LPRC
LOSS PREVENTION RESEARCH COUNCIL

WG BANDIT TAG: CUSTOMER, ASSOCIATE, AND OFFENDER'S EXPERIENCES & PERCEPTIONS IN THE HOME IMPROVEMENT SECTOR

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Executive Summary

Study Overview. Security wraps are a popular product protection approach; however, retailers need to understand which security wraps provide the greatest value to retailers in terms of: (1) providing customers' the most satisfying shopping experience; (2) deterring retail offenders; and (3) promoting efficiency and job satisfaction among associates. *WG* **advertises** the *Bandit Tag* as a simpler and more secure approach to protecting packaged merchandise. In this study, we examine offenders, associates, and customers perceptions of, and experiences with, the *Bandit Tag* in the context of a home improvement retail store. Finally, the LPRC conducted a time and motion study with nine home improvement retail associates which compared *Bandit Tag* application and removal times with application and removal times for a leading competitor's security wrap.

Associates Perceptions and Experiences. When compared to other security and product protection devices and strategies, associates often preferred the *Bandit Tag.* Most believed the device was a credible deterrent, however, they also appreciated the ease with which the solution could be applied and removed from merchandise.

Associate Time and Motion Study. Results from the time and motion study indicated that store associates applied and removed the *Bandit Tag* in much less time than a leading competitor's security wrap. In fact, they were able to apply the *Bandit Tag* over ten times faster on average than a leading competitor's security wrap and were able to remove it over three times faster than a leading competitor's security wrap.

Offenders' Perceptions and Experiences. Most offenders believed the *Bandit Tag* provided at least the same deterrence level as six other product protection solutions. This was expected according to the SEE-GET-FEAR model – most participants noticed the device, understood many of its capabilities, and believed it was a credible threat. Before the offenders understood the device, 75% indicated that they would only be "slightly likely to steal" an item protected by the *Bandit Tag,* while 25% reported that they would be "likely" or "very likely" to steal a protected item. After learning more about the *Bandit Tag's* functions, 75% said that they were "not at all likely" to steal a protected item, while 25% remained likely or very likely to steal a protected item. Offenders listed a few ways in which the *Bandit Tag* could be a more noticeable, understandable, and credible threat, such as using signage to increase *Bandit Tag* visibility and communicate the device's functions.

Customers' Perceptions and Experiences. Participating customers (n = 20) understood the *Bandit Tag* was for crime prevention and appreciated retailers attempts to prevent retail crime. The vast majority also believed that the *Bandit Tag* would not make the shopping experience less convenient, unlike some other technology. Finally, almost all customers indicated that they felt very safe and comfortable around the *Bandit Tag.*

Conclusion. Overall, the results indicate the *Bandit Tag* is well received by customers and associates, and it takes much less time to apply and remove the *Bandit Tag* than a leading competitor's security wrap. Finally, interviews with offenders indicated that the *Bandit Tag* would provide at least the same level of deterrence as all other solutions discussed in the study, including a leading competitor's security wrap.

Introduction

Retail theft continues to be a major challenge throughout the industry, and this continues to generate innovation among solution providers. Retailers have always expected solutions to deter and disrupt retail offenders' criminal behaviors; however, they now expect solutions to generate useful criminal intelligence so incidents may be investigated, and loss prevention programs can be improved.

One popular approach to product protection are security wraps – these wraps are attached to package goods using tethers and may be equipped with one or more alarms. These alarms may be activated by tampering with the protection device, attempting to remove the device from the store without being deactivated, attempting to remove the device without the proper detacher, as well as via other means.

WG has introduced the *Bandit IR Smart Tag* (hereafter *Bandit Tag*). This tag is *advertised* as an advanced product protection solution and is intended to protect boxed merchandise like other security wraps. Table 1 provides all the features of the *Bandit Tag* ***as advertised*** by WG.

Table 1. Features of the Bandit Tag as advertised by WG

Easy attachment to boxed merchandise	Alarms when tampered with or removed
Simple push-button alarm activation	Alarms when in range of EAS pedestals
Plunger that recognizes when it is attached/detached	Removed with a patented/proprietary WG IR detacher
Merchandise can be arranged in a more aesthetically pleasing manner with less loss of shelf space relative to other solutions in the wrap category	Available with active RFID
	Generates crime intelligence through the cloud-based data platform

Prior Research. Prior research has examined customers', associates', and retail offenders' perceptions of, and experience with, the WG *Bandit IR Smart Tag* (hereafter referred to as the *Bandit Tag*) in the ***health and beauty sector***. That research found that, overall, offenders: (1) could easily see the solution; (2) understood much of its functionality; and (3) believed it to be a credible deterrent. These three elements (noticeability, understandability, and credibility) are central to the effectiveness of product protection solutions; therefore, it was no surprise that most offenders indicated they would be unlikely to attempt to steal an item protected by the *WG Bandit Tag*. Similarly, customers and associates had favorable perceptions of the *Bandit Tag*.

Current Study. The current study is designed to examine customers', associates', and offenders' perceptions of, and experiences with, the *Bandit Tag* in the ***home improvement sector of retail***. To accomplish this, LPRC research staff conducted structured interviews with store associates (n=10), offenders (n=8), and customers (n=20). Furthermore, we conducted a time and motion study with a separate group of 9 store associates. In total, we were able to collect data from 47 associates, customers, and offenders.

All the structured interviews, as well as they time and motion study, were conducted at a local home improvement LPRC StoreLab in Gainesville, Florida. LPRC StoreLabs are active, in-service retail stores where the LPRC is permitted to conduct research on an as-needed basis. Given that the LPRC has over 30 store labs, the LPRC is able to rotate where we conduct research, meaning that neither customers nor associates ever develop extensive experience with our researchers or the research experience. Therefore, there is no reason to believe that participating customers and associates in the StoreLabs respond differently because they are shopping or working in a StoreLab; this should provide readers greater confidence in the study's findings.

Offenders' Reactions to the *Bandit Tag*

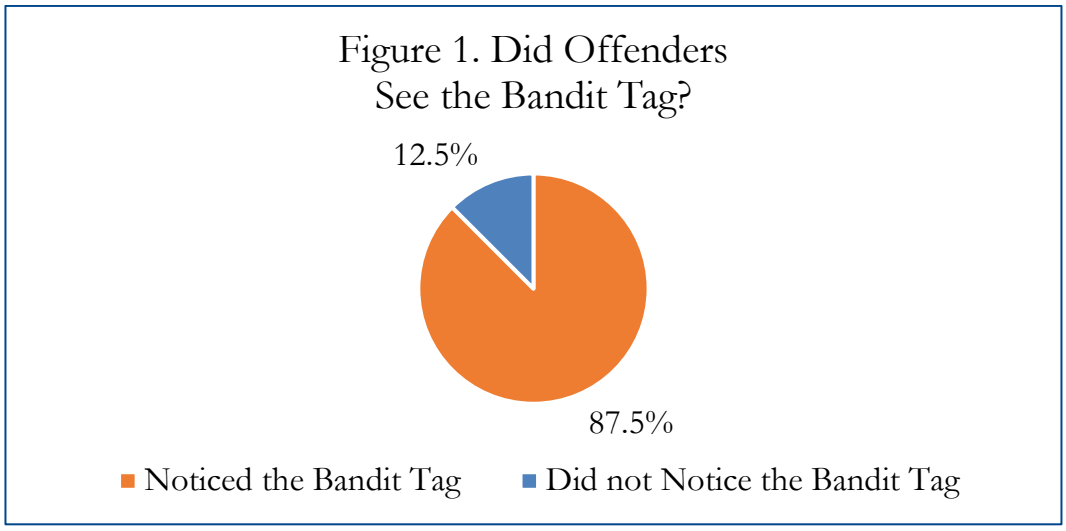
LPRC research staff conducted interviews with 8 self-reported offenders in our . These offenders were recruited from our ongoing pool of past research participants, as well as from advertisements in local outlets and message boards. All of the participants were screened to ensure they had a relatively recent history of offending, and that they had sufficient experience offending.

Within the LPRC, we rely on the "SEE-GET-FEAR" model to estimate the likely deterrent value of a loss prevention solution. According to this model, offenders must: (1) SEE the deterrent - they must visibly recognize its presence; (2) "GET" the deterrent – they must understand its function; and (3) "FEAR" the deterrent, which means they must believe that its use provides a credible threat to them.

The "SEE-GET-FEAR" Model of Deterrence	For a deterrent solution to be effective, offenders must…		
	"SEE IT" Notice the solution is in use	"GET IT" Understand the solution's capabilities	"FEAR IT" Believe the solution is a credible threat

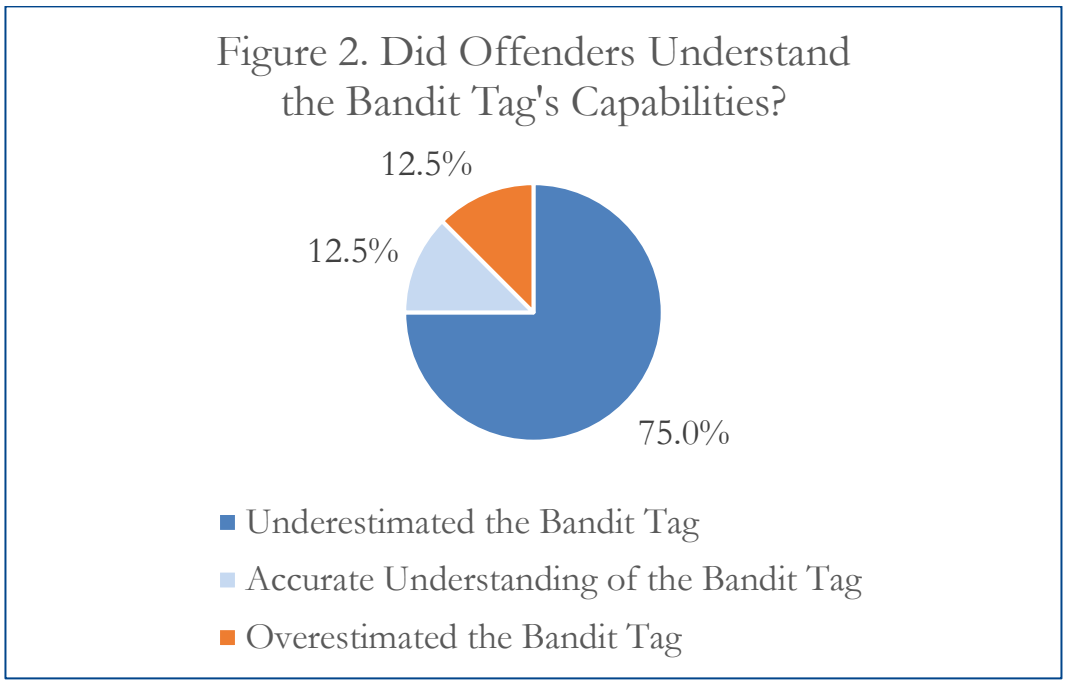
Therefore, we began our interviews with the eight offenders by leading them to the tools section of the StoreLab where the *Bandit Tag* was deployed. While in the tool section, we conducted interviews to understand their perceptions of, and reactions to, the *Bandit Tag*.

Did Offenders "See" the Solution. To understand whether the offenders noticed the *Bandit Tag,* we asked the offenders whether they noticed any product protection devices in the area. There were also enhanced public view monitors, security cameras, another security wrap solution, and other security solutions in the area; nevertheless, 88% offenders noticed the *Bandit Tag* was in use.



When LPRC researchers asked the offenders what could be done to make the *Bandit Tag* more noticeable, 37.5% indicated that the device might be improved by making the device a brighter, or more noticeable color, 25% suggested that signage might draw additional attention to the devices, and 12.5% suggested that additional wires might make the *Bandit Tag* more noticeable.

Did Offenders "Get" the Solution. Next, we asked the offenders to describe how they believed the *Bandit Tag* functioned; this was done to determine whether they understand (i.e., "Get") its capabilities. Figure 2 provides the results of this series of questions; most offenders did not fully understand the *Bandit Tag's* capabilities and functions. Only 12.5% accurately described all the functions of the *Bandit Tag,* 12.5% overestimated the *Bandit Tag's* capabilities; and 75% underestimated the *Bandit Tag.*



The Deterrence and Intelligence Gathering Tradeoff. Before proceeding, it is important to note the tradeoff between deterrence and intelligence gathering. For example, retailers often use a combination of overt and covert surveillance cameras to achieve separate goals – deter offenders and gather intelligence about offenders who are not deterred by a solution.

Theoretically speaking, if offenders underestimated the intelligence-gathering capabilities of a device, while recognizing some of the deterrent features, then the device may help retailers deter "deterrable" offenders while also generating intelligence about determined offenders who are not deterred by the solution.

In the case of the *Bandit Tag,* offenders mostly understood the tag's alarming functions, including when it would alarm, although a few did not realize how sensitive the *Bandit Tag* was to tampering. Most of the offenders who underestimated the *Bandit Tag* did not understanding its intelligence-gathering capabilities. For example, most of those who underestimated the *Bandit Tag* (83.3%) did not understand how the tag could be integrated with surveillance systems and other LP technologies to generate crime intelligence.

Do Offenders Believe the Bandit Tag is a Credible Threat?

To deter retail offenders, offenders must believe deterrents are a credible threat. That is, we want them to believe: (1) the deterrent increases the risk of formal sanctions (arrest, prosecution, etc.) and informal sanctions (reputation, employment, etc); and/or (2) the deterrent increases the amount of time and/or effort required to commit their offense. In other words, we want offenders to believe there is a credible "increased cost" of offending in terms of risk or effort.

Therefore, we asked the offenders how likely they would be to attempt to steal merchandise protected by the tag. In fact, we asked this question twice – once before explaining the full capabilities of the *Bandit Tag* and once after explaining the *Bandit Tag's* capabilities.

The Bandit Tag: A Credible Threat?

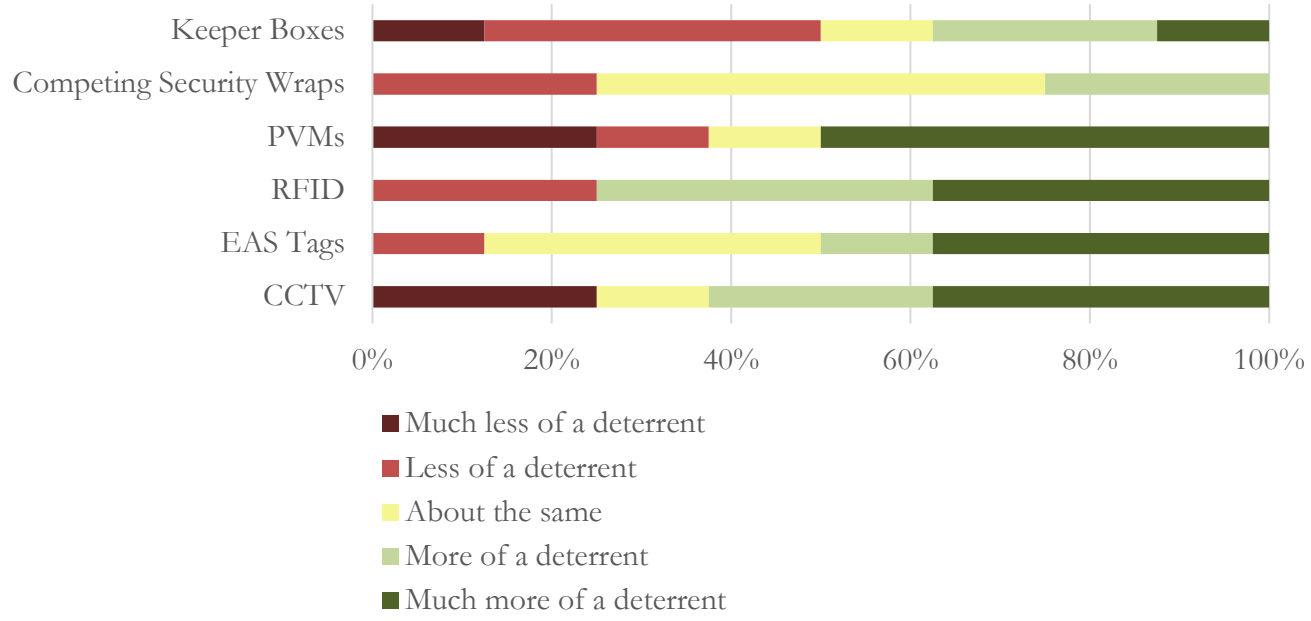
6 offenders said they would not attempt to steal protected items after receiving an explanation of the *Bandit Tag*

2 offenders were "undeterrable" – they would attempt to steal a protected item regardless of the Bandit Tag's capabilities

Prior to explaining the *Bandit Tag's* functions, six of the offenders indicated that they were "slightly likely" to steal an item protected by the *Bandit Tag*, one indicated they were likely to steal, and one said they were very likely to steal a protected item. After explaining the *Bandit Tag's* capabilities, all the offenders who previously said they were slightly likely to steal a protected item said that they were "not at all likely" to steal a protected item.

Perceived Relative Deterrence of the Bandit Tag? The LPRC also wanted to understand whether the *Bandit Tag* was more or less of a deterrent relative to the other solutions. Therefore, we asked the offenders. Figure 3 provides the relative deterrence of the *Bandit Tag* in relation to six other solutions, including keeper boxes, competing security wraps, PVMs, RFID, EAS Tags, and CCTV.

Figure 3. Perceived Relative Deterrence of the Bandit Tag



To aide interpretation of this chart, the chart has been color coded – when the green bars are larger, the perceived deterrent value of the *Bandit Tag* is greater; when the red bars are larger, the perceived deterrent value is less; yellow bars indicate that the perceived deterrent value is approximately the same as the listed solution.

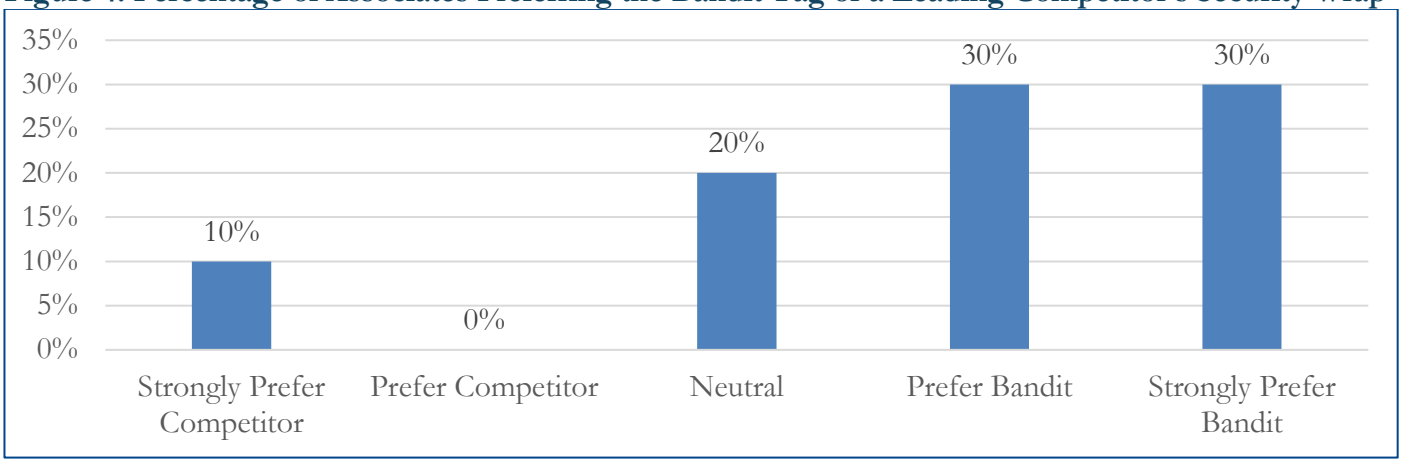
In every case, the majority of offenders indicated that the *Bandit Tag* provided at least the same deterrence level as the other loss prevention solutions. In other words, the majority of offenders believed that this would be as effective as all of the other solutions.

Store Associates' Reactions to the *Bandit Tag*

LPRC research staff conducted interviews with 10 associates at a local home improvement StoreLab in Gainesville, Florida. The participating associates had worked at the store for an average of 7 months; the participating associate with the shortest tenure had been employed for 1.5 months, while the associate with the longest service time had been employed for 12 months.

Overall, store associates held favorable opinions of the *Bandit Tag*. When asked whether the *Bandit Tag* positively or negatively affected their ability to provide customer service on a scale from 1 to 5, with 1 representing a negative effect and 5 representing a positive effect, the average score was a 4.4 out of 5. This indicates that associates believe the *Bandit Wrap* positively influences their ability to serve customers. Furthermore, as shown in Figure 4, 60% of the store associates we surveyed also preferred to use the *Bandit Tag* rather than the leading competitors' security wrap.

Figure 4. Percentage of Associates Preferring the Bandit Tag or a Leading Competitor's Security Wrap



Finally, the associates were asked whether the *Bandit Tag* would hinder them from doing their duties. Importantly, none of the associates said that the *Bandit Tag* hindered their ability to do their jobs. When compared to other loss prevention solutions, some of the associates preferred other technologies to the tag – one associate indicated that they preferred PVM cameras because the "offender can be seen." However, another participant noted that "cameras can only deter so much, the offender has to see and touch the bandit tag, making them less likely to steal the item."

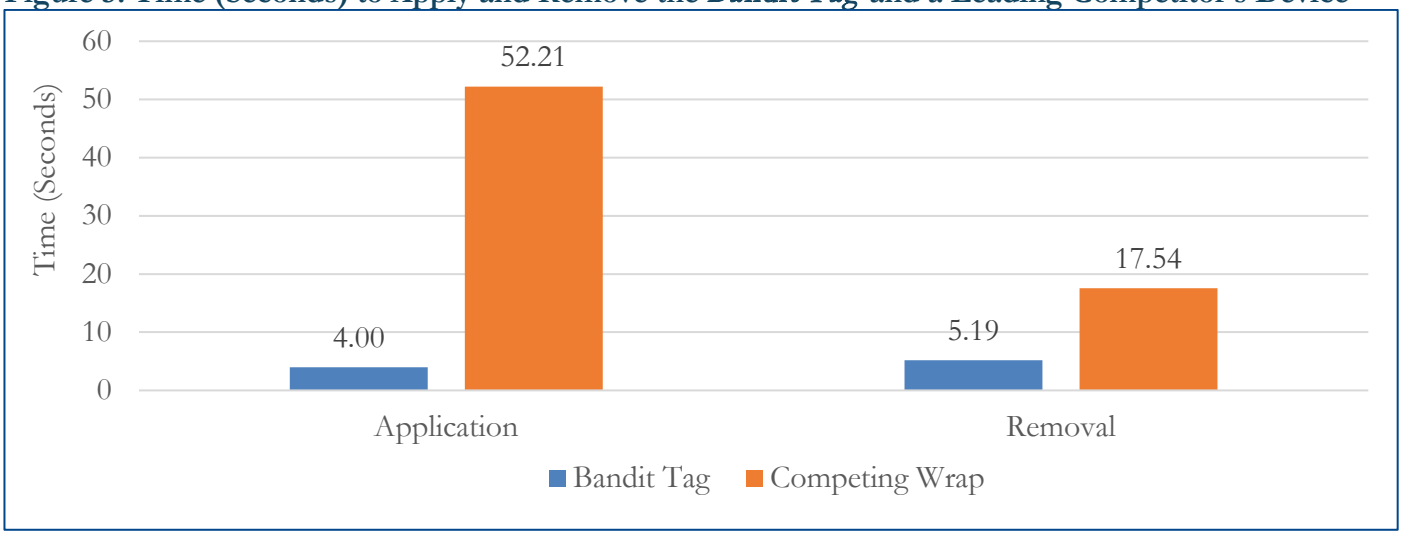
Store Associates Time and Motion Study (n=9)

Next, a separate group of nine store associates participated in the time and motion portion of the study. This time and motion portion was designed to compare the amount of time it takes, on average, to apply and remove the *Bandit Tag* from a product with the amount of time it takes, on average, to apply a leading competitors' security wrap solution. The competing solution is like the *Bandit Tag* in some ways; however, there are two key differences between the *Bandit Tag* and the competing solution that might affect the amount of time it takes to apply the devices to products. First, whereas the competing solution has two straps that must be applied to the corners of the packaging and adjusted during application, and (2) removing the competing solution requires the end user to respool the straps by rewinding a knob on the device.

Each of the nine associates applied and removed the *Bandit Tag* and the competing security wrap 15 times; this was broken down into three trials. The order in which the associates applied and removed the tags were randomly alternated between participants, ensuring that the amount of time it took, on average, was not affected by the order in which they applied the devices – this reduces the influence that factors such as fatigue might have otherwise had on the results of the trial.

As shown in Figure 5, associates applied and removed the *Bandit Tag* more quickly than the competing wrap. However, to ensure that the differences were not due to random chance, we used paired-samples (i.e., dependent samples) t-tests to compare the mean removal and application times. When comparing the average time it took associates to apply and remove the devices, we averaged each of the associates 15 trials for the application and removal of both the *Bandit Tag* and the competing security wrap; next we compared these times using paired-samples t-tests.

Figure 5. Time (Seconds) to Apply and Remove the *Bandit Tag* and a Leading Competitor's Device



First, we used a paired-samples t-test to estimate the mean difference in application time for the ***Bandit Tag*** and the competing security wrap. Results indicated that it took associates 48.2 fewer seconds, on average, to apply the *Bandit Tag* (M = 4.00; SD = .74) than the competing security wrap (M = 52.12; SD = 6.02); this difference was statistically significant (t = 25.15; p < .000).

Likewise, we used a paired-samples t-test to estimate the mean difference in removal time for the two devices. Results indicated that it took store associates 12.35 fewer seconds, on average, to remove the *Bandit Tag* ($M = 5.19$; $SD = 3.88$) than to remove the competing security wrap ($M = 17.54$; $SD = 4.14$); this difference was also statistically significant ($t = 7.83$; $p < .000$).

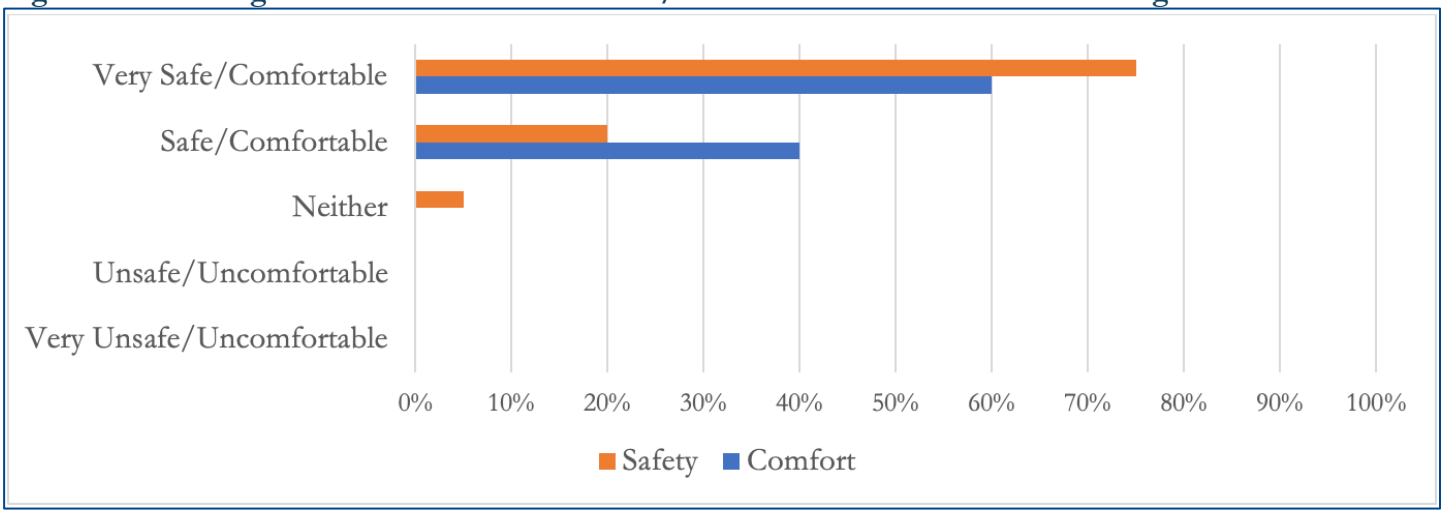
In conclusion, associates spent less time applying and removing the *Bandit Tag* than they did with a leading competitor's security wrap; they preferred it when compared to the competitor's security wrap; and, overall, associates had very favorable opinions of the *Bandit Tag.*

Customer Perceptions and Experiences (n=20)

LPRC research staff conducted interviews with 20 customers during intercepts at a local home improvement StoreLab. These interviews included questions about many aspects of the technology, including whether they had seen the *Bandit Tag* in stores before; fully 75% of customers said that they had not seen the technology before. In response to open-ended questions, most of the customers understood that the device would alarm if it were taken through the entrance; however, many customers did not understand many of the other functions of the device, or, if they did, they only focused on the entry/exit alarm. Others misunderstood the *Bandit Tag's* functions – they believed the *Bandit Tag* would release ink or explode when taken out of the store.

Next, customers were asked how comfortable and safe customers are in the presence of the WG *Bandit Tag.* The LPRC asks these questions because there are some solutions that may have the counterproductive effect of making customers feel unsafe or uncomfortable. Figure 6 above provides the percentage of customers who indicated that they felt safe/unsafe, or comfortable/uncomfortable, in the presence of the *Bandit Tag* technology. These results reflect those described above and suggest that customer safety and comfortability will not be sacrificed for the sake of product protection.

Figure 6. Percentage of Customers who Felt Safe/Comfortable Around the Bandit Tag



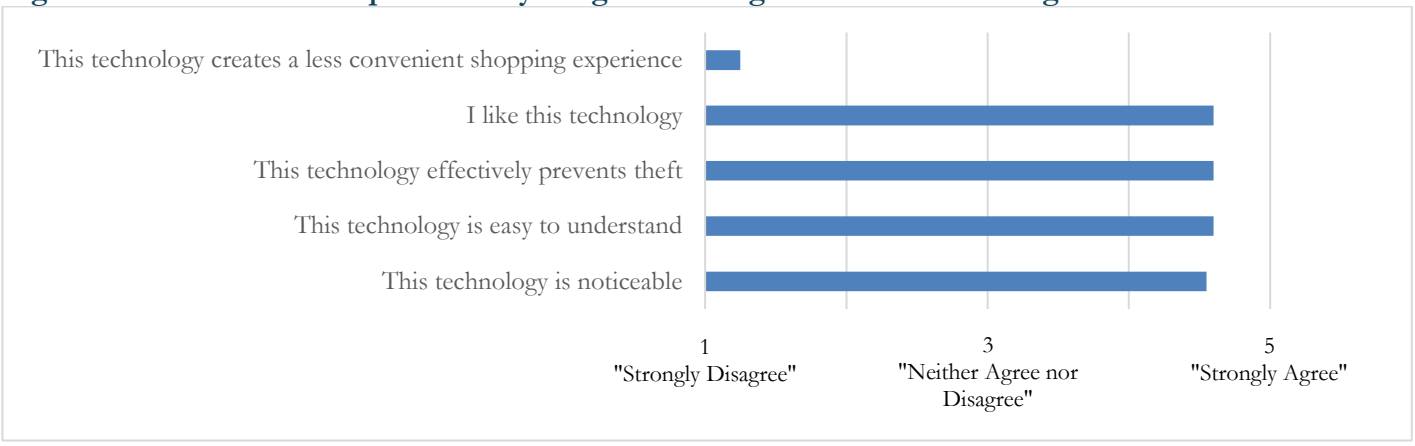
First, customers were asked: "On a scale of 1 to 5, where 1 is very uncomfortable and 5 is very comfortable, how comfortable are you in the presence of this technology?" The average response to this question was 4.6, indicating that, on average, customers were very comfortable in the presence of the *Bandit Tag.*

Second, customers were asked: "On a scale of 1 to 5, where 1 is very unsafe and 5 is very safe, how safe do you feel in the presence of this technology?" The average response to this question was 4.7, indicating that, on average, customers felt very safe in the presence of the *Bandit Tag*.

To determine whether the solution might be an effective deterrent, the LPRC research staff asked customers whether they agreed or disagreed with a series of statements about the *Bandit Tag*, including: (1) this technology is noticeable, (2) this technology is easy to understand, (3) this technology prevents theft. To better understand customers perceptions of the technology, they were also asked whether they agreed or disagreed with the following statements: (1) I like this technology, and (2) this technology provides a *less* convenient shopping experience.

Respondents were asked to indicate how much they agreed or disagree with these statements on a scale of 1 to 5, where 1 represented strong disagreement and 5 indicated strong agreement. Figure 7 summarizes the results of this portion of the survey, and provides the customers' average score across each statement – remember, numbers closer to 5 indicate stronger agreement with the statement, while numbers closer to 1 reflect stronger disagreement with the statement among customers.

Figure 7. Customer's Perceptions: Do you agree or disagree with the following statements?



As shown in Figure 7 above, respondents generally liked the technology, and believed that it was noticeable, easy to understand, and that it will effectively prevent theft. They also disagreed that the technology would create a less convenient shopping experience. Some product protection solutions, such as locking peg hooks and locking showcases, can make the shopping experience less convenient – customers do not think this solution will make the shopping experience less convenient.

Finally, customers were asked: "On a scale of 1 to 5, where 1 is much less likely and 5 is much more likely, will this technology make you more or less likely to shop in a store using it?" The average score among respondents was a 4.65, indicating that the solution is likely to promote store traffic and potentially increase sales.

This increased likelihood in shopping at the store might be due to the perceived effect that the solution would have on crime because many respondents noted preventive effect in the open-ended section of the survey. In fact, the majority of the customers noted that they believed the device is used for crime prevention; more importantly, they appreciated that the store was working to prevent retail crime.

Conclusion

The WG *Bandit Tag* was well received by associates and customers; furthermore, offenders' responses indicate that they believe the *Bandit Tag* is a credible deterrent. Associates appreciated the ease with which the *Bandit Tag* could be applied and removed and believed that the *Bandit Tag* would deter crime. Furthermore, in the time and motion study with associates, it took store associates far less time to apply and remove the *Bandit Tag* than applying and removing a leading competitor's security wrap solution.

Our research with eight offenders indicated that the *Bandit Tag* offered a similar deterrence level as six other solutions, including a leading competitor's security wrap. The majority of offenders noticed the device, understood many of its most important features, and believed it was a credible deterrent.

Finally, the customers we interviewed also responded well to the *Bandit Tag*. They appreciated that the home improvement retailer was working to reduce retail crime. Participants might have been more interested in crime control because this study was completed in late 2021 and early 2022 when retail crime was receiving increased attention in the media.

Retailers should consider these findings and determine whether the *Bandit Tag* is appropriate for their organization based on whether it complements other strategies and solutions they currently use. The LPRC suggests that retailers review and refine their merchandise protection program in terms of whether their program helps them: (1) deter, (2) detect, (3) disrupt, and (4) and document retail offenses.

The LPRC would also encourage solution providers to develop solutions that make merchandise protection as simple as possible for associates as this may enhance worker efficiency, compliance with merchandise protection programming. Theoretically speaking, making compliance easier should promote a more effective merchandise protection program, and this should be examined in future research. Solution providers would do well to make their solutions as noticeable, understandable, and credible as possible to retail offenders.