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Increase Brand Loyalty And Generate ROI With Improved Traceability

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Table of Contents

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Executive Summary

As enterprises adjust to evolving global trends and customer expectations, the need for greater visibility into product data is coming to the fore. For companies *and* customers, knowledge of product components' origins and where their journey to the consumer takes them is growing in importance. Companies must invest in new strategies and technologies to improve their ability to serialize and trace their products. This prevents improper reproduction or use of a company's products and enables quick recalls when problems are discovered; it also enables customers to validate products' level of sustainability. Companies and customers are more invested in sustainability initiatives throughout the supply chain, and serializing — and automating the serialization — of products provides increasing ROI.

In January 2022, Rockwell commissioned Forrester Consulting to evaluate how traceability trends are changing the way companies manage their supply chains and relate to their customers. Forrester conducted an online survey with 307 global supply chain professionals to explore this topic. We found that although companies already see some success from traceability initiatives, those that invest in serialization often see improved data ownership, save money from reduced counterfeiting and gray-market diversion, and maintain better relationships with their customers.

Key Findings

Sustainability and visibility lead the charge for better customer experience (CX). Although some companies are knee-deep in digital transformation efforts, those efforts are evolving to address the current landscape. Companies are turning to traceability to enable new sustainability and visibility-related customer (consumer) experience initiatives.

Traceability initiatives improve visibility and remedy diversion. The cost of an investment in a traceability technology can be daunting (e.g., "What if it doesn't do what we hope and we lose money?"). But the amount of money companies are losing to gray-market diversion and counterfeiting must be addressed with better data and data ownership that comes from a traceability technology initiative.

Improving and automating traceability and serialization provides the best CX through visibility and generates ROI. Counterfeiting and gray-market diversion are taking a bite out of sales income, so companies must invest in the optimization of their traceability initiatives to remain competitive and successful with their consumers.

Sustainability And Visibility Lead The Charge For Better CX

Although the spotlight has long been on supply chains as commerce embraces omnichannel, the last three years have thrown supply chain optimization gaps into sharp relief. Companies have been forced to balance the need to cater to consumers to retain brand loyalty with digitizing product offerings and scaling logistics operations. This struggle has highlighted how far companies need to go in their digital transformation journeys; responsible, customer-focused initiatives for supply chains are at the crux of the matter. Sustainability initiatives are taking the shape of reporting against environmental, social, and governance (ESG) metrics and continuing implementation of ESG-focused initiatives. This is combined with a push to improve product marketability and to cater to consumers' desires to know more about the sustainability of the products they are purchasing. To address these changing expectations around consumer needs and sustainability initiatives, companies are turning to traceability initiatives to provide more data and visibility into their supply chains, with a spotlight on serialization. With the supply chain and related data becoming less analog and more digital, companies are interested in tracing their products from acquisition of raw materials to delivery of the product to the consumer. Serialization involves tracing product paths by placing unique identifiers on products so their journeys can be tracked through the supply chain. In surveying 307 global supply chain professionals, we found that:

- **In 2022, supply chain digital transformation is all about sustainability and visibility.** Respondents said their companies' top three initiatives for the next 12 months are led by digital transformation and implementing sustainability initiatives for the supply chain. This is followed by customer-experience-related priorities like improving brand loyalty through CX, improving CX initiatives, and improving visibility into the sourcing of product components. Top digital transformation priorities mirror overall business priorities.
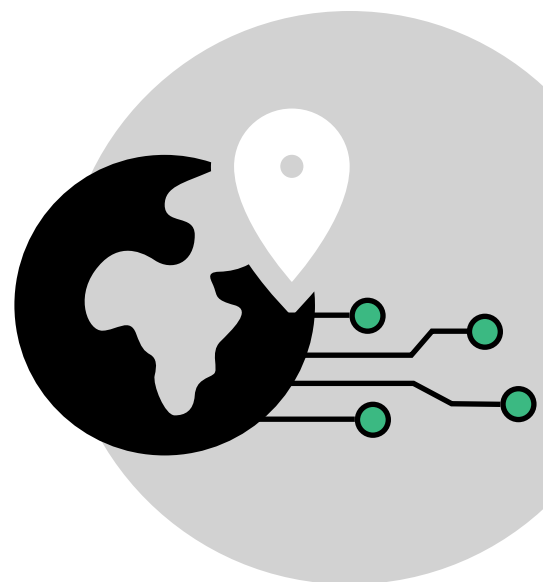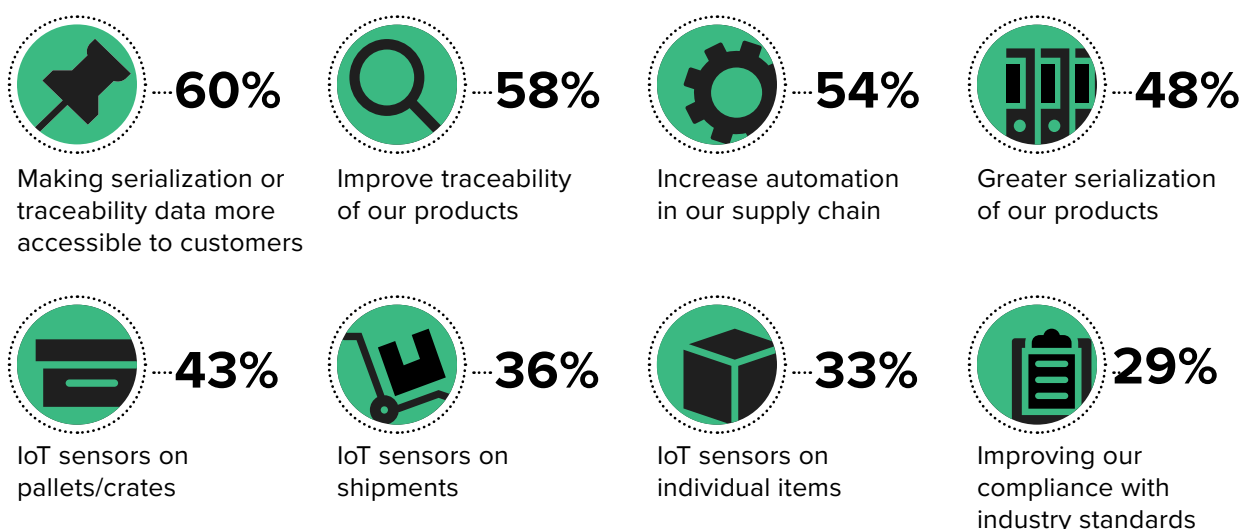
Key priorities in the digital transformation strategy are to make serialization and traceability data more accessible to customers (60%) and to improve traceability for products overall (58%). Forty-eight percent of respondents said their company is planning greater serialization of its products to support traceability (see Figure 1). But what methods are they planning to use to accomplish these initiatives?

Figure 1

"You indicated you're interested in digitally transforming your supply chain. What are your priorities for digital transformation of your supply chain over the next 12 months?"
(Select all that apply.)

60% Making serialization or traceability data more accessible to customers

58% Improve traceability of our products

54% Increase automation in our supply chain

48% Greater serialization of our products

43% IoT sensors on pallets/crates

36% IoT sensors on shipments

33% IoT sensors on individual items

29% Improving our compliance with industry standards

Base: 307 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem
Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

DATA CUTS

Initiatives vary across different geographies. North American companies are most focused on improving visibility into sourcing data and improving CX. EMEA companies are prioritizing implementing or improving ESG standards and digitally transforming their supply chains.

APAC companies' priorities mirror those of companies in EMEA, but with higher intensity: 62% of APAC respondents' companies are focused on digital transformation of supply chain, and 59% said their company wants to implement or improve sustainability initiatives. EMEA respondents indicated 46% for both.

- **Digital transformation is driving changes in supply chain strategies.** Although compliance will always be a key driver as it is mandatory/non-negotiable, other investments are being driven by sustainability and the need to put the consumer's experience first. Fifty-seven percent of respondents said their company has already implemented or is expanding implementation of initiatives that will reduce waste within the supply chain, and another 17% of said their company plans to introduce these initiatives in the next 12 months (see Figure 2). Fifty-four percent said their company currently requires suppliers to digitally report against ESG metrics, and another 20% said their company plans to do so in the next 12 months. With serialization and traceability leading the charge for continued digital transformation, what do companies expect out of this investment into better visibility of their products/product journeys?
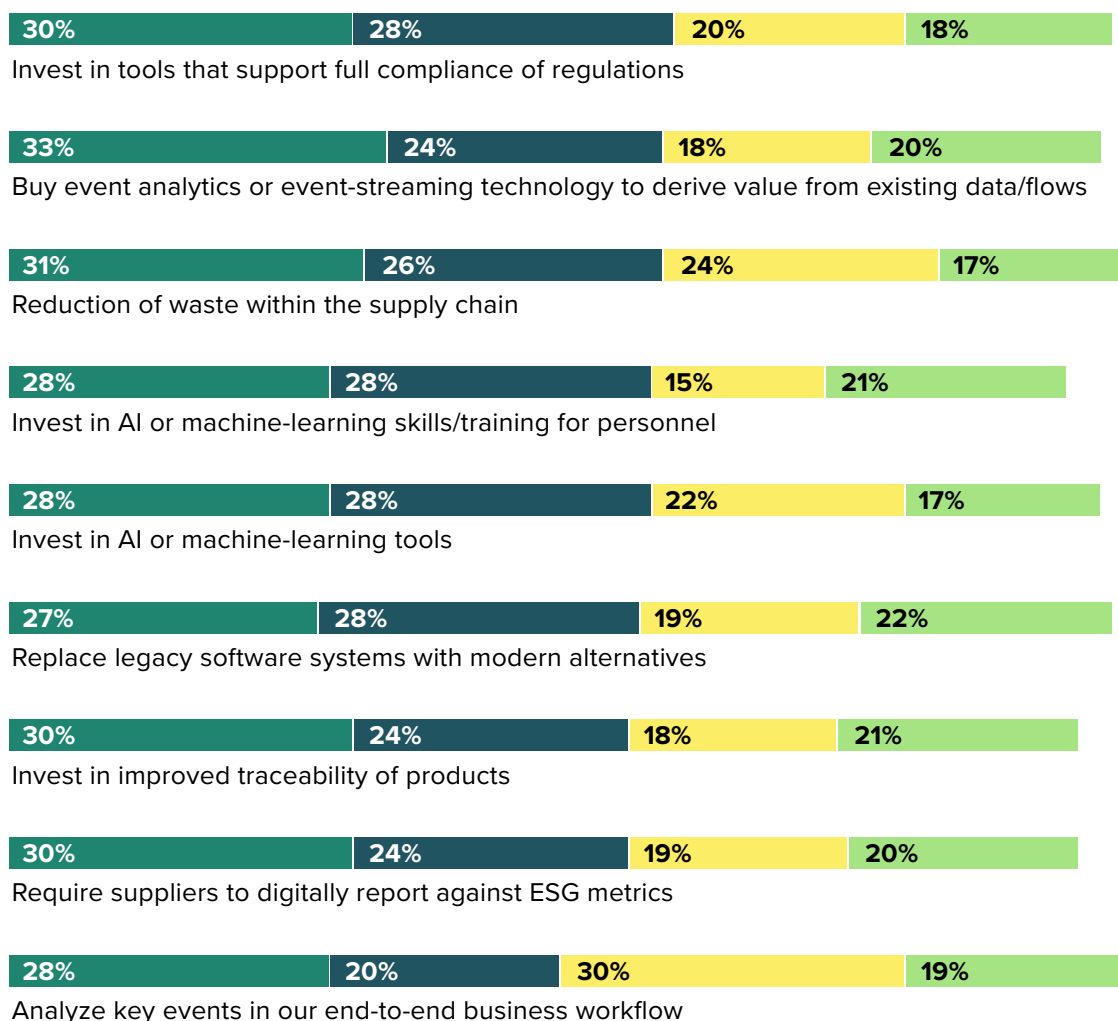
DON'T DISCOUNT DATA

Data will be foundational to these initiatives. Respondents said they know that as their companies digitally transform their supply chains, data will be critical or important for control or optimization of assets, systems, processes, or clients (81%); reduced waste (e.g., ESG initiatives) (79%); and supply chain optimization (77%).

- **Companies are driving serialization and traceability.** Companies are already investing in traceability and increasing their investments in serialization. Sixty-one percent of respondents said their company currently uses unique batch identifiers (e.g., serial numbers), and another 23% said their company plans to use them. Seventy percent said their company currently uses unique item identifiers, and 17% said their company plans to do so. But what is driving this increase in serialization and prioritization within their data transformation strategies? Compliance is typically the top driver for serialization because it's mandatory for doing business in certain industries or geographies (especially for EMEA respondents, who ranked compliance the number one driver at 58%).

Figure 2

"What are your company's plans to implement/perform the following digital initiatives related to your supply chain?"

- ● Expanding or upgrading implementation
- ● Implemented, not expanding/upgrading
- ● Planning to implement in more than 12 months
- ● Planning to implement in the next 12 months

| 30% | 28% | 20% | 18% |

Invest in tools that support full compliance of regulations

| 33% | 24% | 18% | 20% |

Buy event analytics or event-streaming technology to derive value from existing data/flows

| 31% | 26% | 24% | 17% |

Reduction of waste within the supply chain

| 28% | 28% | 15% | 21% |

Invest in AI or machine-learning skills/training for personnel

| 28% | 28% | 22% | 17% |

Invest in AI or machine-learning tools

| 27% | 28% | 19% | 22% |

Replace legacy software systems with modern alternatives

| 30% | 24% | 18% | 21% |

Invest in improved traceability of products

| 30% | 24% | 19% | 20% |

Require suppliers to digitally report against ESG metrics

| 28% | 20% | 30% | 19% |

Analyze key events in our end-to-end business workflow

Base: 307 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem
Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

The second highest driver is improved prioritization of products and improved visibility into product paths for sustainability and brand loyalty purposes. Respondents from companies in North America ranked prioritization of products as the top driver, which is 20% higher than respondents in EMEA. Regardless of the top driver, companies recognize the clear line between improved visibility into product paths and sources and improved consumer experience. Respondents indicated that improved serialization also supports another facet of generating and retaining brand loyalty: product marketability. When asked what product marketability initiatives their companies will prioritize during the next 12 months, 62% of respondents indicated that the number one initiative will be to use traceability to improve the customer experience and products. More than half (54%) said their company also plans to use traceability to innovate and improve its products (see Figure 3). Traceability and serialization will be key to improving CX and products.

83%

of respondents said proper traceability/serialization of their company's products is very or extremely important to staying competitive in the market.
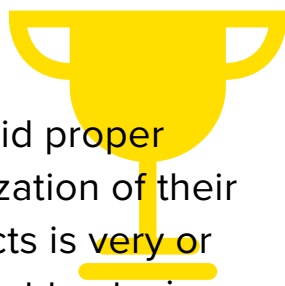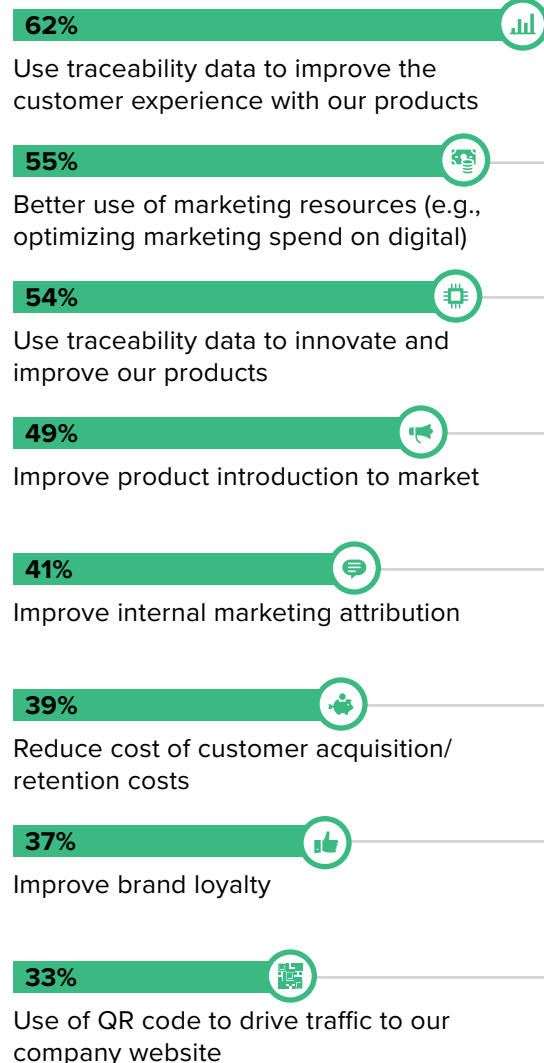
Figure 3

"What product marketability initiatives are you prioritizing over the next 12 months?"
(Select all that apply.)

62%
Use traceability data to improve the customer experience with our products

55%
Better use of marketing resources (e.g., optimizing marketing spend on digital)

54%
Use traceability data to innovate and improve our products

49%
Improve product introduction to market

41%
Improve internal marketing attribution

39%
Reduce cost of customer acquisition/ retention costs

37%
Improve brand loyalty

33%
Use of QR code to drive traffic to our company website

Base: 307 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem
Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

When products are sold outside normal distribution channels with no relationship to the original manufacturer, manufacturers lose revenue; this is called gray-market diversion. Similarly, when unaffiliated suppliers create counterfeit products to sell under a knockoff brand name, the original brand loses revenue. Traceability and serialization can help by adding structure and verifiable data to products and the supply chain. The challenges of gray-market diversion and counterfeiting underscore the need to adopt greater levels of traceability. But even with the clear need to improve serialization and traceability methods as part of a larger digital transformation effort for the supply chain, companies face hurdles when adding these methods to their strategies.

76% of respondents said the ability to prevent counterfeiting would be important or critical to the success of their company.

- **Companies must tackle technical and business challenges to increasing serialization and traceability.** Most of the technical challenges to implementing new traceability and serialization strategies are what would be expected from implementing any new technology. Respondents said their companies are concerned about the complexity of integrating with existing equipment (43%), lack of sufficient standardization, (36%), data-quality issues (35%), and difficulty stitching digital models together (35%) (see Figure 4). Companies can address these challenges through the use of a third-party integrator or by automating the traceability of their supply chains. As for business barriers, companies want to be sure of their investments. They are concerned that there will be a lack of clear return on their investment, the cost to implement could be high, and internal teams may not be aligned enough to get the most out of their investments.
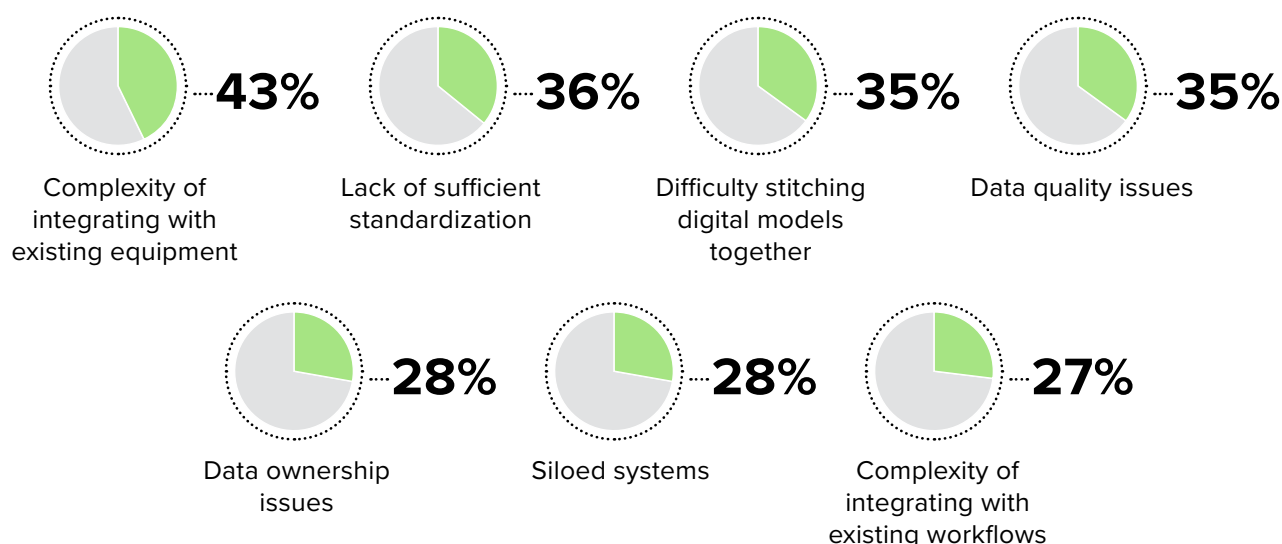
Figure 4

"What have been/would be the technical challenges of implementing traceability and serialization?"
(Select all that apply.)

43% — Complexity of integrating with existing equipment

36% — Lack of sufficient standardization

35% — Difficulty stitching digital models together

35% — Data quality issues

28% — Data ownership issues

28% — Siloed systems

27% — Complexity of integrating with existing workflows

Base: 307 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem
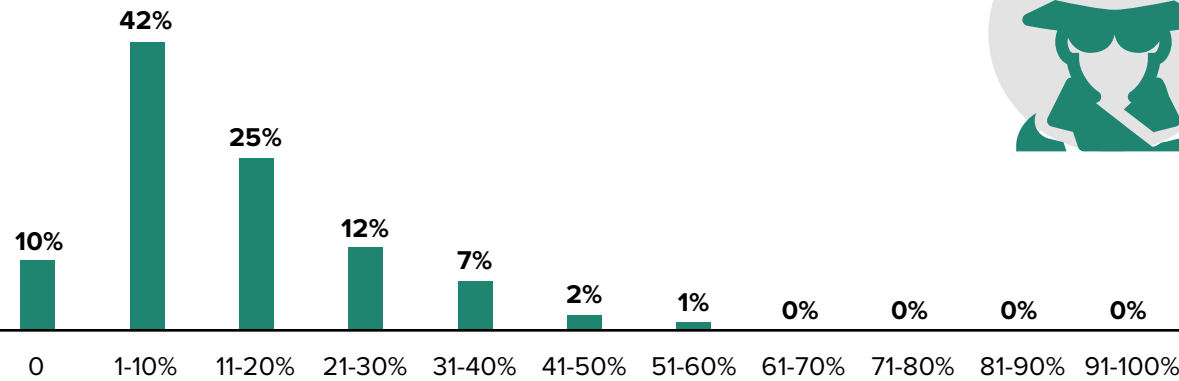Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

- **Gray-market diversion and counterfeiting take a bite out of sales income.** ROI is not just about cutting costs; it is also about increasing revenue. Companies are losing a large share of sales income to gray-market diversion and counterfeiting, both of which could be reduced through adoption of traceability and serialization methods. Eighty-seven percent of respondents said counterfeiting is problematic for their company, and nearly half (47%) said their company loses between 11% and 60% of sales income each year to counterfeiting. It is especially troublesome for APAC companies; 65% of respondents in that region reported that their company loses between 11% and 60% of its sales income compared to 41% of respondents from companies in North America and 33% from companies in EMEA. Seventy-six percent of respondents said the ability to prevent counterfeiting would be important or critical to the success of their company. Eighty-nine percent said gray-market diversion is problematic for their company,

and 56% reported that their company loses between 11% and 60% of sales income each year to gray-market diversion (see Figure 5). When it comes to counterfeiting, APAC companies are most affected, with 70% of respondents reporting that their company annually loses between 11% and 60% of its sales income compared to 54% of respondents from companies in EMEA and 44% from North America. If enterprises were truly worried about cost, they would adopt the technologies that would enable them to save these lost profits.

Figure 5

"What percentage of sales income do you estimate your company loses each year due to counterfeiting of your products?"

0	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
10%	42%	25%	12%	7%	2%	1%	0%	0%	0%	0%

"What percentage of sales income do you estimate your company loses each year due to gray-market diversion of your products?"
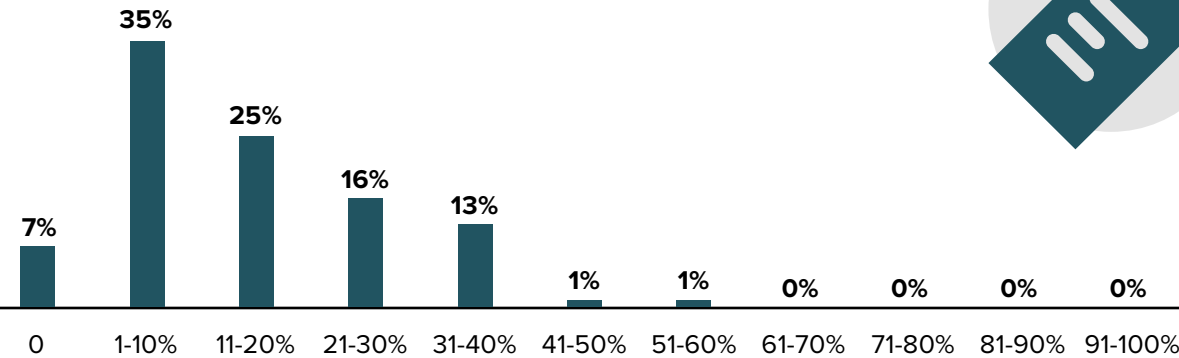
0	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
7%	35%	25%	16%	13%	1%	1%	0%	0%	0%	0%

Base: 307 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem
Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

EXTENDED DATA CUTS

- Mid-size companies and those in APAC particularly struggle with counterfeiting and gray-market diversion. It is most common for companies in North America (44%) to lose between 1% and 10% of sales income due to gray-market diversion, and this is similar for EMEA companies (37%). Companies in APAC also stand out with 44% losing between 11% and 20% of sales income due to gray-market diversion.

- **Product marketability also stands to benefit from better data.** The connection between company data and the consumer experience is growing as more data becomes available to consumers, creating competition around visibility. Companies want to create better avenues for sharing this data, but they face challenges. More than half of respondents said their company struggles to provide the best CX with the data it has. This is followed by a lack of consumer visibility into the data the companies do have. Not only do they need to update their methods of collecting this data through improved serialization of products on their journeys, but they must create new pathways to share this data with customers. The first step is clear: Generate valuable data (e.g., verify authenticity, provide transparency of ingredients, support evidence of corporate carbon-neutral commitments) to share with the consumer base to retain customer loyalty.

Respondents cited cost as the leading barrier to traceability and serialization adoption, so the challenges must be weighed against the benefits. Enterprise initiatives focus on the continued digital transformation of the supply chain, increasing sustainability within supply chains, and providing a better consumer experience through improved visibility. Traceability — specifically serialization — can provide the data and product ownership necessary to generate those types of value for companies and their customers. Automation is available to circumvent any outstanding technical challenges.

- **Traceability and serialization help businesses to stay competitive and retain customers.** Companies are aware that the results of product traceability are critical to business success. Respondents said having full visibility into where their companies' products are (79%) and having the ability to quickly recall the right products (78%) are important or critical to the success of their businesses. This is followed by improved brand loyalty through better product management (77%). Seventy-one percent also cited the importance of being able to provide ethical sourcing information (see Figure 6). This tracks with the number of companies demanding that suppliers provide tracking against ESG metrics.

Figure 6

"How important are the following outcomes of product traceability to your company's success?"

● Critical   ● Important

| 43% | 37% | 79% |

Full visibility into where our products are

| 33% | 45% | 78% |

Ability to quickly recall the right products

| 35% | 43% | 77% |

Improve brand loyalty through better product management

| 35% | 41% | 77% |

Easily meet regulatory requirements (e.g., reporting)

| 38% | 38% | 76% |

Ability to prevent counterfeiting

| 32% | 39% | 71% |

Improved ability to provide ethical sourcing information

Base: 307 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem
Note: Total percentages may not equal separate values due to rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

DATA CUTS

Smaller companies are reaping the foundational benefits of improved traceability within their product marketability efforts, while larger companies are leveling up even further with their newfound traceability data. All respondents from companies with 100 to 499 employees said their company enjoyed improvement in product quality from improving product traceability/serialization. Companies with 5,000 to 19,999 employees saw the most improvement in new product innovation, and all of these companies (including those with 20,000 employees or more) experienced better use of marketing resources due to these initiatives. But one thing got high scores across companies of all sizes: increased brand loyalty.

- **Improved traceability is also important for brand loyalty and product marketing.** Although nearly half of respondents said their company sees compliance benefits from adoption of serialization and traceability methods, other benefits mirror companies' hopes for their digital transformation investments related to CX. More than half of respondents indicated that improving traceability would enable better use of marketing resources to better reach customers, increase brand loyalty, and offer new product innovation.

- **Automating serialization and traceability solves any complexities in implementation and data analysis.** The benefits of investing in automation of serialization mirror the technical challenges companies face when adopting serialization in the first place. The top three benefits to automation are reduced complexity in integrating with existing equipment, improved data quality, and improved ability to stitch digital models together. Having an understanding of how critical data is to the success of the business makes automation of serialization key as it improves data quality. In terms of benefits to the business overall, nearly half of respondents said their company has experienced or expects to experience improved alignment of internal teams and leadership; they also said their companies have seen or expect to see an increase in brand loyalty and the ability to garner executive buy-in and budget.

Once decision-makers adopt automation technology that makes the most of their investments in traceability and serialization, the benefits will be evident, and executives will be ready to allocate more budget to facilitate continued success. Additionally, easing the process of integration with existing technologies will take the burden of analysis away from employees, which will free workers to spend more time on revenue-generating tasks.

- **Looking for quantifiable ROI from traceability efforts poses no problem.** Though respondents said the number one challenge to investing in improved traceability technology is the cost of the new technology, enterprises must consider the cost of not investing. Problems that take a chunk out of sales income — like counterfeiting and gray-market diversion — can be addressed by investing in traceability and serialization. The amount of sales income available to be reclaimed through improved knowledge of the product journey is significant; of respondents from companies that have already invested in methods of serialization, nearly half (45%) said their company has seen an increase of more than 31% in sales income, attributed directly to serialization. Only 1% said their company has not realized any sales ROI from adopting methods of serialization (though 3% said their company does not have the attribution structure to attribute sales to serialization) (see Figure 7).

DATA CUTS

Companies of different sizes are experiencing different amounts of increased sales due to the serialization of their products. Although 98% of all respondents said their company sees an increase in sales due to serialization of products, 26% of those from companies with 1,000 to 4,999 employees said they see a 31% to 40% increase in sales. Companies with 5,000 to 19,999 employees aren't far behind; 28% of respondents from such companies said their organization sees a 21% to 30% increase.

Figure 7

"You indicated that you use methods of serialization on your products. Have you seen an increase in sales due to the serialization of your products, and if so, what was the size of the increase?"
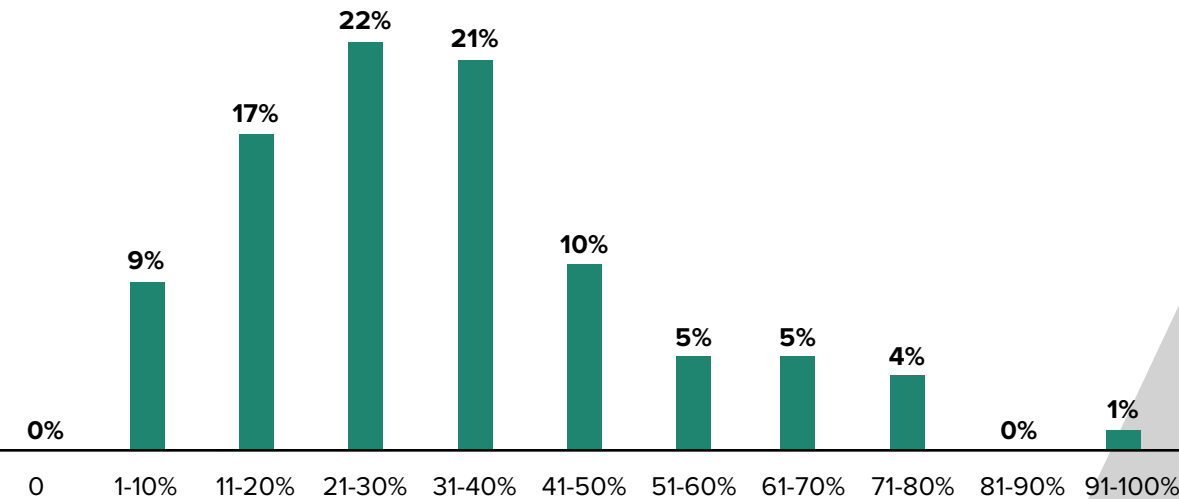
Base: 259 global supply chain professionals tasked with planning, implementing, and measuring traceability and serialization within their organization's ecosystem

Source: A commissioned study conducted by Forrester Consulting on behalf of Rockwell, January 2022

Key Recommendations

Forrester's in-depth survey of 307 global supply chain decision-makers about their company's interest in or use of traceability and serialization solutions to optimize their supply chains yielded several important recommendations:

Accentuate the positive.

Serialization and traceability efforts get a bad rap: Either they're all about checking compliance boxes for auditors and inspectors or they just exist to reassure consumers that some expensive item is not a fake. Those capabilities are important, but the same technologies support more uplifting use cases, too. Rather than scaring a prospective buyer into confirming the authenticity of their expensive purchase, why not encourage them to explore its journey from the point of manufacture? This feel-good use case uses the same technology and the same data, but it may also increase positive brand associations.

Combine use cases to maximize ROI.

There are multiple justifications for investing in serialization and traceability solutions, from regulatory compliance and counterfeit prevention to sustainability and consumer engagement. Rather than building a separate case for each, look for opportunities to kill at least two birds with one stone.

More regulation is coming, so get ahead of it.

Governments and regulators will require more traceability up and down the supply chain. Rather than waiting until required to act, take the opportunity to invest and realize value today. Cost-cutting competitors will soon be forced to follow suit. From 2023, Germany's new Supply Chain Due Diligence Act will require any business with a significant presence in Germany to assume some responsibility for human rights and environmental violations throughout its supply chain.[1] From 2027, point-of-sale devices in the United States will be expected to support GS1's Digital Link specification, turning the humble barcode into a web-enabled connection to product recalls, supply chain data, and more.[2]

Appendix A: Methodology

In this study, Forrester conducted an online survey of 307 global supply chain decision-makers at organizations in North America, APAC, and EMEA to evaluate their organizations' approaches to traceability and product serialization. Survey participants included decision-makers with purview over supply chain decisions and budget. The study began in December 2021 and was completed in January 2022.

Appendix B: Demographics

GEOGRAPHIES	
United States	25%
United Kingdom	16%
China	12%
India	11%
France	9%
Germany	9%
Canada	8%
Australia	8%
New Zealand	2%

NUMBER OF EMPLOYEES	
20,000+	15%
5,000 to 19,999	29%
1,000 to 4,999	33%
500 to 999	17%
100 to 499	1%

INDUSTRY (SHOWING 2% AND ABOVE)	
Manufacturing	17%
Financial services and/or insurance	13%
Technology and/or technology services	10%
Food and/or beverage	8%
Construction	8%
Healthcare	7%
Electronics	7%
Life sciences	5%
Business or professional services	4%
Retail	4%
Consumer services	4%
Chemicals	3%
Transportation infrastructure	2%

ANNUAL REVENUE (USD)	
>$5B	13%
$1B to $5B	40%
$500M to $999M	47%

RESPONDENT LEVEL	
C-level	18%
VP	21%
Director	30%
Manager	31%

DEPARTMENT	
Operations	30%
Finance/accounting	27%
Marketing/brand operations	24%
Supply chain/logistics	14%
Legal/compliance	5%

Appendix C: Endnotes

[1] Source: "Act on Corporate Due Diligence in Supply Chains," Federal Ministry of Labour and Social Affairs (https://www.bmas.de/EN/Services/Press/recent-publications/2021/act-on-corporate-due-diligence-in-supply-chains.html).
[2] Source: GS1 Digital Link, GS1 US (https://www.gs1.org/standards/gs1-digital-link.)