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A Printful custom report from the editors of Digital Commerce 360

THE SUPPLY CHAIN PUZZLE: GROWING SALES AND PROFITS AMID UNCERTAINTY

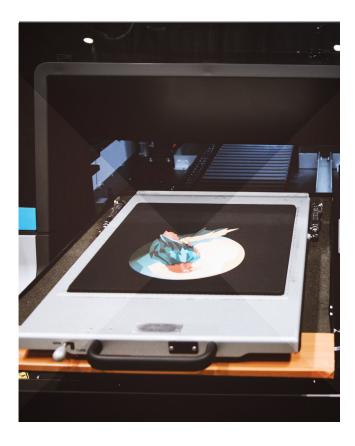
A new survey by Digital Commerce 360 reveals how retailers and brands view this challenge, the strategies they're employing and potential solutions.

May 2023

MAY 2023

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Supply and demand. They're both causing online brands and retailers headaches in today's uncertain world.

When asked about their biggest profitability challenges in 2023, among online sellers' top worries were ability to forecast demand and to react quickly to trends.

But the most-cited concern was on the supply side: 52% of respondents cited supply chain reliability among their biggest challenges.

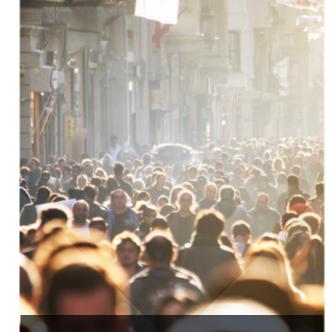
Getting merchandise to sell emerged as a huge problem during the pandemic, as Asian factories shut down for extended periods. When they reopened, the massive pent-up demand for goods overwhelmed ports, transportation services and customs clearinghouses, leading to more delays.

And supply problems persist, suggests accounting and consulting firm PwC, which surveyed 300 supply chain executives in early 2023. Only 17% say their companies' investments in supply chain technologies have fully delivered expected results. Besides worrying about supply chains and demand forecasting, online sellers have other important concerns. They rate product quality as crucially important, but lack confidence partners can deliver it consistently. They want to tap into global markets, but often find it hard to get products to consumers in other countries quickly and affordably.

How are they addressing these challenges? This report will look at the strategies of the companies surveyed—direct-to-consumer ecommerce brands, entertainment and gaming companies, apparel brands and sellers of promotional products.

Among the findings is that two-thirds of these companies are employing or testing print-on-demand, a technology that produces customized products only after consumers order them, eliminating inventory risk.

Print-on-demand services grew rapidly during the pandemic along with the growth



Who did we survey?

The data in this report reflects responses to a survey of 102 online sellers conducted in early 2023 by Digital Commerce 360.

61% of responding companies put themselves in the category of direct-to-consumer ecommerce brands, 31% as entertainment and media brands, 29% apparel brands, 17% game developers and 8% sellers of promotional products. (Some companies sell in more than one category.)

56% of respondents are based in the United States, 23% in Canada and 21% in the United Kingdom.

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Global sales of print-on-demand products is projected to grow at an annual rate of 26.2% from 2022 to 2030, to \$3987 billion.

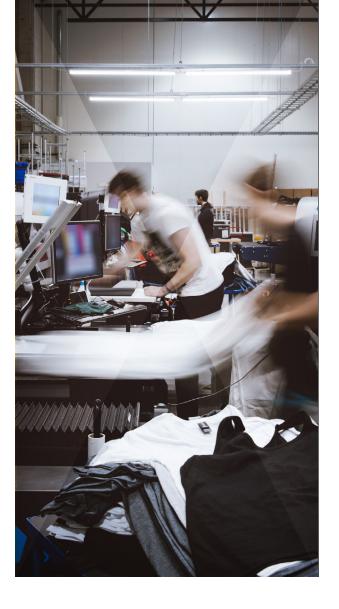
in online shopping, and that's expected to continue. Global sales of print-on-demand products

is projected to grow at an annual rate of 26.2% from 2022 to 2030, when sales will reach \$39.87 billion, says market research firm Straits Research.

Improved quality, a wider array of products that can be customized on-demand and technology innovations are helping drive that rapid growth. That's leading both start-up and such major entertainment companies as CBS and Spotify to employ print-on-demand to respond quickly with quality products and reach global markets without taking on the risk of being stuck with unsold inventory.

This report will show how online retailers and brands view their challenges of responding to rapidly changing demand at a time when supply chain reliability remains a concern. And it will show how print-on-demand can address many of the issues they face. -Straits Research





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SELLERS' GOALS AND CHALLENGES

Asked what will be crucial to meeting their 2023 business and ecommerce goals, 78% of the online sellers surveyed cited product quality, just edging out revenue growth. Of course, the two are tightly linked: Retailers and brands can only succeed long-term by satisfying their customers.

More smaller firms than larger ones (44% to 33%) cited concerns about entering new markets and having enough capital to invest (34% to 21%).

Size of company made less of a difference in several other important areas, including ensuring consistent product quality, reacting to trends and getting product to market in a timely way.

27% of all respondents cited operating sustainably as a major challenge. That's an important concern, given the high importance many consumers give to buying products that are good for the environment.

RETAILER INSIGHTS

Product quality tops even revenue in importance

How important are each of these to your overall ecommerce and/or business growth in 2023? (% saying very important)

| Product quality | _78% |
|---|-----------|
| Increasing revenue | _77% |
| Improved logistics | _ 58% |
| Being able to react quickly to trends with products | 58% |
| Testing new product and design ideas | _55% |
| Minimizing inventory risks and investments | % 54% |
| Product customization | 47% |
| Increasing assortment | 46% |
| Addressing environmental concerns, including improving sustainability efforts | _ 44% |
| Selling globally | 38% |
| Testing new business models including print on demand | _31% |
| Utilizing more third party vendors | /0 30% |
| Source: Digital Commerce 360 survey of 102 online sellers, March 2023 | |

ource: Digital Commerce 360 survey of 102 online sellers, March 2023



In a 2022 study, 66% of U.S. consumers and 80% of those ages 18 to 34—said they would pay more for sustainable products.

Brands that produce products only after they are ordered, using print-on-demand services, can tout their sustainable practices. That can be an especially strong differentiator for apparel sellers, as 30% of all clothing produced worldwide winds up going unsold and ultimately discarded. That's never the case for print-on-demand products, as those items are all sold before they are produced.

When we dug into the inventory-related problems, we found that sellers face challenges both on the supply and demand side.

When it comes to demand, they struggle to forecast accurately what consumers want. On the supply side, they cite concerns about being able to obtain inventory and suppliers ability to fulfill orders.

Sellers also face a range of obstacles to getting products to market quickly enough to take advantage of new trends.

RETAILER INSIGHTS

Supply chain issues, entering new markets and reacting to trends are key challenges

What challenges do you face when it comes to ensuring business profitability in 2023? Please select all that apply.

| A reliable supply chain | 52% |
|--|-----|
| Entering new markets | 38% |
| Consistent product quality | 37% |
| Forecasting and managing inventory levels | 34% |
| Reacting to trends | 32% |
| Taking a long time to get products to market | 30% |
| Lack of capital to invest | 27% |
| Sustainable business model | 27% |
| Overwhelmed by operational constraints | 25% |
| Inexperienced product development team | 13% |
| Lack of a global infrastructure | 13% |
| Limited design options | 12% |
| Inability to scale product catalog | 10% |
| Inability to handle peak shopping | 8% |

Source: Digital Commerce 360 survey of 102 online sellers, March 2023



Long shipping times is the top concern, with manufacturing lead times is not far behind.

The cost of bringing new products to market is also impacting more than a third

of sellers surveyed. And more than a quarter cite struggles with getting the raw materials they need, such as blank T-shirts for online retailers that sell shirts with custom designs.

RETAILER INSIGHTS

Time to market is hindered by long manufacturing and shipping times

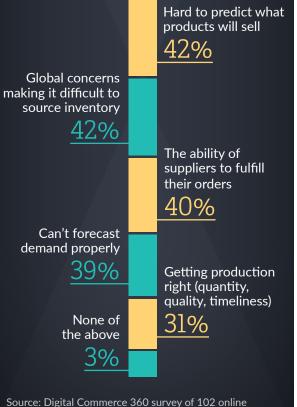
In which of the following ways is your speed to market currently hindered? Please select all that apply.

| A reliable supply chain | 37% |
|---|-----|
| Entering new markets | 34% |
| Consistent product quality | 32% |
| Forecasting and managing inventory levels | 27% |
| Reacting to trends | 20% |
| Taking a long time to get products to market | 19% |
| Lack of capital to invest | 16% |
| Sustainable business model | 13% |
| Overwhelmed by operational constraints | 9% |
| Source: Digital Commerce 360 survey of 102 online sellers, March 2023 | |

RETAILER INSIGHTS

Sellers struggle to know what will sell

Based on your experiences of the past year, what inventory-related concerns do you face as you move into 2023? Please select all that apply.



Source: Digital Commerce 360 survey of 102 online sellers, March 2023

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REACHING CONSUMERS WORLDWIDE

Ecommerce makes it possible to reach consumers anywhere, and more than half (54%) of the online sellers surveyed offer their wares to consumers outside of their home countries. Another 30% plan to start selling internationally in 2023 or 2024.

UK companies were the most likely to be selling globally today, at 67%, which is not surprising given country's close proximity to major European markets. International selling is least common among companies based in the U.S. at 49.1%. Canada, at 54.1%, comes in the middle, no doubt reflecting that many Canadian retailers sell into the neighboring U.S. market.

When asked about the chief obstacles to reaching online shoppers around the world, fulfillment is the top concern. That includes high shipping costs and long shipping times. **RETAILER INSIGHTS**

More than half of companies surveyed sell internationally

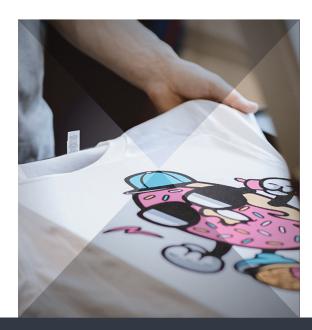
How would you describe your current reach into global markets?

| Selling globally to some markets | 39% |
|---|-----|
| No plans to sell globally | 16% |
| Planning to sell to global markets in 2023 | 16% |
| Already selling globally to most markets | 15% |
| Planning to sell to global markets in 2024 or beyond | 14% |
| None of the above | 2% |
| Source: Digital Commerce 360 survey of 102 online sellers, March 2023 | |



Nearly one in six cited inconsistent product quality, which can be a problem when online sellers rely on a variety of providers to fulfill orders in different parts of the world.

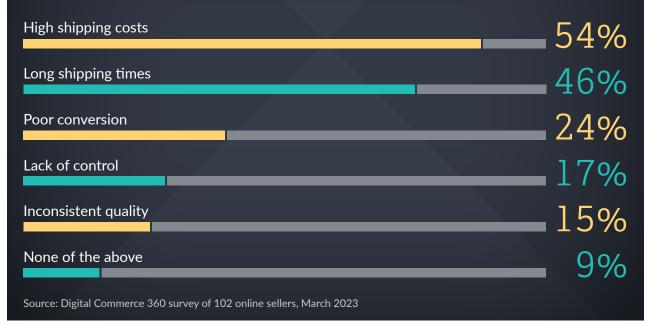
Leading print-on-demand providers can fulfill orders quickly by operating production and distribution facilities around the world. And some use the same equipment and blank stock everywhere, ensuring product quality will be consistent, whether the customer is in Australia or Brazil.



RETAILER INSIGHTS

Fulfillment is the biggest obstacle to international sales

Which of the following make it difficult for you to grow your global business profitably? Please select all that apply.



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THE QUEST FOR QUALITY

The vast majority of sellers rate product quality as important, with 50% calling it critical and 43% very important. But many feel the quality of their own products can be improved, and some struggle even to measure product quality.

Just over a third of sellers gave themselves top marks (9 or 10 on a 10-point scale) for their product quality. More than half put themselves int the pretty good category, rating their products at either 7 or 8 for quality.

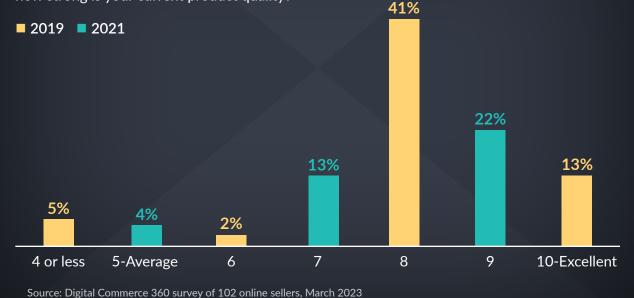
It's interesting to note that many retailers and brands lack confidence in their ability to measure product quality. Only 54% said they can measure product quality very well, with most of the rest saying they have only some ability to measure this key product attribute.

The lack of confidence in ability to measure quality may stem from the

CONSUMER INSIGHTS

Room for improvement in product quality

On a scale of 1 to 10 where 1 is poor and 10 is excellent, how strong is your current product quality?



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many ways sellers seek to benchmark themselves on quality. The most common way of measuring quality was sales growth. Apparently, sellers assume that if a product is selling well, customers must be satisfied with it. Other popular ways to assess quality include tracking customer complaints and returns. Nearly half of companies test their products, 29% track their ability to deliver goods when promised, and 23% monitor misprints and other product defects. •

RETAILER INSIGHTS How sellers measure product quality

Which of the following are ways that you currently measure product quality? (Multiple responses allowed)

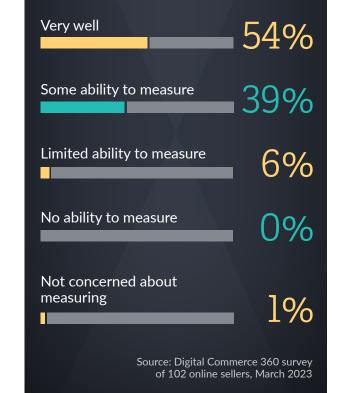
| Sales growth | 66% |
|--|-----|
| Customer complaints | 55% |
| Return rates | 50% |
| Product tests | 49% |
| Ability to meet customer deadlines | 29% |
| Number of misprints/defects | 23% |
| Confirm product blanks match set standards | 22% |
| None of the above | 2% |
| Other (user stories, knowledge) | 2% |

Source: Digital Commerce 360 survey of 102 online sellers, March 2023

RETAILER INSIGHTS

Just over half of sellers say they measure quality well

How well are you able to measure product quality?



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Source: Digital Commerce 360 survey of 102 online sellers, March 2023

HOW ONLINE SELLERS VIEW OUTSOURCED SERVICE PROVIDERS

Given the many challenges facing online sellers, it's no surprise that many turn to outside partners to manage at least some tasks. But how do they evaluate these third-party vendors?

More than anything, they look for companies they can trust and for low-cost providers. But other factors are also important, including experience and industry knowledge.

Smaller online sellers especially put a higher value on partners that can provide creative solutions (50% versus 38% for larger players.) Those smaller firms are more often to have smaller in-house teams with limited ability to innovate their way through thorny problems.

RETAILER INSIGHTS

Cost and trust are key factors when evaluating a service provider

Which of the following are ways that you currently measure product quality? (Multiple responses allowed)

Cost

| Cost | 65% |
|---|-----|
| Trust | 64% |
| Experienced team | 48% |
| Flexibility | 48% |
| Creative solutions | 44% |
| Industry knowledge | 42% |
| Responsive customer success team | |
| Ability to boost revenues | 40% |
| A solution that is tailored to our company's unique needs | 40% |
| None of the above | 38% |
| | 1% |
| | |

Source: Digital Commerce 360 survey of 102 online sellers, March 2023

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Larger companies put a greater premium on flexibility (52% to 44%), a responsive customer success team (46% to 34%) and solutions tailored to their unique needs (46% to 30%.) Bigger sellers typically sell more products into more products, and require third-party providers that can adapt to requirements that can vary significantly.

Much bigger differences between larger and smaller sellers emerged when we asked about the challenges they've encountered when working with third-party solution providers.

Smaller sellers especially complained about limited product offerings, lack of industry experience and the difficulty to achieve ROI when working with these outside services.

Larger companies were more concerned with inconsistent product quality, vendors' inability to respond quickly and their lack of flexibility.

Overall, the most common criticism was a limited product offering, but a quarter of all sellers also complained that vendors were not responsive to their unique needs.

These are all criteria sellers will want to consider when selecting vendors.

RETAILER INSIGHTS

Limits to what they offer is the biggest drawbacks to third-party vendors

Which of the following issues have you faced with third party service providers? (Multiple responses allowed)

| | Under \$10M | More than \$10M |
|---|------------------------------------|--------------------------|
| Limited product offering | 44% | 35% |
| Difficult to achieve ROI | 26% | 10% |
| A team that is not responsive to our unique needs | 26% | 25% |
| Lack of industry experience | 26% | 17% |
| Inconsistent product quality | 22% | 35% |
| Not being able to support our goals for international expansion | 22% | 23% |
| A lack of creative solutions | 22% | 27% |
| Trust | 22% | 13% |
| Inability to solve problems in a timely fashion | 20% | 29% |
| Inability to grow the business | 20% | 19% |
| Lack of flexibility/inability to scale | 14% | 21% |
| Source: Digital Commerce | $\frac{1}{260}$ survey of 102 of | nling collers March 2021 |

Source: Digital Commerce 360 survey of 102 online sellers, March 2023

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FAMILIARITY WITH PRINT-ON-DEMAND

Among the types of service providers available to online retailers and brands are print-on-demand companies that produce customized products after they are ordered and, in some cases, deliver them directly to the consumer. As we noted, print-ondemand is an increasingly popular option, with global sales of POD providers growing by more than 20% annually.

The online sellers we surveyed were mostly familiar with POD. About a quarter are using this type of service successfully and another quarter are currently testing it. 12% plan to test POD in the coming year.

Others have been disappointed with their POD experiences. 8% say they are currently using POD but find it's not meeting expectations and another 7% have tried it and discontinued it.

RETAILER INSIGHTS How online sellers view print-on-demand services

Print-on-demand (POD) is an order-fulfillment method where items are printed as soon as an order is made, often without order minimums. How familiar is your company with print-on-demand services?

We are currently testing POD services and will measure their effectiveness

| | 25% |
|--|------|
| We are currently using POD services and they have been a good addition to our business | 0404 |
| | 24% |
| We are not familiar with POD services | |
| | 14% |
| We are considering POD services in the coming year | |
| | 12% |
| | |
| We are familiar with POD services but they aren't right for our business | |
| | 10% |
| We are currently using POD services but they haven't met business expectations | |
| | 8% |
| | 0 /0 |
| We tried POD services but are no longer using them | |
| | 1% |
| | |

Source: Digital Commerce 360 survey of 102 online sellers, March 2023

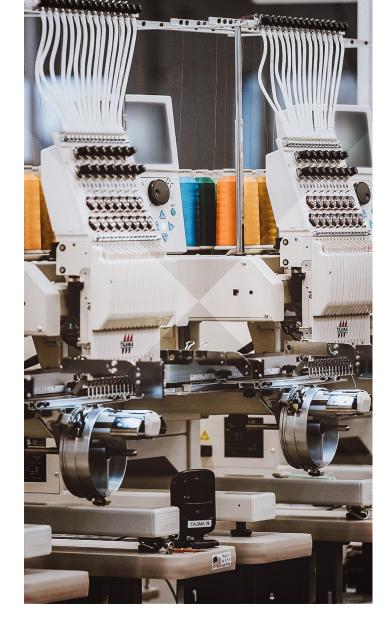
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Those results reflect the reality of the printon-demand market. Some service providers are more technologically advanced and have broader international reach, enabling them to serve clients more effectively. And the most successful ones keep improving their services.

The rapid growth in print-on-demand sales and the large number of sellers using or

testing the service suggest that many more retailers and brands will be exploring POD services in coming years. They will want to evaluate POD providers by looking at their reshipment rates, product catalog, international reach and pricing as well as seeking out current clients to learn how satisfied they are with providers' services. •





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CHOOSING THE RIGHT PRINT-ON-DEMAND PARTNER

As this survey shows, online retailers and brands want help in meeting uncertain demand at a time when supply chains are in turmoil and costs are rising. They also want partners that will be responsive to their unique needs.

Printful has emerged as one of the world's largest providers of print-on-demand services by demonstrating that it can produce a wide variety of products on demand, guarantee high quality and fast delivery, and provide marketing expertise that helps clients grow their business. Over 10 years in business, Printful has delivered 60 million items for such major brands as Coca-Cola, NBC, CBS, Star Trek, Dunkin' Donuts and Spotify for Musicians.

Here's why these brands, as well as many others, trust Printful to deliver customized products that will delight their customers:

- Printful is a vertically integrated company that handles everything from production to fulfillment to customer service. With 17 fulfillment centers around the world, it can deliver orders quickly worldwide.
- Printful uses state-of-the-art Kornit Digital printers that cost several million dollars apiece in all its production plants. "We're using Ferraris to do a simple thing: print on a T-shirt," says Printful head of marketing Raitis Purins. "No matter if you're selling five products a month or 5,000, you're getting access to the best possible printing equipment in the world." Printful also prints on top-quality blank garments from such well-known brands as Champion and Adidas.
- In order to minimize errors, Printful employs a 3-step process for quality control. The client's design file is checked and optimized, and products are checked during printing and before any item is packaged for shipment. The result: a reshipment rate due to defects of 0.26%, or one in nearly 400 products shipped.



 Printful differentiates itself from other print-on-demand companies by providing enterprise-level clients with a dedicated customer support team that works with the client year in and year out, getting to know their business and helping them increase sales. The Printful team supplies expertise on the latest features available, such as wholegarment printing and embroidery, and leverages its market knowledge to help its partners predict trends in colors, styles, and upcoming holiday sales opportunities.

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 Printful offers 360 unique products, many of which can be customized in a wide variety of colors and sizes. Clients that add new products—such as hats, beanies, leggings, mugs and posters on top of such staples as T-shirts and sweatshirts often see a big increase in average order value, says Dans Rozentals, customer success team lead at Printful. Including all the available colors and sizes, he says, "you can have thousands of products on your website, without any being produced until they're ordered."

"No matter if you're selling five products a month or 5,000, you're getting access to the best possible printing equipment in the world."

-Raitis Purins, head of marketing, Printful

 Printful keeps innovating. It can print anywhere on a garment, including the sleeves, back, even the inside label.
Printful also offers embroidery to add an elegant touch to apparel. And it's partnered with ColorReel, which developed a technology that can produce embroidery thread in any color, allowing a brand to match exactly its color palette.

When partnering with Printful, a brand, retailer, musician or graphic designer can introduce new products continuously without needing to buy inventory or equipment, or developing new expertise. They can test new ideas without risk, Rozentals says.

"You never know what will sell," he says. "You can launch many products a month and see which ones catch on."

Printful frees its customers from the time-consuming and uncertain process of forecasting demand for a new product, color or style. "We're happy to take the risk for clients, so they don't have to forecast how many shirts or other products to order." In short, Printful enables clients to do what they do best: connecting with fans and customers, creating innovative new designs, and marketing their concepts. "You don't need to invest in non-revenueproducing activities like customer support or fulfillment," Rozentals says. "Printful can do that."

Printful's capabilities are especially valuable at a time like this when inflation is driving up costs, labor is in short supply and recession fears make consumer demand uncertain. Rozentals cites the example of the owner of a retail business that prints posters who decided last year to shut down his production facility and outsource the work to Printful.

"He found managing an in-house operation was a headache and a massive expense," Rozentals says. "The owner closed that operation and now sends all orders through Printful."

Other business executives might come to a similar conclusion: A reliable print-on-demand partner can deliver a wide array of top-flight merchandise while eliminating management headaches and inventory risk. •

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Investing in the success of enterprise clients

Printful provides its most mature clients with customer success managers who use their industry knowledge to help the client grow their sales.

These Printful experts closely follow trends in online retail sales worldwide. That enables them to provide advice on which new products would fit with a client's brand, which untapped markets hold promise and how to take advantage of design trends. They stay abreast of holiday-related opportunities worldwide, and suggest new opportunities for their clients.

Each success manager gets to know the client's business and suggests ways it can be improved to keep customers coming back. That includes recommending complementary products as well as offering marketing and merchandising tips that work for other online retailers. They're always looking for opportunities and provide suggestions on how clients can utilize print-on-demand to increase sales and market through new channels.

These Printful experts have deep knowledge of Printful's ever-improving technology, partner services and product offerings, and keep clients updated on new merchandise and decorative options they can offer on their websites. They also keep up with supply chain developments to ensure that clients can deliver the products customers purchase in a timely way and with the high quality customers want.

Printful success managers maintain longterm relationships with clients, getting to know their business intimately and making sure clients take advantage of every new opportunity that arises as technology improves and consumer trends shift.

Many clients view the Printful team as integral to their operation, says Raitis Purins, Printful's head of marketing. "We're not just a printer, you get a team looking after you," Purins says. "There's no fee for using us. We need your success, because otherwise there's no business for us." ●

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Printful Enterprise is a global leader in white-label on-demand printing and fulfillment services. It helps brands build and scale their merchandise business fast and without inventory risks. Since its founding in 2013, Printful's been trusted to deliver 58M+ items and has built a global network of in-house fulfillment centers and strategic partners.

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