage engineering to de-risk projects, achieving higher success rates. By adopting this approach, you align with best practices and position your project for success.



Automation Solutions, Inc.

Services for all Automation and Controls

25 West Park Circle Birmingham, AL 35211

205-428-1550

[www.automationsolinc.com](http://www.automationsolinc.com)