The Importance of Brand Value

Branding—that is, the use of a name, term, design, symbol, or other feature that identifies one’s goods and distinguishes them from another’s—is critical for firms seeking to differentiate their products and to communicate their value. In one survey of corporate executives and board members, 78 percent identified brand strength as fundamental to business success. Intangibles, including brand value, may exceed 75 percent of a typical firm’s value. Brand values are also associated with share prices above book value and earnings information for consumer firms.

The importance of brand to firm value makes managing brand risks core to a firm’s long-term visibility and success. Corporate brand managers who traditionally oversaw marketing decisions now must assess and manage
reputational risks as well. The pressures to reduce such risks may come from many sides. For example, federal law requires military contractors to have a procedure for assessing counterfeit product risk, and for all publicly traded companies to identify and disclose any financial-related risks, including those such as product counterfeiting, to brand value. Similarly, financial institutions such as stock exchanges and debt-rating services may require firms to have processes for assessing and managing risks.

Despite the importance of brand value, firms may have little in place for brand protection. This is particularly true for protection against counterfeit products, that is, goods or packaging bearing a trademark that is virtually the same as one registered to an authorized owner. Brand management strategies targeting counterfeit risks are typically reactive and arise only when a firm suspects lost sales, detects significant quality issues from customer returns or complaints, or receives a third-party tip. This presents a major problem for brands because reputation-damaging events such as counterfeiting can dissuade future purchases of a particular branded product, other products of the same brand, and even products of unaffected brands.

This work seeks to help firms that wish to organize for brand protection: specifically, to combat product counterfeiting. It presents reasons why firms should organize and how they can do it. It provides an overview of product counterfeiting and how the problem has evolved. Importantly, it presents a framework for assessing the problem and discusses how to implement a total business solution to address it.

### 6 principles of a total business solution

1. **Identifying the infringer as the unseen competitor.**
2. **Emphasizing prevention, proactivity, and strategy.**
3. **Creating and relying on performance metrics and using data and analysis to assess and mitigate risk.**
4. **Highlighting the value of internal and external controls and mechanisms for detecting and responding to infringements.**
5. **Creating a culture of continuous improvement and embracing learning.**
6. **Promoting a holistic approach that integrates and coordinates all parts of the firm for brand protection.**
The Nature of Product Counterfeiting and Its Consequences

Product branding, and subsequent counterfeiting, is nearly as old as civilization. In fact, it appears to be older than currency counterfeiting. Branded products, and subsequent counterfeits, were evident in ancient civilizations, including ancient Rome, where commercial institutions sought to punish abuses of brand infringement. Differentiation of trademarks by quality became more pronounced in the Middle Ages, as guilds required members to affix marks to goods so as to distinguish their goods from lower-quality ones. Anglo-American trademark law originated in cases of the late 16th and early 17th centuries. Within the United States, a system of state and then federal protections developed over time to recognize and protect trademarks.

In short, product counterfeiting has been a concern throughout history, but answers to the question on how to address it have varied. As a result, brand owners themselves have often had to take action. And responding to counterfeit risk requires a more comprehensive approach than ever before.

Counterfeiting is widespread today. One estimate found trade in counterfeit and pirated goods amounted to $509 billion in 2016, with nearly 150 nations exporting counterfeit products to others. Counterfeit goods extend to every industry. Commonly counterfeited goods include aircraft and automobile parts, artwork, batteries, agricultural products, chemicals and pesticides, clothing, collectibles, electronics, food and drinks, healthcare products, household products, jewelry, military hardware, tobacco, and toys.

The consequences of counterfeiting include harms to individuals, businesses, and society. Individual consumers who purchase counterfeit goods are, especially if they believe they are purchasing legitimate goods, denied the use of legitimate products. Counterfeit harms can also be more direct and evolve over time, such as through counterfeit COVID-19 face masks, test kits, and medications. Legitimate businesses may suffer loss of reputation from poorly performing counterfeit goods that illegitimately bear their trademark, and even warranty, liability, and legal costs for them. Counterfeitors undermine the investments that brands make in research and development. Businesses also can be unwitting purchasers of counterfeit goods and suffer harms from subsequent poor performance of these goods.
(including, for example, military contractors who purchase counterfeit goods from suppliers\textsuperscript{27}). Finally, larger entities such as governments, economies, and societies may all suffer from product counterfeiting. Governments suffer loss of tax revenue and must spend to thwart counterfeiting and related crimes. Economies are deprived of jobs and innovation when legitimate manufacturers are unable to overcome the losses they suffer from counterfeiting. Societies may suffer risks to public safety through the links of counterfeiting to criminal activity,\textsuperscript{22} including transnational organized crime and extremism.\textsuperscript{23,24}

There are many contributors to counterfeiting. Perhaps foremost among these is the expansion of the global economy. Consumerism, i.e., the insatiable desire of many consumers for goods they cannot afford, also provides opportunities for counterfeiters.\textsuperscript{25} Counterfeiters typically make their products where manufacturing is cheap and governments have little interest in enforcing intellectual property laws.\textsuperscript{26} E-commerce further complicates the problem of product counterfeiting.\textsuperscript{27} In addition to using legitimate platforms such as Amazon, eBay, or Alibaba, counterfeiters may use less visible virtual marketplaces, including the dark web. At the same time, firms are increasingly using technology to combat counterfeiting. Security experts, for example, are seeking to integrate anti-counterfeit and product-authentication solutions to reduce vulnerability to counterfeiting.\textsuperscript{28}
A Brand Protection Program Model

Because of the limited knowledge they have of product counterfeiting, most firms address the problem only after discovering they have been victimized. Upon discovery, firms may seek monetary damages and injunctions against counterfeiters. Businesses that see legal actions as an effective deterrent may seek partnerships with customs and law enforcement agencies. Crackdown operations involving undercover informants, raids, and seizures can deter counterfeiting if conducted in ways to maximize loss to counterfeiters. Firms may also gather and organize evidence for law enforcement officials.

Firms may seek to minimize supply chain vulnerabilities to product diversion or embezzlement, using both physical and virtual strategies. Similarly, firms may rely on contractual agreements, including penalties for nonconformance and employee-background checks as well as periodic field audits. Organizations may use anti-counterfeiting labeling and packaging and track-and-trace technology to follow a product through its life cycle. Vertically integrating supply chains can provide the most direct control over a supply chain and minimize risks to counterfeiting.

Still other approaches to product counterfeiting may involve raising awareness among consumers and collaborating with competitors to identify sources of counterfeit trade. Internal education and awareness can also help firms minimize the threat of counterfeiting. Such efforts may include aligning brand protection with performance objectives and incorporating brand protection values into daily operations.

Altogether, previous work suggests several common strategies that firms may use to address product counterfeiting but few systematic approaches to doing so. Firms may hire a risk officer or specialist to address counterfeiting issues, but often their approach is reactive, addressing the problem only after it occurs. Furthermore, many approaches are siloed, with little interaction among those in different organizational functions addressing the problem. Firms may seek to quantify risks as best they can, but how well they address problems before they occur, or how well organized they are to do so, is unclear.

There are few, if any, frameworks to guide brand managers seeking to protect their brands from infringement. Most previous strategies focused on consumer attitudes and corporate actions, with little known about their effectiveness. Some anti-counterfeiting methods may have limited application. Track-and-trace technologies are helpful, but only for monitoring the legitimate supply chain. Public efforts to curb counterfeiting must be multifaceted. Legislative approaches, for example, can be effective but time-consuming, while law enforcement operations may react fastest but only address part of the problem.
This work seeks to provide a comprehensive guide to how firms can organize for brand protection. It is grounded in and helps to operationalize a total business solution to brand protection. To implement a total business solution, firms must be strategic, evidence-based, proactive, always learning, and comprehensive in their approach to mitigating counterfeit risk. We provide a model for identifying and assessing risks and provide details on how to most effectively organize to address them. Our total business solution program model has six elements, each of which we describe below. As shown in Figure 1, these elements are

- Problem recognition
- Risk assessment
- Strategy development
- Strategy implementation
- Performance measurement
- Assessment

These elements build on and inform each other. Problem recognition, for example, is necessary before risk assessment, while the final assessment stage can help refine each preceding step. Below we review each of these elements and how firms can implement them.

**Problem Recognition**

Many brand owners who claim not to have a product counterfeiting problem have likely never looked for it. As noted above, virtually any product can be counterfeited. The critical first step in protecting the brand is therefore to recognize the risk to the brand. Someone within the firm must determine a problem exists and that the firm will respond, beginning by assessing the extent of the problem. Internal partners such as a risk management team may have a role to play here.
Assessing the risk of counterfeits will require firms to develop a general awareness of counterfeits in the marketplace. Just as firms assess the strategies and activities of their legitimate competitors, so they should assess the strategies and activities of those infringing their intellectual property. Counterfeiters compete with authentic brands, so brands should treat them as competitors and analyze their nature and operations in order to reduce infringers’ opportunities.

A general awareness of counterfeits in the marketplace should lead to identifying and understanding specific incidents of product counterfeiting. Firms may face new and evolving counterfeiting threats. The rapidly increasing popularity of self-balancing scooters, for example, led counterfeiters not only to produce counterfeit scooters but to affix counterfeit safety certification labels to them when the victimized firm did not yet offer such a certification program. Brand owners may also find that by tweaking online search terms they can identify myriad counterfeits of their products in virtual marketplaces.

Counterfeitors reduce a firm’s market share through competition and by diminishing a brand’s reputation. Hence, one of the measures that brands may wish to monitor is their changing market share in regions where counterfeiters are operating. More generally, firms may wish to assess the threat counterfeiters may pose, the vulnerability that the firm has to counterfeit products, and the consequences of product counterfeits in developing and implementing its strategy against counterfeiters.

The total business solution contends that controls are critical for identifying problems that the firm must ultimately acknowledge. Spikes in warranty claims or consumer complaints or sudden dips in sales, for example, might signal counterfeits of a specific product entering a specific market. Managers should establish mechanisms throughout the enterprise and its supply chain to alert the firm of business activities that put the brand at risk. Research on the total business solution has identified 35 specific functions that play a role in brand protection, and these efforts should be coordinated for this purpose.

Integrated as part of the business culture, these mechanisms should be implemented across the enterprise, throughout the supply chain, and across all product stages from conception through distribution to immediately and systematically signal activities that put the firm at risk. Specific mechanisms may include establishing communication channels to ensure
all involved in brand protection are informed of issues such as significant changes in sales, substantial quantities of products at discounters or on websites, increased orders for proprietary components, or increased gray-market activity.

Firms should provide consumers and resellers an easy way, such as a complaint website or hotline, to report suspected counterfeit goods and verify genuine products. They should also have effective directives in place to respond to issues as they arise, particularly for assessing risk and even measuring performance in responding to and mitigating risks.

Control measures should also include management of personnel. By one estimate, “85 percent of trade secret thefts are committed by someone... familiar to the trade secret owner. [Such cases] are generally not a 'whodunnit.'” Due-diligence processes regarding intellectual property protection are necessary both for new hires as well as employees who join a firm through merger or acquisition.

Altogether, firms should recognize that problem recognition is not just a function of observing the problem but also determining what action to take in response to it. This broadly reflects an issue we will later raise in strategy development, on how strategy requires both addressing the overarching structure a brand protection team should have, with the structure reflecting the general issues a team will address, and a focus on specific procedures to implement in response to a problem. Firms should also recognize that controls provide an ongoing source of intelligence to help firms identify problems, and can also be useful in informing risk assessment, specific actions to take, and even performance measurement.
Risk Assessment

Traditionally, and particularly within criminal justice, security personnel have relied on their own experience in deciding which risks to prioritize and address. Yet such subjective methods can lead to bias and less accurate predictions than more structured quantitative assessments. Organizations have therefore sought to use actuarial risk assessments rather than relying on the subjective judgment of employees. Controls can provide specific data points to consider in risk assessment.

A risk assessment seeks to predict the likelihood of occurrence for a specific outcome. Risk assessments should also identify targets for change. Interventions can be most effective when they are targeted toward higher risk cases, rather than applied equally and widely.

There are many assessment frameworks that firms may use to investigate risk. In fact, most firms may already have assessment processes in place for other forms of risk that could be adapted to counterfeiting. Given its intuitiveness, flexibility, and demonstration across substantive domains, we propose a risk assessment model based on identifying and mitigating risks for crimes with potentially catastrophic consequences. The risk assessment model we propose has three elements: the threat of a product counterfeiting incident, the vulnerability of a firm to product counterfeiting, and the consequences of a specific threat.

![Figure 2: The three elements of a risk assessment model](image-url)
The threat of product counterfeiting represents the probability that an entity (counterfeiter) has both the intent and the ability to counterfeit a product. High profit margins, high market demand, and product exclusivity all contribute to the likelihood that an entity will develop intent to counterfeit a product. In assessing the threat of counterfeiting, brand owners may wish to assess how frequently other products in the same category are counterfeited, the desirability of a product, the difficulty in obtaining a product from an authorized source, the market for non-deceptive counterfeits, and access to the equipment, materials, and knowledge needed for counterfeiting.

The vulnerability of product counterfeiting is the probability that a firm will be damaged (e.g., through loss of revenues or reputation) given a specific incident of product counterfeiting. It does not reflect the magnitude of damage, that is, the consequences of counterfeiting, but only the susceptibility to damage if a given product is counterfeited. Vulnerability may be increased where there is a lack of capable guardians to observe and prevent illicit activity. Specific points of vulnerability to counterfeiting may include use of contract manufacturers or contract packagers for all or part of a product, use of non-proprietary or non-exclusive components for a product, and distribution channels. Products manufactured and packaged exclusively within a brand owner's facilities likely have less vulnerability to counterfeiting than those produced elsewhere. Products that use proprietary rather than common components also may be less vulnerable to counterfeiting. Finally, products that are shipped directly to consumers from brand owners may be less vulnerable to counterfeiting than those distributed by other means. Of course, firms must consider several issues in sourcing, producing, and distributing their products. We note these only to help brand owners identify where vulnerabilities to counterfeiting may arise.

The consequences are a result of the counterfeiting threat and vulnerability. Put another way, the consequence is the expected magnitude of damage (e.g., in revenue or reputation) to a brand owner given a specific incident of counterfeiting at a specific time and place. Consequences may vary by incident as well as by specific circumstances of an incident. A counterfeiting incident occurring at one time or place may not have the same consequences as a counterfeiting incident involving the same product at another time or place. In considering the consequences of counterfeiting, brand owners may wish to consider the likelihood that a counterfeit will affect earnings, the costs of responding to an incident of counterfeiting, and the effect on product reputation. The effect on earnings may vary by whether consumers...
are purchasing deceptive or non-deceptive counterfeits. A consumer purchasing a deceptive counterfeit luxury item for near the price of the genuine article, for example, is more likely to represent a loss to the brand owner than a customer purchasing a non-deceptive item at a lower price. The costs of responding to incidents of product counterfeiting include those of investigation and enforcement, product recalls, and lawsuits. Response costs can also vary by the type of product counterfeited, particularly if brand owners pay the cost of product returns, replacement, or repair associated with failure of counterfeit goods. Effects on product reputation can be greatest when firms do not thwart the entry of counterfeit products into the market, counterfeit goods intermingle with legitimate product, and consumers are unable to distinguish counterfeit from legitimate product. Such conditions can lead consumers to seek alternative products, harming the legitimate brand owner.

As shown in Figure 3, the product of (1) the probability a good will be counterfeited (i.e., the threat of counterfeit), (2) the probability that a good, if counterfeited, can lead to any damage to the firm (i.e., the vulnerability of a firm to counterfeit), and (3) the estimate of the damage to a firm should a good be counterfeited (i.e., the consequence of counterfeiting) is the risk of counterfeiting. That is, risk is the result of threat, vulnerability, and consequences. Although we focus on product risk, this framework can be adapted to gauge counterfeit risk in other forms, such as by region, supply chain component, and vendors and partners. How a firm addresses these will affect how it develops strategy to combat counterfeiting.

Figure 3: Components needed to estimate product counterfeit risk

\[
\text{Threat} \times \text{Vulnerability} \times \text{Consequences} = \text{RISK}
\]

- **Threat**: The probability a good will be counterfeited
- **Vulnerability**: The probability that a good, if counterfeited, can lead to any damage to the firm
- **Consequences**: The estimate of the damage to a firm should a good be counterfeited
Strategy Development

In developing strategy, firms should consider two dimensions. One is the structural nature of its brand protection activities, including issues such as the size, nature, and location of its brand protection team and program. The structure of the brand protection team will shape how a firm will first respond to counterfeiting incidents. The expertise employed by the team will dictate the first tools that the brand protection team can apply to the counterfeiting incident. Different products may have different counterfeiting issues; those for luxury products, for example, are likely to be different, or pose different dangers, than those for pharmaceutical products. Hence, firms producing these different types of products are likely to need different types of expertise, infrastructure and resources for brand protection, reflecting the most pressing issues each will face when confronting a product counterfeiting issue.

The second dimension that firms must consider in developing brand protection strategy is the procedural, that is, the activities that the program will choose to conduct over time. This, too, will vary by firms and the products they make, but there is a difference with the structural issues: while the structural issues a firm must consider in brand protection are likely to remain relatively stable over time, the procedural issues, that is, the activities that a firm conducts, are likely to vary. The feedback loop from program assessment is likely to affect both, but it’s more likely to affect activities, or to affect activities more rapidly than it affects program structure.

In addressing counterfeits, firms should consider the probability, vulnerability, and consequence of counterfeiting. Doing so allows firms to compare the risk of different types of goods. Some products may have a high threat of being counterfeit but pose little damage to a firm’s reputation. Others may not be likely to be counterfeited but could cause severe damage if they are. Considering the threat, vulnerability, and consequence of counterfeiting together allows firms to consider what products pose the most risk and prioritize efforts accordingly. Second, defining risk by examining the threat, vulnerability, and consequence of a counterfeit good allows brand owners to map their anti-counterfeiting strategy more precisely. Market surveillance can help identify the goods with the highest threat of counterfeiting. Introducing proprietary components or exerting more control over the supply chain can reduce the vulnerability of a firm to counterfeiting. Managing the consequences by increasing preparation and response to counterfeiting incidents can also help reduce the overall risk.

Because not all incidents of counterfeiting can be predicted and prevented, reaction will be a necessary component of a brand protection program.
Nevertheless, proactive efforts should seek to reduce opportunities for counterfeiting as much as possible. Crime, including product counterfeiting, can be reduced by making it harder to commit, increasing the chance of apprehension, reducing its rewards, and removing provocations or excuses for it.

Research on the total business solution has identified 12 categories of tactics that can be implemented across the firm to prevent and respond to product counterfeiting. These are:

- Analysis
- Communications and coordination
- Education and awareness
- Enforcement
- Firm policy and process
- Legal
- Physical security
- Product protection
- Public policy
- Resources
- Strategy
- Supplier compliance

Proactive efforts against counterfeiting can lead to fewer incidents requiring a response, lower overall costs, and less damage to the brand. A preplanned strategy to incidents can further help by providing a more comprehensive and efficient solution than one designed hastily.

Market monitoring can also have a role in brand protection strategy. By identifying where counterfeiters are gaining market share, brand owners can identify where to target their resources. This may include markets where brand owners have not yet sold products but where counterfeiters using their name have. Monitoring may also include identifying the authenticity of returned products and tracking excess, obsolete, or scrap material. Prevention may include screening employees and suppliers, using packaging that helps consumers authenticate products, and securing warehouse facilities and supply chains. More generally, proactive strategies emphasize prevention, awareness, education, and partnerships.

Brand protection strategies should consider the goals and values of a firm, as well as how a firm would define success. This will help the firm define the budget it wishes to spend on activities as well as the size and skills it wants on its team. Particular strategies may vary by whether a firm wishes to be reactive or proactive, as well as by the immediacy of dangers that fake products can pose to consumers. One analysis of metrics used by firms to assess their brand protection programs, for example, found that
microelectronics and computer firms, as well as firms producing food, agricultural, and pharmaceutical products, had more metrics, particularly for those in numbers of brand protection activities, than those firms dealing in apparel, luxury, and consumer items.\textsuperscript{77}

Mechanisms for brand protection should be integrated with the business culture to protect the brand from product conception through distribution. Specific actions may include establishing communication channels to ensure all involved in brand protection are informed of issues such as significant changes in sales, substantial quantities of product at discounters or on websites, increased orders for proprietary components, or increased gray-market activity. Firms should also provide consumers and resellers an easy way, such as a complaint website or hotline, to report suspected counterfeit goods and verify genuine products.

**Strategy Implementation**

Strategy implementation involves putting the developed strategy into action. While the work is completed by the brand protection team, external partnerships can offer firms means to leverage resources and identify new opportunities for leveraging resources and advancing brand protection.\textsuperscript{78} Academic partners can help firms identify the extent of issues that a firm faces, the different ways to meet them, and means for identifying future issues. Early development of partnerships with law enforcement agencies can help law enforcement officials identify problematic products and make investigations more efficient. They can also help ensure product counterfeiting cases are prosecuted as such rather than as financial crimes such as money laundering. Over time, partnerships can transform to consider other issues, such as regulation of supply chains or development of new initiatives among competitors to address common issues. Industry associations and share groups can combine individual efforts to better address issues, share relevant information among members, and identify standardized approaches to combat widespread problems.

Strategy implementation should also include steps for firms to take when counterfeiting is not prevented but crises occur. This can include pre-crisis planning, including identifying signs and signals of a pending crisis and probing to identify if one is developing; crisis planning to contain damage, address a crisis breakout, and recover from the crisis; and post-crisis learning and resolution by identifying what went well, what could be improved, and what can help prevent future crises.\textsuperscript{79}
Both preventing and responding to crises requires organizations to consider their brand protection and strategy. This requires continuous measurement and modification of plans over time. Determining program implementation priorities can reflect risk tolerance, anticipated effects, and organizational priorities. In some cases, organizations may need to assign different priorities to products or have contingency plans for different products. In one case where a firm was addressing one counterfeit problem for a product grossing more than $1 billion annually and another for a product grossing $2 million annually, the brand protection team taught the team for the second product the tools of responding to a brand protection incident while offering supplementary help as time allowed.80

Performance Measurement

Brand protection programs should include performance metrics for all business purposes associated with brand protection and implement data-driven processes to evaluate and reduce risks.81,82 To measure their performance, firms may collect metrics on brand protection inputs, outputs, and outcomes.83 Controls used to assess risk and indicate approaches for addressing problems can inform measurements of inputs, outputs, outcomes, and their analysis.

Inputs indicate the extent of investment in brand protection. They might include the number or cost of brand protection personnel and the direct costs of enforcement.

Outputs indicate the activities that firms conduct with the investments (inputs) they make in brand protection. They might include the number of raids, seizure actions, or takedowns.

Outcomes indicate the effectiveness of brand protection activities (outputs). They might include indicators on the prevalence of counterfeit products, the effect that counterfeit products have on brand image or value, sales of counterfeit products and how they affect sales of legitimate products, and market share for counterfeit and legitimate products. Presumably, for example, brand protection activities (outputs) will improve outcomes by reducing the prevalence of counterfeit products and the effect that counterfeit products have on brand image and value. Comparing outcomes to inputs can help illustrate the return on investment for a brand protection program.

Metrics should include all aspects of brand protection. While benchmarks on metrics and their values by industry, firm size, region and other characteristics may be instructive, firms tend to develop performance metrics frameworks and interpret the information they provide based on their own organization
and values. Proactive measures are particularly needed where illicit actors gain insights before product distribution. Data collection will remain an evolving process as firms identify and manage the data they need.

Firms may face a challenge in discerning appropriate metrics among the myriad data available to them. For example, while consumers may be eager to share data after an incident of counterfeiting, their reports may be lacking in quality or accuracy. Still, such data might help identify whether infringing products sold in a particular channel are being reported.

**Ongoing Program Assessment**

The total business solution suggests that brand protection firms must become learning organizations to maximize performance. As part of a learning organization, managers should draw from their experience with prior brand risks and integrate the lessons learned into mechanisms designed to prevent a counterfeit issue from recurring. The brand protection process is circular, not linear. Firms should continually seek to strengthen their brand protection efforts. Such innovation should be of two types. In the short run, firms should adjust their activities as new threats emerge. In the long run, firms should assess and adjust their program structure as necessary, particularly as new products and threats to them evolve.

Once firms have taken steps to mitigate counterfeiting risks, they should use the results to strengthen their processes and controls to prevent an issue from reoccurring. Firms may wish to take specific steps such as having senior management provide support and direction, conducting ongoing risk assessment of routine operations, and using the results of investigations to educate employees and improve business processes. Many risks that firms need to address are external to their businesses and will require stronger partnerships with suppliers, contractors, distributors, consumers, and law enforcement.

While continuous learning processes will not eliminate brand protection failures, some costs incurred in response to these failures may still deter future infringement. For example, legal actions against infringers may signal to others the willingness of a firm to fight infringement and deter future attempts. Firms should account for such effects in planning and revising their responses to counterfeiting.
Ongoing assessment and becoming a learning organization is not just an aspirational goal for brand protection, but an essential one to successfully implement a total business solution. Ongoing assessment allows for continued support of the program and creates a path for continuous improvement. It also ensures the continual flow of intelligence gathering and information sharing from internal partners.

**Conclusion**

The steps suggested in this paper—problem recognition, risk assessment, strategy development, strategy implementation, performance measurement, and ongoing program assessment—help create a total business solution to brand protection. None by itself is sufficient. Risk assessment, for example, can identify where risks are greatest, but not what should be done about them.

Much of preventing product counterfeiting follows the principles of situational crime prevention.\(^91\)\(^92\) These include reducing the opportunity for crime and illicit activity by increasing the effort the offender must make to carry out the crime, increasing the risks the offender must face in completing the crime, reducing the rewards or benefits the offender may expect to reap from the crime, removing excuses that offenders may use to rationalize their crime, and reducing or avoiding provocations to commit the crime.

Product counterfeiters, like other criminal offenders, seize opportunities as they perceive them. Such decisions may be constrained by time and information and can vary by crime or stage of crime.\(^93\) Considering product counterfeiting risks from a brand owner’s view—or, conversely and to the extent possible, opportunities from a potential counterfeiter’s view—can help brand owners address the problem holistically. The framework we present can also help them consider the problem over time, and to evolve as their products, and the opportunities and vulnerabilities that counterfeiters perceive in them, evolve as well.
Authors

Dr. Jeremy M. Wilson
Professor of the School of Criminal Justice, Michigan State University

Dr. Jeremy M. Wilson is a Professor of the School of Criminal Justice at Michigan State University, where he founded and directed for ten years the Center for Anti-Counterfeiting and Product Protection. As a scholar, educator, technical assistance provider, and advisor, Dr. Wilson has spent decades working hand-in-hand with industry, law enforcement, government, and other institutions to bring science to the development, implementation, and evaluation of strategies to bolster brand protection, protect intellectual property, and promote public safety. For more on his research, visit https://jeremywilson.org/.

Dr. Clifford A. Grammich
Director, Birdhill Research and Communications, LLC

Dr. Clifford A. Grammich is director of Birdhill Research and Communications, LLC, in Downers Grove, Illinois. His work includes research on criminal justice, demographic, and product counterfeiting topics. He also has worked in research communications for the RAND Corporation for more than 20 years and was affiliated with the Center for Anti-Counterfeiting and Product Protection at Michigan State University. He holds bachelor’s, master’s, and doctoral degrees in political science from the University of Chicago.
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