

The Advantages of Toll and Contract Manufacturing

Developing On-Demand Services in Manufacturing

Consumers have grown accustomed to getting what they want, when they want it —services like Uber, Seamless, and Netflix are examples of how this on-demand business model can be successful. What if the on-demand model could be expanded to the manufacturing space?

Contract and toll manufacturing are prime examples of how the industry is ripe for the instant gratification marketplace. These two supply chain management strategies use the “sharing economy” model of on-demand services to help customers save time and money during product development.

Toll versus Contract Manufacturing

In toll manufacturing, a company provides a third party with raw materials to complete the manufacturing process for them. The toll manufacturer, equipped with the necessary production equipment and specialists, charges the company a fee (a toll) to finish the job.

Contract manufacturing is a similar process, except the contract manufacturer is responsible for sourcing raw materials in addition to making the product,

meeting customer specifications, and adhering to delivery time requirements.

The Cost-Saving Benefits



OEMs and other industrial manufacturers can apply the on-demand service model to their businesses by taking advantage of toll and contract manufacturing.

By going to a third-party when they need specific services, companies avoid the investment required for additional equipment, facilities, and employees. In turn, they receive the services they need, when they need them, while saving time and money.

This on-demand service model is ideal for new product development, seasonal projects, and testing products by utilizing a variable-cost operation.

Contract and toll manufacturers allow companies more flexibility no matter what stage of production they are in. During product development, for example,

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companies can contract a manufacturer to begin production while still building their own facility.

They can also reach out to contract manufacturers for assistance producing high-quantity orders during overflow production or to help source and test materials during first-run production.

Sierra Coating operates as a toll and contract manufacturing organization (CMO) providing critical on-demand [laminating services](#) to our customers. To learn more about this model and the financial advantages of employing a contract or toll manufacturer, download a free copy of our eBook, “The Financial Case for Contract Manufacturing.”



Why Raw Material Planning in Manufacturing is Essential

You've heard the terms "toll manufacturing" and "contract manufacturing" before. In fact, you may have even read about them last year in our blog on toll manufacturing versus contract manufacturing.

Toll and contract manufacturing are both advanced tools for supply chain management. These types of manufacturing processes are usually utilized in new product development. They are very similar processes that can often be confused. There's an important, yet often overlooked, difference between the two.

Toll versus Contract Manufacturing

When you work with a contract manufacturer, you are essentially partnering with an independent manufacturer — they will source all of the raw materials, manufacture the contracted part, and deliver a completed product to you. In toll manufacturing, the company will manufacture your part, but you or an additional third-party is responsible for sourcing and delivering the raw materials.

The difference between the two lies in who is responsible in the risks associated with raw material planning. These risks often include the price, quality, and

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delivery of the raw materials. Toll manufacturing is often done by a raw material manufacturer to create a new product line for the company.

The toll manufacturer is assuming the risks associated with raw material planning and product manufacturing. Whereas contract manufacturing is considered a turnkey solution for clients, where the contract manufacturer is responsible for raw material planning and product manufacturing dates.

Why Raw Material Planning Matters



Businesses, manufacturers in particular, are increasingly relying on Just-in-Time (JIT) and other similar manufacturing processes. The JIT process is an inventory strategy to reduce costs associated with product storage.

A key element of JIT and related processes is raw material management. The entire process relies on the requisite materials being delivered to where they are needed at the time when they are needed, creating a steady inflow of material

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and outflow of completed parts. Sierra Coating specializes in raw material planning, skills which we put to use when partnering with you as a toll or contract manufacturer.

We maintain an in-house team of experts dedicated to raw material planning a wide variety of chemicals that we use during coating processes. The team includes a logistics planner, a raw material planning specialist, and two dedicated chemists. Our team procures the chemicals that your product requires, testing them on production equipment to ensure the product functions properly.

Trusting Your Partners with JIT Manufacturing

Though extremely important, raw material planning is only one part of a multi-stage process — JIT and other production streamlining methodologies must be maintained throughout the entirety of a production process in order to be effective.

At Sierra Coating, we follow through. After testing and procuring high-quality raw materials, we can manufacture and ship your products on a JIT schedule. Our raw material team works hand in hand with our manufacturing team to ensure that every step of the process runs seamlessly.

To learn more about the benefits of working with a toll and/or contract

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manufacturer, download our free eBook, The Financial Case for Contract Manufacturing.



Finding a Cost-Effective Poly Replacement for Packaging

The Move to Eco-Friendly Packaging

Over the past several years, businesses across multiple industries have taken a growing interest in environmental sustainability. The packaging industry plays a critical role in this movement, as packaging is often the first thing a customer

notices about a product. As such, companies are tasked with reconciling environmentally-conscious material selections with cost-effective production.

Petroleum-based plastics, though affordable and easily sourced, are nearly impossible to recycle, The Guardian recently explained; they litter the Earth and pollute oceans forever without biodegrading. Instead, packaging companies must seek out alternatives to create more sustainable solutions. Even candy manufacturers are now looking for eco-friendly wrappers, using wood-based materials and non-toxic ink to create a compostable solution.

Replacing PVC and Plastics in Packaging

Recognizing this shift toward sustainability, Sierra is seeing a growing opportunity to replace polyvinyl chloride (PVC) and other harmful plastics with greener, biodegradable package made with paper. This is especially relevant to blister packaging; because it cannot be recycled due to mixed material limitations, the packaging tends to wind up in landfills.



PVC and low-density polyethylene (LDPE) resins, found in many of today's packages, are neither recyclable nor biodegradable due to their use in a package

design. When exposed to high temperatures, these wrappers can also release toxic fumes and dangerous chemicals into the environment.

Plastics, which for many years held the advantage over paper for being heat sealable, have finally met their match. Sierra has developed innovative paper-based blister pack technology to reduce or replace PVC, LDPE, and other harmful plastics commonly used in packaging structures.

These paper-based recyclable coatings provide protective features that can compete with traditional packaging — but without the negative side effects. Both environmentally friendly and affordable, Sierra's blister packs can be heat sealed while still allowing products to biodegrade much more easily. These state-of-the-art "green" coatings can be used to design packages that reduce PVC or replace poly coatings.

Creating a Cost-Effective Poly Replacement

Many companies are seeking affordable poly-replacement materials that will allow their packages to biodegrade, allowing them to position their products as environmentally friendly. For decades, this was a high-priced specialty order, but now Sierra is working on closing the gap on cost-effective poly replacements with paper-based packaging like blister packs.

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Until recently, green packaging solutions only existed on a small scale due to relatively higher costs compared to polys. As more brand owners respond to customer desires for an environmental solution, innovation has created alternative options that are reducing costs. Sierra continues to source and test these innovative coatings to drive this technology into the mainstream.

To learn more about the benefits of blister packages, as well as what to consider when designing them, download our eBook, “Critical Elements of Blister Packaging.”

Download
the eBook



Download our
**Guide to Critical Elements
of Blister Packaging**

Join Us at Lambeau for the 2016 Converters Expo

North America's biggest packaging show is right around the corner. The 2016 Converters Expo will be held in Green Bay, Wisconsin on April 13th and 14th at the legendary Lambeau Field. Our Sierra Coating team will be at booth #A213, ready to welcome our old colleagues and connect with new show attendees.



We are looking forward to showcasing our full array of packaging services at the upcoming event. From initial concept to full-scale production, we cover a complete range of coating and laminating services. These include our cutting edge eco-friendly and high barrier coated paper, which combines superior product protection and sustainable packaging, and our food grade packaging and made-to-order products, which fulfill our customers' most challenging specifications.

Education, Networking, and More

The Converters Expo is a one-of-a-kind opportunity for paper, plastic, film, and non-woven packagers and converters to meet industry buyers and suppliers. Last year's event set a new record for attendance, and this spring's expo is promising to be bigger than ever.

Over 75 exhibitors are already enrolled for the 2016 event, and attendee registration numbers continue to grow. Event attendees will have the opportunity to see the latest and most advanced products while learning from the industry's top professionals. All participants will gain access unparalleled educational opportunities, including discussions about the newest trends, techniques, and advancements in the industry.

The following industries represent just a few of the exhibitors planning to present at the upcoming expo:

- Coating and lamination
- Folding and finishing
- Printing
- Automation
- Packaging, warehousing, shipping, and logistics



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Sierra Coatings: Contract Manufacturing On Demand

In today's on-demand world, contract manufacturing is booming. With a full range of coating treatments and lamination adhesive services available from companies like Sierra Coatings, customers no longer need to purchase their own equipment or build additional facilities to finish their products. As highlighted in a recent LinkedIn article, companies can leave this work to a contract manufacturer, thereby lowering costs and upfront investment while reaping the benefits of increased efficiency and streamlined production processes.

At Sierra Coatings, our services are an important manufacturing step for many customers whose products require films, paper, or nonwoven materials. Customers save time and money by letting us help with product development — no new machines required. With our highly advanced equipment, we can produce in any volume our customer needs — from prototypes to large scale runs.

We Look Forward to Meeting You

Learn more about our full range of coating and lamination services while networking at the largest expo in the industry of its kind, but be sure to sign up quickly before the event is full. [Click here to register for the Converters Expo](#), or

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contact us today if you would like to find out more about our capabilities at Sierra Coating.



Paper Coating Needs Increase Annually

The need for paper coating is on the rise with online shopping as one driver in this increase. Each year during Thanksgiving weekend, shoppers are turning to their computers and cell phones more and more to find the perfect gift or the best deal. More online shopping means more packages to ship, and more paper to coat.



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Paper coating demand is expected to rise to more than 3.2 million tons of material by 2020 from 2.4 million tons of material in 2014, according to a new report from Smithers Pira, a leading expert in packaging, paper and print market trends worldwide.

This increase in demand is partially due to the need for more packaging per year, including packaging for items purchased online.

With more and more retail customers choosing to stay home to shop, packaging needs are on the rise. For example, Thanksgiving weekend in 2015 saw \$11 billion in online sales from Thanksgiving Day through Cyber Monday.

Adobe Systems' market research also noted Cyber Monday hit a record high at \$3.07 billion in sales this past year. Evidently, shipping and packaging are on the rise, which correlates to paper coating increases, as well.

In general, more than 30 percent of paper-based packaging has some kind of coating as a barrier or as another function, and this statistic includes the 100 percent of liquid packaging requiring a coating. These paper coatings can be a compound or polymer to impart weight, gloss, or lower ink absorbency on the paper surface.

As one of the most advanced paper coating companies in the industry, we plan to continue providing the best service and products in coatings. Three coaters help us support industry needs—two that are equipped with flotation dryers and

one that is equipped with hot melt gravure coating.

Our wide web coaters can work with paper rolls as large as 62 inches wide. These same coaters are specially designed for low or high coating weights. Methods include the following:

- Gravure
- Direct reverse gravure
- Offset gravure
- Roll coating
- Offset pattern
- One color offset print
- Pan with trailing blade and roll coating
- Slot die

Our Hot Melt Coater and Laminator can use an offset gravure coating method. Its thermoplastic melting point is at 300 degrees Fahrenheit, or 149 degrees Celsius. Overall, our equipment is capable of laminating multiple layers of similar or different substrates.

Specific food-grade paper and our FDA-approved coating surfaces can be produced to the most specific of formats and requests for various packaging coating purposes.

With the paper, packaging and coating industries only expanding, Sierra Coating



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Technologies is ready to help with projects of many sizes and difficulty. Having already worked successfully on dry food packaging coating many times, we know the best procedures and back them with quality work and industry standard adherence.

Whether it is for mass production of paper coating for packages containing liquid products or for other packaging needs, Contact our team today to learn more about how we can help you with your coating needs.

Eco Friendly Packaging & Poly Replacements

As more brands seek to adopt environmentally conscious practices, the demand for eco friendly packaging increases. Poly replacement coatings for food packaging have historically been more expensive than standard poly materials.

Bridging the Gap Between Cost and

Performance

The team at Sierra Coating aims to bridge the gap between cost and performance. Though the cost of poly replacements, polyvinyl chloride (PVC) replacements, and other eco friendly coatings are steadily decreasing, we're working to hasten that process. Chemical experts at Sierra are equipped with the knowledge and experience to provide a wide range of eco friendly solutions by sourcing coatings and substrates to replace plastic in packaging.

Over the years, our team has orchestrated and contributed to a number of environmentally friendly packaging development projects, working with the nation's leading chemical companies to deliver eco friendly coating solutions.

RELATED: Taking the Eco-Friendly Packaging Leap

The Sustainable Packaging Movement

Driven largely by the desires of consumers and major retailers, the packaging industry has been moving toward sustainable options. Gaining momentum over the years, eco friendly efforts increased dramatically when the largest retailer in the world created an environmental impact scorecard for product packaging.

Types of Eco Friendly Packaging

There are a variety of ways to create an eco friendly package. Below are some common methods:

- Utilize recycled materials to create the package
- Manufacture a package that can be recycled
- Construct a compostable package
- Develop a biodegradable package

Why Recyclable Plastics Don't Always Work

A recyclable package can be reprocessed back into the work stream. Plastics are generally all recyclable, but several limiting factors must be taken into consideration. For example, not every county or municipality has the proper recycling laws or infrastructure to support certain types of plastic recycling. And when they do, recycling can be difficult to enforce.

Municipalities also have varying restrictions on what is recyclable – some municipalities won't accept plastics that are soiled in any way, which food packaging almost always is; some recycle limited types of plastics; and some restrict what can be recycled based on their size or shape. These restrictions and

challenges make paper-based packages with water-based, food-safe coatings attractive alternatives.

Sierra: A Culture of Innovation

Sierra Coating Technologies is proud to nurture a culture of innovation, which acts as the foundation of our business. Interested in learning how to make your packaging eco friendly? Contact our product experts today.

Toll Manufacturing versus Contract Manufacturing

Toll manufacturing and contract manufacturing are two relatively similar forms of supply chain management that are often misunderstood and confused. While both of these manufacturing options have distinct and clear characteristics, their most strategic advantage is their ability to provide customers with valuable ways to save both time and capital on their product line development.

On-Demand Service

In many ways, contract and toll manufacturing are similar to other on-demand services like Uber, Seamless, and HBO Go. They allow Sierra Coating to provide laminating or coating services on demand and as needed, as part of a “sharing economy” model that is beneficial for both the customer and the manufacturer.

“Sierra has delivered us a quality product for years, on time all the time. If there is any kind of an issue they always get right on it.”

Brian, Company is a 10-year customer

Below, we will highlight the advantages and distinctions between toll and contract manufacturing to help you make the best decision for your company.

What is Toll Manufacturing?

In toll manufacturing, one company provides raw materials (or semi-finished goods) to a third-party, who will then provide the rest of the services (manufacturing). Typically, the third-party company will already have particular equipment and organizational models in place, and they can supply subclasses of manufacturing processes for the first company for a fee – or toll.

As a toll manufacturer, Sierra Coating can provide customers with a facility and

manufacturing equipment to process their raw materials or semi-finished products. Because of this, the customer only has a variable cost of manufacturing without the financial investment in equipment, facilities, and employees. With toll manufacturing, the customer is equipped with the resources to develop their own specialty coatings or papers that Sierra Coating can use in the manufacturing process. Subsequently, the customer is able to develop the exact product they envision, without the time and capital investment of building a manufacturing operation. This significantly decreases the time required to get the product to market, as lead times for ordering and installing new machinery are eliminated.

At Sierra Coating, customers are able to supply one or more of the raw materials needed for production or, if the customer prefers, the Sierra Coating team can supply the materials.

Key Differences with Contract Manufacturing

Though contract manufacturing is similar to toll manufacturing, there are some key differences between the two. Similar to toll manufacturing, contract manufacturing involves outsourcing production processes to a third-party company. In contract manufacturing, however, the third-party company hired to produce the goods is supplying the manufacturing process as well as sourcing all



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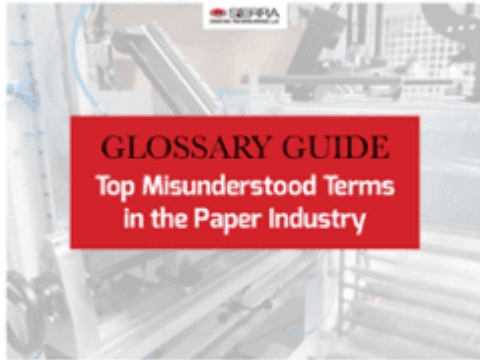
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of the raw materials. Contract manufacturing is creating a supply chain vendor for a branded, private label or custom-made product. The contract manufacturer is responsible for making the product to specification and meeting the delivery time requirements. This offers the customer a fast and effective method of extending their product line with minimal investment and a made-to-order supply program.

Helpful Resources

Sierra Coating is a leader in coating and laminating services, with over twenty years of experience providing our customers with both toll and contract manufacturing services. To learn more about the differences between toll and contract manufacturing as well as other popular paper industry terms, download our free guide, ***Commonly Misused Terms within the Paper Industry***.

If you have any questions about how Sierra Coating can help with your next toll and/or contract manufacturing project, contact us today.



MFG Day - A Time to Celebrate Entrepreneurs

Sierra Coating Supports MFG Day and the Innovators Making It Possible

On October 2nd, 2015, we celebrate American entrepreneurship with National Manufacturing (MFG) Day. Manufacturers across the country will open their doors



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for tours and educational events to raise awareness of STEM education programs and celebrate progress made within the manufacturing industry.

From new start-ups to family-owned businesses that have been crafting goods for generations, our industry would not exist without the new ideas and solutions of innovators and entrepreneurs alike. Companies, like Sierra Coating Technologies, are proud to offer the services that help bring these new projects to life.

As a contract and toll manufacturer, Sierra Coating provides laminating services on-demand for all scales and project applications — especially those that have never been seen before.

To help entrepreneurs understand the steps of taking their idea from prototype to high-volume production, our team of experts at Sierra Coating created the ultimate cheat sheet. One of the most critical keys for developing a new product design is the staging and gating process. Our team outlined four steps for young entrepreneurs to keep in mind as they pursue a new project:

1. Consult Research & Development specialists who can offer insight, experience and expertise.
2. Determine the feasibility of your project. Does it hold up to economic analysis?
3. Develop and test your prototype.
4. Continually utilize the staging and gating process to enhance the quality

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and reduce the risk of failure.

The Sierra Coating team is well-equipped to help minimize the costs and risks associated with new product development through our contract manufacturing services. The treated paper services we offer include a facility for high-volume production, and prototype development can often utilize the very same machines.

We're lucky to work with brilliant new ideas every day. Learn more about our process at Sierra Coating and how you can get a new project off the ground by downloading our new eBook, ***The Stages and Gates of Prototype to High-Volume Production***. We wish all the innovators and creative makers a happy and inspiring MFG Day!



Common Roadblocks in Product Development

In today's business world, new companies seem to sprout up all the time—and fade into obscurity just as quickly. While there isn't a set roadmap that leads to success, it's certainly helpful for companies to spend an appropriate amount of time conceptualizing their products.

You've probably heard the saying "work smarter, not harder," and that's exactly what successful companies do; they avoid poor production practices and use informed decision-making for better results. Success is never a guarantee, but if you learn to work smarter, your company can avoid common problems that inhibit product development.

Choosing the Wrong Manufacturer

It's easy to be enticed by low-cost production solutions (usually found overseas), but you need to invest in a quality manufacturer. If you entrust your product to a company that can't handle high-production volumes, or can't fully understand the design or specs of your product, find someone else to work with.

When you find a reliable manufacturer, provide them with every detail possible (metrics, tolerances, etc.) so you can both be on the same page during the development stage. Also, be sure to provide manufacturers with functional tests to ensure the correct operation of your product.

Continuously Adding Features

At some point during the development process, you or a member of your team might have ideas about features to add to the product. Though that seems like a perfectly normal practice, you must learn to avoid it and exercise the proper restraint. By continuing to add more features, you might change the intended use of the product or make it too complex for many consumers to understand.

Launching a simpler product is many times a smarter play. Don't alienate potential customers with your overloaded product; launch something simple that solves a particular problem, then learn how you can improve the product with customer feedback. You should be careful about adding excessive features to your products as it comes paired with additional complexity and expense.



Poor Balancing Between Pre- and Post-launch Learnings

You should be learning more about your product before it hits the market, but the product launch also has a lot to teach you. Once your product gets into the hands of consumers, the experience will give you greater insight on what works, and what can be improved upon.

For example, maybe after the product's launch, you realized that a certain packaging material would have suited your needs better, or perhaps the package design isn't attracting as many people as it could be. Details such as these can

help you develop an outstanding product; conduct rigorous user research to discover how to improve your existing product, and how to improve your future products.

Let Us Help You

Sierra Coating Technologies LLC can assist you with the coating or lamination portion of your product development needs. We incorporate a proven development process and share our expert ideas with you, helping you develop your intellectual property. If you require a coated or laminated product manufactured to defined quality specifications in a repeatable and economically viable process, contact us today to get started.

Sierra Coating Helps Brand Owners Shine

Establishing a Distinctive Brand with Packaging

When it comes to creating and marketing a new product, brand owners must factor various considerations. Even at the rudimentary level, entrepreneurs need their product to be fully functional, serve a meaningful purpose to consumers, and help establish a distinctive brand within a heavily saturated market.

A highly effective method for establishing your brand is utilizing top-quality packaging. Many brand owners focus more on other aspects of product development, but this is a critical mistake. In addition to safeguarding products from damage, packaging entices potential customers to learn more about the product—this promotes brand recognition, which in turn leads to future sales.



Stand Out on Retail Shelves

At Sierra Coating, we understand the importance of exceptional product packaging—there's no better way to accentuate the hard work accomplished by brand owners. To teach you the benefits of this practice, our team has created a new eBook titled ***Helping Brand Owners Shine: The Silver Box Advantage***.

This free-to-download resource provides a detailed overview on the value of packaging, and why it should never be overlooked by any brand owner.

First impressions are vital to future product success.

According to extensive market research, 31% of consumers feel packaging influences their overall product satisfaction and 37% of consumers admitted to never trying a product due to lackluster packaging. When you choose a packaging solution from our company, we can assure that your product will turn heads.

When reading the eBook, you'll become familiar with Sierra Coating's innovative silver folding carton grade made with Metalized Polyester (MET-PET) film. MET-PET is a brilliantly lustrous silver film that can be laminated and permanently adhered to SBS board stock; utilizing this material will instantly elevate your brand recognition, as the glistening finish simply cannot be ignored or forgotten by consumers.



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Establishing your brand can be difficult, but Sierra Coating's MET-PET packaging film will provide a professional edge over several other brand owners. Learn more by obtaining your free copy of ***Helping Brand Owners Shine: The Silver Box Advantage*** today.

If you have questions about the silver box advantage or our other packaging solutions, contact us today.