



# The Ultimate Guide to Consumer Products Plant Upgrades

## Introduction

Whether you're improving the formula of an existing product, adding additional ingredients to create new ones, or bolstering operations for expansion into an emerging market, your goals as a project manager are typically the same – get the job done quickly, safely and on budget.

Sometimes, checking all three boxes requires more expertise than you have internally. Collaborating with a team of process engineering consultants can alleviate your burden and improve the overall quality of your manufacturing process. So, what's the catch?

Finding a capable team of process engineering consultants who can actually deliver what they promise is your first, and arguably most stressful step towards successfully completing this project. That's why we've created this handy, information-packed guide, just for you!

By the end of this guide, you'll be able to determine if the process engineering consultants you're considering are right for your particular project. You'll also find solutions to some of the top manufacturing challenges facing project managers like yourself and gain access to real-world examples of how these solutions have been implemented recently.

## Tips for Vetting Process Engineering Consultants

You're managing a product line expansion and your timeline is more aggressive than you're used to. Or maybe it's time to upgrade your plant's controls systems, but you can't afford any downtime to production. Whatever the issue, it's your responsibility to make the project work and you're starting to feel the pressure. So how do you know if you're choosing the right partner?

There is no "one size fits all" solution when evaluating process engineering consultants. In most cases, the qualifications that guide your selection are informed by your industry, the scope of the project, and the resources you'll need to do the job right. The following list provides helpful guidelines for vetting process engineering consultants, regardless of the circumstances.



- **Make Them Prove Their Experience** – Many consultants will want to bid on your project, whether they've delivered a successful outcome before or they are using your budget to gain experience. These firms promise that they know your market better than their competitors. Make them prove it. Ask your candidates for examples of similar projects they've completed in your industry. They shouldn't have problems providing photos, videos, testimonials and case studies for your review. If you're still unsure of their qualifications, ask for a list of references.
- **Ask for a Complete Price, Not the Lowest Price** – Does the quote you've been given include everything that is needed to do the job right? Before they send you their quotes, diligent process engineering consultants will ask you a number of important technical questions to help them fully understand the scope of your project. This will minimize risk later. Ask the consultant for a proposal that fully addresses the entire scope of your project. This should outline, not only what is included, but also what is excluded. The level of detail included in the quote is a good indicator of the attention to detail you can expect from your process engineering consultants after the project is awarded.
- **Visit Their Facilities** – Ask for a tour of the consultant's fabrication facilities. How closely do the process engineers, equipment designers and craftsmen work from one another? If they work in the same facility, this is a good sign! While communication between locations is fine, having all of your resources in one place mitigates communication errors throughout the project. Additionally, you'll want to verify that your process equipment is being fabricated in a facility that meets the standards of your particular industry, whether those are FDA, BPE, ASME or others. If the process engineering consultants handle several industries, make sure their sanitary stainless-steel fabrication facilities are isolated from more industrial carbon steel fabrication facilities.

## Engineered Solutions to Common Manufacturing Challenges

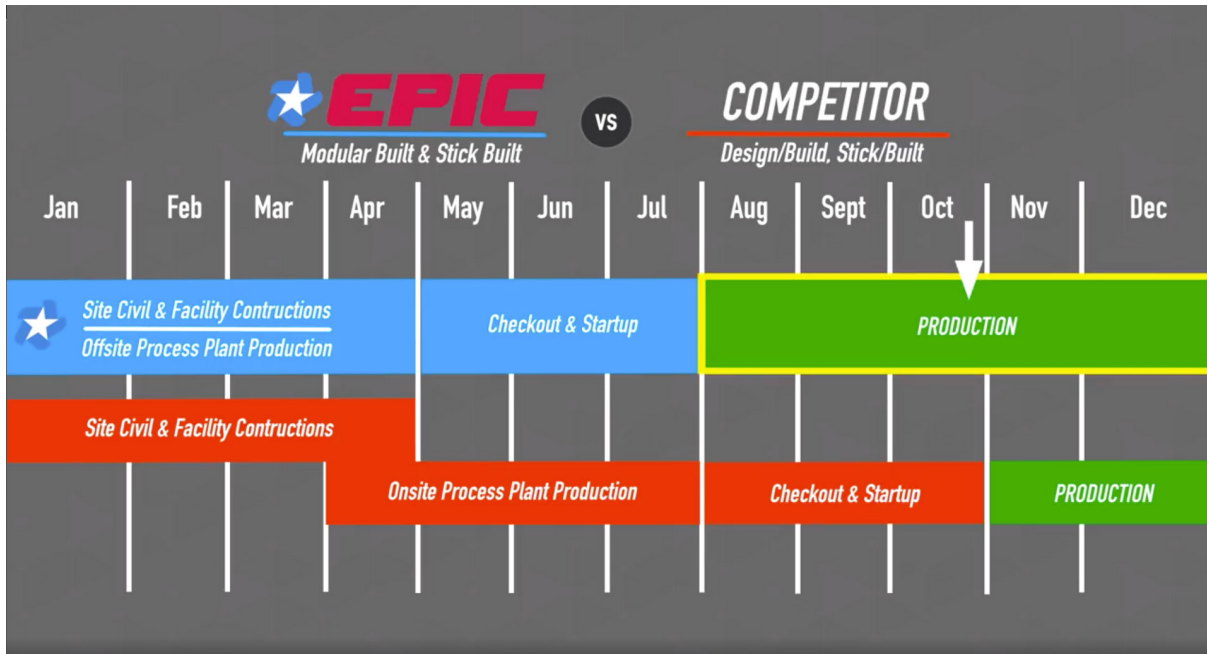
Each plant upgrade project has its own unique challenges, but the consumer products industry is prone to a few common issues. In this section, we'll review three such industry challenges and provide real-world examples of how project managers were able to overcome these problems by collaborating with the right process engineering consultants.

### Overcoming Aggressive Project Schedules with Modular Plant Design

Traditional stick-build plant upgrades will significantly prolong your project timeline. Scheduling your site civil and facility upgrades and process equipment fabrication sequentially can delay your time-to-market by 3-4 months. Nobody wants a longer project, especially when you've already established a distribution agreement with a retailer. So, what's the solution? A consultant with offsite skid fabrication capabilities.

In recent years, manufacturers have increasingly embraced the advantages of modular plant design. By fabricating and testing your process skids offsite, you can schedule process equipment fabrication and site/civil facility upgrades in parallel. This effectively cuts your project timeline in half.

This [case study](#) tells the story of a Fortune 500 consumer products project manager who saved his company \$8-10 million and shaved several months off of the original project timeline by switching to a modular design-build approach.



### Introducing New Product Recipes with Limited Budget and Floor Space

Until recently, manufacturers have been limited in their ability to rollout large variances of new product recipes. Traditionally, each new recipe has required fabrication and installation of its own batch mixing system. These systems are equipped with cumbersome mixing tanks that use a large amount of floor space, not to mention your budget.

An inline blending system is smaller, less expensive and provides greater flexibility when introducing new product recipes. By dosing ingredients into the run after the initial batch, an inline blending system allows manufacturers to produce multiple flavor or fragrance variants for a given product without the bulky, expensive equipment.

In this [case study](#), you'll learn how a project manager added 20 new flavors to his company's flavor manufacturing line, while also reducing capital costs with the help of a consultant experienced in managing projects for his particular industry.



## Upgrading Automation and Control Systems Without Interrupting Production

In manufacturing, downtime is never a good thing. When your product is in demand, every minute of production lost translates directly into lost revenue. So, what happens when you need to update your PLC to avoid obsolescence? Find a process engineering consultant with automation integration experience.

In this [final example](#), EPIC Systems worked around the clock for seven consecutive weekends to convert the outdated PLC5 chassis and associated I/O to a new ControlLogix platform without interrupting the client's weekly production schedule. Sometimes, the solution truly depends on the character and work ethic of your chosen process engineering consultant.



## Working with EPIC Systems

How do we know so much about process engineering consultation for consumer products companies? Since 1995, we've been helping project managers like you solve manufacturing challenges for products including cosmetics, batteries and electronics, personal care products such as soaps and shampoos, pet care products, child care products, home care products and more.

We make project management easy because we've been where you are. EPIC's process and automation engineers have experience in the industries we serve. We have first-hand experience overcoming the challenges associated with running and maintaining consumer products plants. Below is a list of the services we provide as process engineering consultants.

- **Concept Development** – You bring the process technology and we'll help design your system
- **Front-End Loading (FEL2, FEL3)** – Conceptual development of projects and preliminary system design
- **Process System Design** – Detailed process system design with 3D modeling and simulation
- **Controls Engineering** – In-house controls developed by automation engineers
- **Fabrication & Assembly** – Production-style skid fabrication in controlled shop conditions
- **Process System Installation** – Minimal production downtime and faster system startup
- **Startup & Commissioning** – We'll remain onsite during full startup, punchlist resolution and staff training

## When Should You Contact a Process Engineering Consultant?

The sooner you contact a process engineering consultant the less risk you take on. If your consultant truly cares about providing you with the best solution possible, they'll want to partner with you early on to leverage your combined knowledge from the very beginning. Kicking this partnership off in the concept development phase allows you to align on a single solution to complete the project quickly, safely and on budget.

To speak with a process engineering consultant today call [314-310-1549](tel:314-310-1549) or [contact EPIC online](#).



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