THE TOP TIPS FOR WORKING WITH A
CUSTOM ASSEMBLY INTEGRATOR

How to get the best value, best service, best product, best delivery time and best experience when working with a custom assembly automation integrator

WHITE PAPER

TABLE OF CONTENTS

INTRODUCTION

Investment in a custom automation or test solution for your company can be an investment with significant benefits if executed well. To help ensure a successful project, it's important to work effectively with your systems integrator. Over the next few pages you will find some useful tips to help you get the most out of the relationship and help keep your project running along smoothly.

1 Stay Focused On Your Key Objectives and Requirements

Know What is Most Important and Clearly Communicate Why

If you are considering investing time and money to automate some or all of your manufacturing process you need to fully understand what you wish to gain in the process. Every job is unique when you are talking about custom systems, the answer to 'why automate' will not be the same for everyone. You may want to start the process by asking yourself and your team some of the questions outlined in the next few pages.

What Is Your Decision To Automate Based On?

Many factors go into deciding on whether to automate your manufacturing process. You need to be aware of what is driving those decisions, as well as able to communicate those factors to an integrator in order for them to have a clear understanding of the problems or issues they need to focus on addressing.

Is Production Challenging?
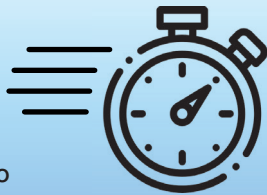
Are you looking to increase your **speed of production** to keep up with high demand? Will a higher rate of production increase your profitability?

Are **quality issues** threating your customer relationship, profits, and/or future sales?

Is precision a challenge? Are parts often out of tolerance? Is the required level of accuracy too precise for repeatable human achievement?

Is Workplace Safety an Issue?

Do you have a process that exerts too much **force or pressure** for human operators to work alongside of safely?

How about **ergonomics** – are their frequent claims for back and neck issues?

Are your parts **heavy or sharp?** Do you deal with worker injuries on an all too regular basis?

PRIMETEST® **AUTOMATION**

4

How Are You Calculating Your Return on Investment?

A return on investment (ROI) is important but success can be measured multiple ways. Make sure you are aware of how you are arriving at your numbers. It is important to relate to the integrator what is driving the need for the system so they can focus on prioritizing what is driving your ROI.

Are you missing out on potential revenue due to current or foreseen production levels that are difficult or impossible to fill with your current process or available manpower?

Can you lower insurance costs and reduce downtime by addressing safety issues that will save money and improve the workplace in the long run?

How much are you currently losing due to poor quality and inconsistent manufacturing, resulting in wasted time and supplies, and lost or dissatisfied customers?

Are you looking to lower your overhead by reducing the manpower involved in your manufacturing process? Are skilled laborers difficult to find, train, retain continuously driving up labor cost or causing production issues?

What are Your Budgetary Guidelines?

Budget is always an important consideration, but what factors are driving that budget? Is there an amount that you have budgeted for overall annual spending, or is there a company cap on funds for this particular type of project? How strictly must you stick to that budget?

Due to the nature of some projects, the ability to ballpark your budgetary need may be difficult. If this is the case, take some initial steps to let your integrator get some good estimates. Experienced integrators can provide guidance at the beginning to help you plan for the investment.

Discussing any financial limitations can help the integrator formulate solutions based on budgetary needs.

Explain the budget approval process and expected time-frame for that process as to allow the system integrators to plan and forecast as this may help with keeping costs down.

How Quickly Do You Need To Have Your Process Automated?

Sometimes there are reasons for choosing automation that involve a time crunch. If you need to automate quickly, the integrator can consider a quick fix with smaller tools that can take as few as two months to complete vs. an entire system that can take from six months to over a year depending on the complexity of the process.

What Are The Production Challenges You're Aware Of?

Every process has its hurdles to overcome, and understanding both past and present challenges will help the integrator see more than just the big picture.

Automation likes consistency. Are there many parts out of tolerance? Are they bent or have flash making it difficult for your other automated processes to function? Are there any special conditions the automation need to be able to handle or additional checks need to be implemented?

Understand all the roles your current operators perform and really study how your process is done manually to make sure processes are implemented effectively (automation or manual). For example, your people may be boxing parts but do they also inspect each part for irregularities and make on the fly adjustments? Are incoming parts out of tolerance, requiring manipulation by the operator to fit properly?

If issues are identified early, often the integrator can help to resolve them by adding incoming inspection or other automation that allows the systems to handle the challenges.

What are Your Company's Must Haves?

Are there any non-negotiable features your system must have? Letting the integrator know these things up front will help save time and money in the long run, keeping them from spending time designing a product that is unacceptable to the client.

Does your company require you to work with a specific supplier of parts, are there different brands you use frequently and have had good experiences with or brands you will never use?

If your company has general machine specifications make sure the integrator understands if they're strictly or loosely followed.

Clearly understand and communicate the difference between "must have" and "nice to have" features to avoid unnecessary impact to schedule and cost.

Avoid Giving Too Much Information

Confusing or over complicated information may delay the process or result in rework, which will drive up the price of your project. Consider what you want the integrator to be spending their time on. A large unorganized data dump is typically confusing to the integrator and often adds time and cost to the project. Instead take some time and compile/organize the information and documentation files required for this specific project in order to get the most informed and typically more accurate quote.

2 Keep Open and Frequent Communications

Before you go to agreement...

Invest in a Good Partnership

Projects frequently take from 4 months to more than a year to complete depending upon the particular project. Investing in a good relationship will pay dividends so take some time to understand who you will be working with.

Understand the integrators organizational structure - Who do you reach out to with any questions or issues?

If needed, would you have access to the engineers, or program or project managers?

Once you enter an agreement what is the process for ongoing communications and make sure this is a good fit for you corporate culture.

Avoid opportunities for misunderstandings or crossed expectations

Miscommunication is one of the most common factors that lead to derailing any project. Keep everything on track by communicating your needs well, and perhaps more importantly also taking the time to understand everything your integrator is trying to communicate back to you.

Make sure everyone fully understands the quote – is it clear? Do you completely understand what you will be getting and perhaps more important, understand what you will not be getting?

Are there things that are driving price/delivery that may or may not be needed?

It is also important to understand the specifics of how the machine will run – how many parts will it produce and how fast?

Does the integrator know what the acceptable criteria is for your process and have they fully signed up to deliver to that standard?

Determine who, on both sides, are the decision makers and how are decisions or changes are communicated and documented.

What are the unknowns at this time and what is the plan for dealing with them as they arise.

Once the project is underway...

Provide all necessary information and supplies

A successful project requires attention and engagement from all involved parties. One of the leading causes of delay is neglecting to provide sample parts or other needed materials on a timely basis. Those parts and materials are vital to the planning and design of your system and the engineers can't do their job without them.

Whenever possible give real world product – you want your machine to run properly so even small changes in size and consistency may affect the process all the way down to the way a machine is designed.

Make sure you provide a true range of input materials for your system, testing not only the edges of the tolerance range but also what the machine behavior will be for any product that falls outside of the acceptable range. Often, if know, good design can help mitigate the impact of the occasional bad input.
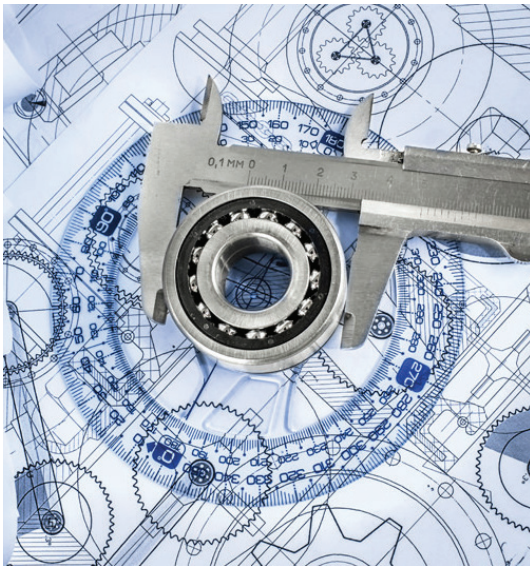
Be part of the design process

Being involved in the process is crucial for optimal outcome. Ask questions and listen.

If you don't understand why the integrator is designing something a certain way, ask – there may not be a reason beyond a personal preference. Often there are many different ways to achieve the same task so if you want to discuss a different approach don't be afraid to speak up.

If a mid-process change in requirements or circumstances cannot be avoided, handling it as quickly as possible could mitigate some of the added costs

3 Plan Ahead And Adjust Quickly

Regardless of the amount of up-front planning, custom automation is sometimes a matter of inventing never before attempted processes. With any new territory, a certain amount of trial and error is expected and your ability to react and adjust accordingly will help the project stay on track.

Even the best-laid plans encounter unexpected challenges - changing requirements, technical hurdles, component availability, etc. So have a plan B in mind and try to be flexible when circumstances arise that are out of the integrator's or your organization's control.

No one likes a Change Order but, sometimes during the development process, opportunities or challenges are identified that weren't considered in the scope of the initial project. A good integrator will help you mitigate/capitalize on these and use them to improve the final outcome.

Changes add time so make sure you are communicating well with your integrator to understand the true impact of modifications and work with them to see if offsetting accommodations can be made if appropriate.

Working collaboratively to meet the key objectives will keep the project successful. Make sure you keep up to date on the project as it progresses.

Good Communications and Coordination For the Final Delivery

All parties involved want the project to be a success, so make sure you are collaborating with the integrator for a smooth process when the machine is ultimately delivered.

PRIMETEST® AUTOMATION

Make a good test plan as early as possible and communicate it to the supplier so that everyone is on the same page

Complete a thorough Factory Acceptance Test and make sure it includes testing all the specifications agreed to in the original quote.

Decide how long you need to run the machine to provide accurate analytics on the machine's performance

Provide enough sample parts for set up, debug, and runoff phases of testing – a high speed machine can run though a tremendous amount of parts quickly so be prepared and plan ahead.

The more parts you can run though a system at the integrator's facility the better for everyone, as machines need time to run in. Modifications, if needed, can often be handled much more quickly there.

Make sure you are involving the right people in the process

Are you bringing the right team of machine and maintenance operators, engineers and or programmers that need to fully understand how this machine will work and be maintained?

Expect some "infant mortality" - a system that has 1,000 parts and a 99% success rate will still have 10 components go bad much sooner than expected. Make sure you plan to have spare components and other contingency plans ready.

Make all necessary arrangements for your systems installation

Is the area clear and ready for technicians to work – Have you pre-installed all necessary power and air? – Does it your system need to be connected to your network?

Plan to discuss the installation plan before the machine arrives. – Have you discussed shipping? Will it be installed by the supplier? Will it need technician assistance upon set up?

Agree upon a Site acceptance test plan and schedule so the commissioning of the system can be accommodated by your organization and run smoothly.

SUMMARY

In the end It all comes down to communications and trust in the partnership – if you are you keeping the line of communications open and are clear with what your needs and expectations are, then chances are you will be in great shape to tackle any custom automation project. Do your best to choose a good custom integrator and treat them as partner. Capitalize on their expertise but remember their success is heavily driven by your support, communications and responsiveness. If you work together well, your project is likely to be a great all around success!

Partnering With You To Build The Best Automated Machines

About PrimeTest® Automation

PrimeTest® Automation is a full-service systems integration company who provides custom automation solutions including material handling, assembly, and test and measurement. Using the latest in 3D design software, all systems are modeled by our talented in-house team featuring mechanical, electrical, and software engineers. All systems are manufactured in our facility located in Boca Raton, Florida. PrimeTest® Automation offers complete turn-key automation solutions that are deployed across North America and Europe in the automotive, aerospace, oil and gas, medical, military and commercial industries.

For more information on PrimeTest® Automation or to request a quote

GET A QUOTE

to receive our newsletter and notifications about upcoming technical resources sign up today

JOIN OUR MAILING LIST

CONTACT

1101 Holland Drive, Suite 7
Boca Raton, FL 33487

Call Now
561-912-9433
info@primetest.com