



BRIDGE THE GAP. UNLOCK THE POTENTIAL.

THE BLUCO® ENGAGEMENT MODEL

***BRIDGE THE GAP.
UNLOCK THE POTENTIAL.***



CAPACITY



CONSISTENCY



EFFICIENCY



PART QUALITY

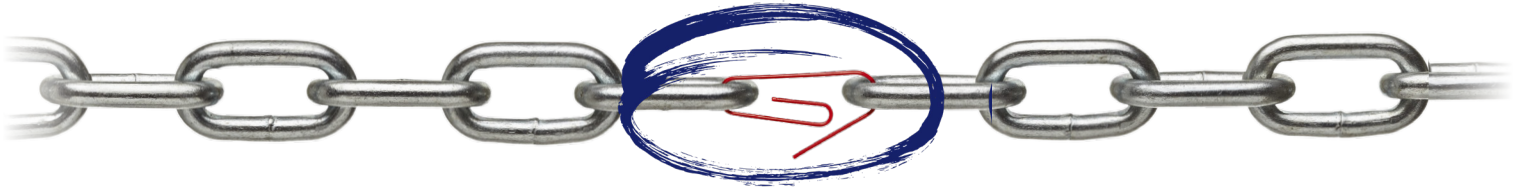


ERGONOMICS



SCALABILITY

YOUR PRODUCTION PROCESS IS ONLY AS STRONG AS YOUR WEAKEST LINK.



*Efficiency and productivity are vital to your success,
so you've already optimized your entire production process ... or have you?*

*Most manufacturers leave a critical gap.
An Engineering Gap where workholding should be, or should be doing more.
A weak link where time, money, and resources can leak away unchecked.*

*Because workholding isn't just about how a part is held – it defines what your process is
capable of. It shapes your sequence of operations, floor plan, and automation planning.
It impacts capacity, consistency, efficiency, final part quality, worker safety & comfort,
and the ability to adapt as production needs change.*

*That's why bridging the Engineering Gap matters.
That's why it's time to have a conversation about Bluco® modular workholding.*

THE BLUCO® ENGAGEMENT MODEL *Drives Conversations That Deliver Results*

Our unique process is built on 35+ years of experience. We call it the Bluco Engagement Model, and it defines how we engage, analyze information, identify pockets of hidden potential, and validate the effectiveness of modular solutions.

It starts by meeting you where you are.

Whether you bring us an individual project, a complex production challenge, or a broader operational priority, we'll listen to your needs and guide you to the best outcomes.

A process powered by collaboration, dedication, and expertise.

We believe in the power of 1-on-1 interaction. We *don't* believe in shortcuts. And our knowledge is drawn from thousands of successful applications in countless industries.

Designed to deliver modular solutions that bridge Engineering Gaps.

No matter where the conversation starts, or the complexity of your challenge, our goal is always the same: to help you bridge Engineering Gaps so you can *Make it Better*.

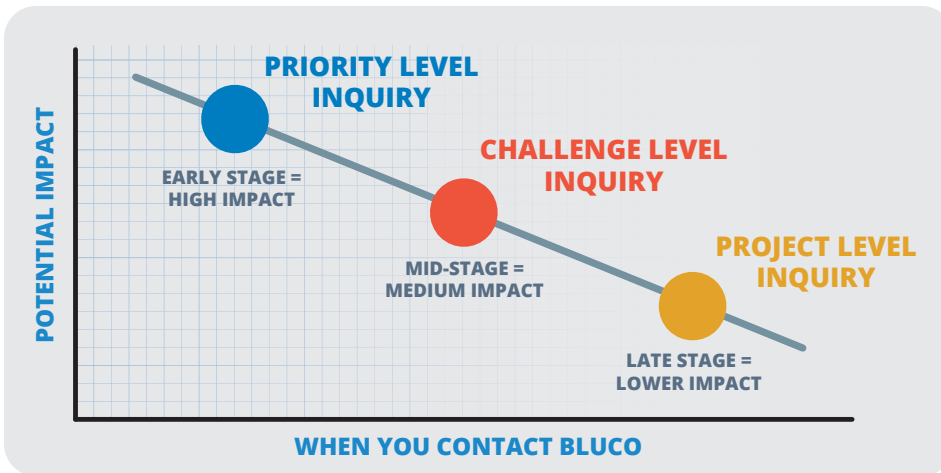
We Start Where You Are

Every production challenge exists on a timeline. Some manufacturers come to Bluco with a defined project. Others with a specific constraint they can feel on the floor but haven't fully diagnosed. And some step back to ask a broader question: ***How much potential are we leaving on the table?***

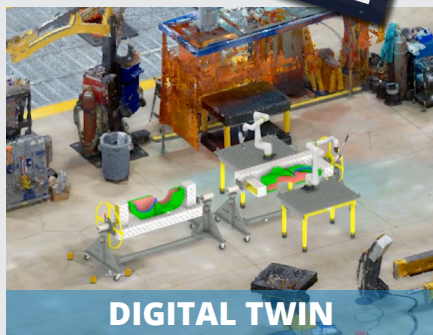
The earlier you engage Bluco, the greater the impact. Early engagement allows us to design modular workholding solutions that impact upstream decisions like process flow, part orientation, shop layout,

worker comfort and automation readiness. This is where we're able to uncover opportunities that may not show up in a simple fixture request.

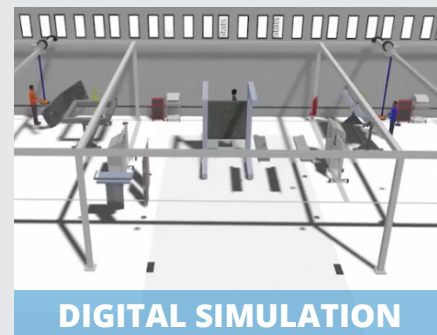
Later-stage engagement still delivers value. And those project-level conversations often reveal opportunities for future engagements where we can contribute earlier in the process.



		WHERE ARE YOU STARTING?	When You Contact Us	How We Work Together
BLUCO'S UMBRELLA OF SERVICES	PROJECT	"I have a specific project. The scope is already locked in."	LATE STAGE Bluco is engaged near the end of the project timeline, after planning, budgeting and logistics have already been set.	You send us CAD files of your part, and we propose a solution. Our efforts are constrained to a defined cell or operation.
	CHALLENGE	"I have a specific project, but our process is less defined."	MID-STAGE Bluco is engaged before budgets and planning have been finalized.	You send us your production plans, and we perform a detailed analysis. It may include areas up- and down-stream in order to provide more impactful solutions.
	PRIORITY	"I have an organizational goal to achieve, and I'm not sure where to start."	EARLY STAGE Bluco is engaged before issues have been identified or even suspected. Engagement is tied to customer priorities instead of to a specific project.	We walk the floor of your facility, widening our focus to cover the entire production process, identifying Engineering Gaps, process improvements and shop layout modifications that bridge the gaps and unlock opportunities that would have otherwise gone unnoticed.



DIGITAL TWIN



DIGITAL SIMULATION



TIMELINE

A BluPrint® Systems Report is the deliverable for a priority-level inquiry.

It may include a digital twin or virtual simulation that will allow you to visualize solutions in your actual environment, and to understand how your team will interact with the solution in real time.

You'll also get a menu of potential projects broken down by phase, a proposed timeline, and the estimated investment required. The most in depth BluPrints also include predicted X-Factor results for each project.

You can queue up these modular projects in the order and cadence that makes the most sense for your organization.

Potential Impact (Relative opportunity for exponential improvement)	What We Deliver
LOW - MEDIUM Delivers focused, incremental improvements within a defined scope, with limited ability to influence upstream decisions or unlock broader operational gains.	A modular workholding solution based on your input.
MEDIUM - HIGH Addresses root causes and adjacent processes, enabling broader efficiency, throughput, and consistency gains beyond the original project scope.	Targeted diagnostics & capacity assessments that provide clarity around the issues you've identified, and inform decisions on scope and timing before work on the solution begins.
HIGH Enables early, strategic influence over process design, ergonomics, automation readiness, etc. This unlocks the potential for significant, compounding gains in profitability, part quality and overall productivity.	Bluco's team conducts a broad assessment of your entire facility and provides a detailed BluPrint® Systems Report that includes a menu of modular workholding projects along with estimated investment requirements. The most detailed BluPrints also include expected X-Factor returns.

We start where you are.

Your level of engagement may evolve over time, or lead to other projects at different levels.

A Unique Process That Reduces Risk By Design

The Bluco Engagement Model brings clarity to decisions that are usually made with limited visibility. We've replaced assumptions with clear choices, and guesswork with pre-investment validation.

By removing variables and defining expected outcomes, we help organizations act with confidence. The result is fewer surprises, faster decisions, and measurable improvements you can plan for – not hope for.



PLAN: We'll go over your challenges, desired outcomes, and the initial investment required (which will be applied toward BluPrint modular projects). Then, we'll collect any data you have, and conduct a site scan to create a digital twin of your facility.



DESIGN: Our team uses the site scan data to create an immersive experience. Then, in this virtual space, we'll identify Engineering Gaps and begin modeling end-to-end solutions, integrating tech from collaborative partners if needed.



VALIDATE: This is where ideas become reality. Test your solution first in a virtual setting, and do hands-on testing in our Validation Center. You'll work side-by-side with our engineers, who will help ensure the success of your project.



IMPLEMENT: If your solution requires installation, our application engineers can be on hand to either handle or assist with the process. Once installed, they'll train your team so you can get up and running as quickly as possible.



EVALUATE: We'll continue to check in to make sure you're meeting production goals, and to help identify areas for further optimization. We're committed to your success, and to providing the customer support required to get you there.

Ready to get started?
Email sales@bluco.com, or call 1-800-535-0135

This assessment is intended to reveal whether workholding decisions are supporting your production strategy ... or quietly limiting it. The results can help determine when executive-level alignment is required to unlock additional capacity.

HOW OFTEN DO YOU EXPERIENCE THE FOLLOWING CHALLENGES?

0 = Never **1 = Rarely** **2 = Occasionally** **3 = Frequently** **4 = Almost Always** **5 = Always**

1. CURRENT PRODUCTION REALITY

- _____ New part designs require retooling or fixture rebuilds
- _____ Changeover/setup time slows down production
- _____ Sequence dictated by fixture limitations, not optimal workflow
- _____ Welders modify fixtures to “make it work”
- _____ Operators struggle with ergonomics or access
- _____ We experience bottlenecks caused by inconsistent workholding
- _____ Dedicated fixtures become obsolete before ROI is achieved
- _____ We don't currently use fixtures (Multiply this score X2)

_____ **SUBTOTAL**

2. IMPACT ON METRICS

- _____ Low operator factor (“Arc-on Time”) per piece/cycle
- _____ Too much Non-Value-Added Activity (NVAA) per piece/cycle
- _____ Low welding speed due to out-of-position welding
- _____ Scrap/rework rate too high
- _____ Throughput below expectations
- _____ Unbalanced production between operations causes waiting time
- _____ Direct labor hours spent waiting on changeover
- _____ Inspection delays
- _____ WIP accumulation occupying floor space

_____ **SUBTOTAL**

3. CROSS-FUNCTIONAL ALIGNMENT

- _____ Engineering, operations, quality, and production do not share a unified workholding strategy
- _____ Workholding isn't part of capital planning
- _____ Workholding constraints aren't discussed at the executive level
- _____ There isn't a well-defined process for evaluating part revisions
- _____ No on-site engineers, or engineering workload prohibits internal fixture design
- _____ Fixture decisions are made by one department; not holistically

_____ **SUBTOTAL**

TOTAL SCORE

_____ **TOTAL OF SECTIONS 1, 2 AND 3**

How did your scores add up?

- 0 - 25: Tactical issue**
May be handled at the engineering level
- 26 - 45: Operational constraint**
Requires multi-department coordination
- 46+: Strategic constraint**
Executive review strongly recommended

If your score indicates a strategic-level constraint, you may benefit from an executive-level discovery session. This is a 45-60 minute session where Bluco helps leadership quantify the financial and operational impact of potential Engineering Gaps, and to evaluate the appropriateness of an engagement to produce a full BluPrint® Systems Report.

THE COST OF DOING NOTHING

This comparison outlines how today's workholding decisions are likely to impact operational performance over the next 12 months – both if the status quo is maintained and if a modular solution is introduced.

AREA OF IMPACT	TODAY	IN 12 MONTHS: STATUS QUO	IN 12 MONTHS: WITH MODULAR SOLUTION
 Capacity Utilization	- Time lost to fixture setup and changeover - Output varies between operators and shifts	DELAYS & LIMITS - Usable capacity erodes as part mix & variability grow - Work gets delayed as backlog grows - Throughput is capped, so work is outsourced or additional capital spent	CONSISTENCY & SCALABILITY - Faster setups & changeovers unlock hidden capacity - Consistency across operators & shifts due to modular precision & repeatability - Growth absorbed without adding equipment or floor space
 Labor Allocation	- Fixture setup & weld sequencing depend on operator - Manual setup and adjustment required – operators use tape measures and chalk lines	RISK & INEFFICIENCY - Higher operational risk due to retirements, turnover, or role change - Long onboarding time for new operators - More supervision required to maintain consistency	STANDARDIZATION & FLEXIBILITY - Setups are standardized, repeatable, and easy to learn - Less reliance on tribal knowledge - Faster operator ramp-up with less supervision required
 Quoting Confidence	- Quoting includes conservative buffers to manage setup uncertainty & quality inconsistency - Risk is priced into every estimate	DECREASED CONFIDENCE - Buffers increase as variability compounds - Quotes less competitive or less accurate - Margin volatility persists	INCREASED CONFIDENCE - Setup times and fixturing outcomes become predictable - Tighter quotes with higher confidence - Improved margin reliability without added risk
 Part Quality	- Fixture variability leads to dimensional drift & rework - Quality maintained through inspection instead of prevention	QUALITY RISK INCREASES - Quality risk increases as part complexity & volume rise - More rework & excess scrap	QUALITY LOCKED IN - Repeatable, rigid setups hold parts consistently throughout the weld sequence - Quality checks are engineered into process - Lower rework and inspection burden
OVERALL COST OF INACTION	Inefficiencies are absorbed as part of day-to-day operations	HIGHER COST - Profit lost as small inefficiencies accumulate into material cost - Indirect losses caused by delayed work, excess labor, & additional QC	LOWER COST - Inefficiencies identified & addressed instead of being absorbed - Financial exposure reduced by stabilizing capacity, labor & quality - Costs are visible, attributable & manageable

Engineering Gaps are places where efficiency and resources leak out uncontrolled. The sooner the gaps are bridged, the better the outcome. BluPrint® allows us to work together to develop your roadmap to success.

The FAQ's below are intended to help engineers answer common executive questions about the Bluco Engagement Model and BluPrint. The focus is on risk, decision clarity, and next-step considerations.

For clarity and ease of use, answers are phrased as though YOU are speaking directly to management. If you would like us to be part of this conversation, just ask. We are more than happy to help explain the value of our engagement to your team.

Q: What exactly is the Bluco Engagement Model?

A: It's the diagnostic and improvement framework Bluco uses to identify where current workholding and weld processes are creating hidden risk, inefficiency, or constraints.

Q: What is the actual deliverable?

A: The end product of the initial phase of our engagement may be a project proposal, perhaps with targeted diagnostic evaluations, or a full BluPrint Systems Report (see page 5 of folder for more details).

The specific assets, analysis, and leveled recommendations will be decided on before we begin. No matter the deliverable, we'll get virtual simulations and/or CAD models of potential workholding solutions as well as a clear picture of the investment required, the results expected, and the support that will be included.

Q: How is working with Bluco different from just buying fixtures?

A: When simply buying equipment from a catalog, manufacturers are stuck buying what vendors want to sell. And the choices are often limited to the vendor's preferred methods and specifications.

But Bluco flips that traditional experience upside down: equipment is LAST.

Bluco works to understand & evaluate our process, constraints, and goals FIRST, so any resulting investments are based on data & engineering analysis rather than assumptions or what we can see in the pages of a catalog.

We then have the opportunity to vet our proposed solution both virtually and/or physically, so we know exactly how our solution will perform – and what kind of results it will deliver – before it goes into live production. In other words, Bluco delivers an entirely different experience than purchasing out of a catalog, as the process eliminates guesswork and the risk that comes with it.

Q: Why does our process need this level of attention if we're already producing parts?

A: Producing parts doesn't mean the process is stable, scalable, or sustainable. Bluco sheds light on how our current approach will hold up as demand, part mix, or labor conditions change.

Q: How does this relate to our current backlog/growth plans/labor allotment?

A: Any level of engagement is likely to positively impact or inform decision-making in all three areas. Higher levels of engagement deliver greater impact because the scope of analysis is wider. But in general:

- Backlog is almost always reduced, as modular solutions are designed to improve efficiency.
- At its most basic level, growth plans are facilitated by the scalable nature of modular solutions. In higher level applications of BluPrint, a clear roadmap facilitates phased growth.
- Labor allotment becomes easier to manage as modular tooling enables repeatable results with less training.

Q: Will this disrupt production or slow us down?

A: No. The evaluation process is done while normal work proceeds, and all virtual and/or physical testing of new solutions is done offline. The goal is to evaluate and validate improvements *without* interrupting live production.

Q: How much time does our team have to commit?

A: This is highly dependent on specific project needs, but in general, Bluco will need to spend 2-4 hours with the owner of the production process. After that, there will be 2-3 review meetings with key personnel. Depending on the level of engagement, it may require up to 8-10 hours of our time.

Q: Who needs to be involved on our side?

A: The most impactful results are delivered when the project begins with an executive-level discovery. After that, the project can proceed under the direction of a lead engineer or operations personnel.

Q: Are we required to buy Bluco solutions after a proposal or BluPrint is delivered?

A: No. These assets provide analysis, solution designs, and investment recommendations. Customers retain full control over if, when, and how they act on the findings.

SEE REVERSE FOR MORE FAQ'S

MORE ABOUT BLUPRINT:

Q: How is this different from an integrator, consultant, or internal review?

- A:** Bluco provides a focused, engineering-led analysis of how workholding and welding processes perform in real production conditions. Unlike an integrator or consultant, the analysis is not tied to a predefined solution or change initiative.

Unlike an internal review, it brings an outside perspective informed by hundreds of similar welding applications. The goal is not to recommend a specific solution or product, but to surface risks, constraints, and options early so any next step is deliberate, validated, and aligned with our specific challenges.

Q: Is BluPrint an operating expense or a capital expense?

- A:** If any costs are associated with BluPrint, they are typically treated as an operating expense because it is an engineering analysis performed *before* any capital purchase is finalized. Although the analysis identifies opportunities where a capital investment would improve operations, BluPrint is intentionally structured to clarify scope, timing, and priority before capital is committed. How the cost is ultimately classified varies by organization, but BluPrint exists to make sure any resulting investment is deliberate, right-sized, and defensible.

Q: What is the cost and how do we justify it?

- A:** Cost varies based on the scope of the engagement. Any up-front investment will be proportionally applied to the solution(s) implemented.

When fees are required, justification is built into the deliverable itself. As part of the process, Bluco evaluates proposed solutions and estimates their impact on KPI's using simulated models and engineering analysis. These projected improvements provide a clear way to assess benefit relative to cost.

Q: How will we determine if BluPrint was successful?

- A:** BluPrint is successful when it delivers operational improvements. When expected gains are defined, Bluco stays involved to validate results and adjust the approach as needed to achieve them.

Q: What decisions should we be able to make after our BluPrint is delivered?

- A:** Once a BluPrint is delivered, leadership will have a clear, prioritized roadmap for improving production performance – not just fixturing recommendations.

BluPrint identifies the true constraints limiting throughput, capacity, and responsiveness. In many cases, the perceived bottleneck isn't the real one. BluPrint often uncovers upstream production capacity gaps, labor limitations, material flow issues, or equipment constraints that must be addressed before throughput can meaningfully improve.

This enables leadership to:

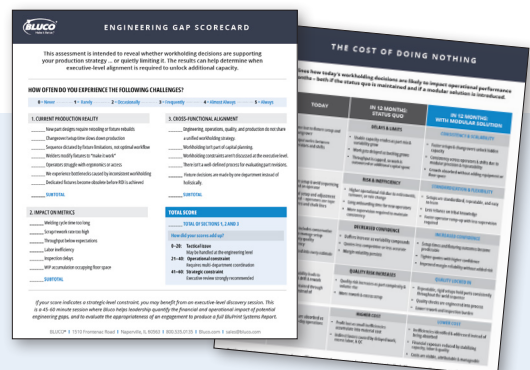
- Focus investment where it will change outcomes
- Distinguish incremental fixes from step-change opportunities
- Sequence improvements based on impact and risk
- Confidently decide what to address now vs. later

Rather than responding narrowly to a single fixture need, BluPrint provides a system-level view – enabling smarter, lower-risk capital decisions.

Q: What risk are we exposed to if we don't go with BluPrint?

- A:** Right now, we don't know what we don't know. That means we're making decisions without full visibility into where capacity is being lost, where quality risk is being introduced, or how dependent our process is on individual experience.

As long as those risks remain hidden, they tend to surface later as schedule pressure, rework, margin erosion, or the need for reactive capital or labor decisions. BluPrint reduces that risk by making these issues visible early – when they can still be addressed deliberately rather than reactively.



ADDITIONAL RESOURCES:

Your Scorecard and "The Cost of Doing Nothing" page are designed to help you explain and justify BluPrint.

Our sales engineers are also available to join your conversation. Just reach out to sales@bluco.com.

