Statistics – A Key Component In Security

It's More Than Numbers

Every day the effect of statistics can be seen, as they set out the latest economic trends and provide projections on what might take place, governments enacting policies to reflect social changes and organisations forecasting their latest growth figures. In itself, statistics is a discipline that is engaged in the collection of data and through the analysis and interpretation of that data, provides a product on which decisions can be made.

However, statistics are open to errors, whether that's through data collection or their accidental or deliberate or manipulation, which can affect the product and ultimately that of the decisions being made. Within security, one of the most striking examples of the use of statistics is within the current spate of shoplifting in the UK. One newspaper described the year on year rise of shoplifting as *soaring* to its highest level in 20 years and with online videos of shoplifters, lifting armfuls of goods and brazenly walking out of shops, its an impression that is difficult to counter.

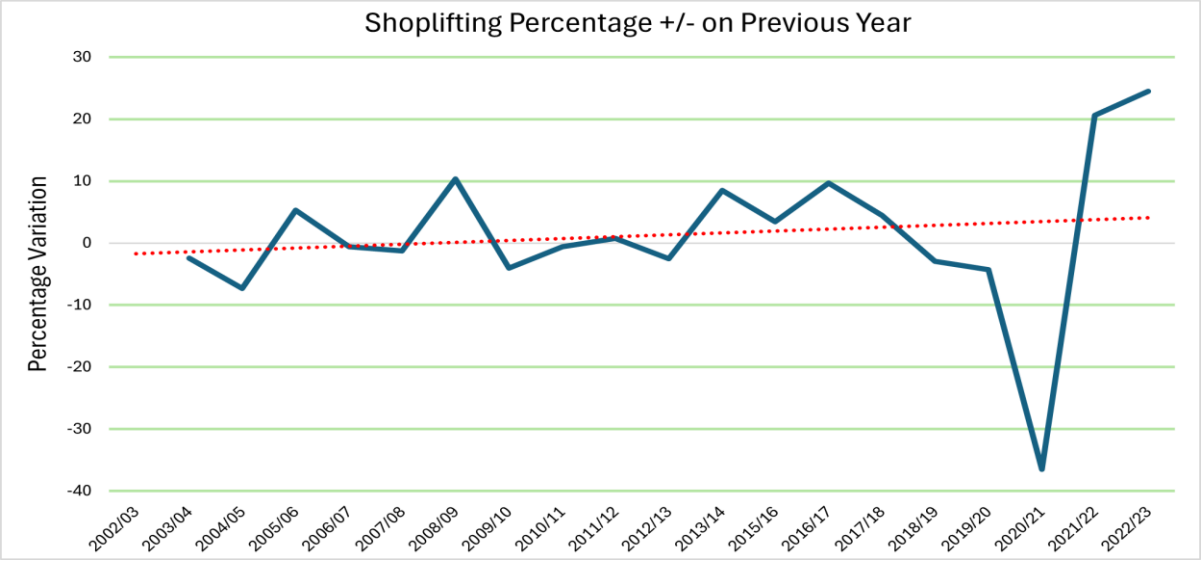
Statistics are needed within Security Risk Management, whether it's simply to monitor ongoing trends within a threat environment or as part of monitoring the effectiveness of controls in mitigating an identified risk. It is not the objective of this paper to query if there is an unprecedented rise in shoplifting, but to use the publicly available figures to set out some of the issues that arise and how presentation of the data can lead to different conclusions.

Unfortunately, just because few if any breaches in security have occurred can't be taken as meaning an effective security regime is in place. It is through collecting data and the presentation of statistics that will allow a more accurate reflection of Security and how it is Managing the Security Risk.

Beware of Percentages

Shoplifting has captured the headlines and like all crime, fluctuates over time, as clearly shown on the graph, *Shoplifting – Percentage +/- on Previous Year*, below. The data, sourced from original material in the Police Recorded Crimes Statistics, for England and Wales, illustrates this trend, depicting percentage changes either increasing or decreasing over the previous year's figure.

Although the graph illustrates a general upwards trend, (the red dotted line), what is evident is the dip induced by the Covid pandemic in 2020/21. However, as the pandemic ended and the restrictions imposed at that time eased, the frequency of shoplifting increased with the resultant peak in 2022/23.



Across the time period, represented by the graph, until 2019/20, the largest reduction in shoplifting, recorded over the previous year, was 7.3%, however the decrease from 2019/20 to 2020/21 was 36.5%. The subsequent year from 2020/21 to 2021/22, saw an increase of 20.5%, followed by a further increase of 24.5% over that.

It is perhaps not surprising as the difference, in percentage terms, between the 2020/21 low and the 2022/23 high, is 50%, that shoplifting and the problems generated by it has attracted press attention. This severe increase, over a comparatively short period, has necessitated a response from retailers, government and the police. However, this percentage peak, is not the same as recorded figures, which offer a different perspective.

It's In The Numbers

Although the percentage rise from 2020/21 to 2022/23 is substantial, in itself, it does not provide an accurate picture of what might have been happening on the ground. The graph, *Number of Recorded Shoplifting Offences*, below, taken again from the Police Recorded Crimes Statistics, illustrates that 2017/18 marked a peak in the number of shoplifting offences, before a gradual then steep fall to 2020/21, prior to the subsequent increase to 2022/23.

In percentage terms the decrease in reported offences from 2017/18 to 2022/23 was 11.4%. However, this doesn't imply that shoplifting isn't an issue or should be ignored, but rather has to be seen from within a longer term statistical perspective.

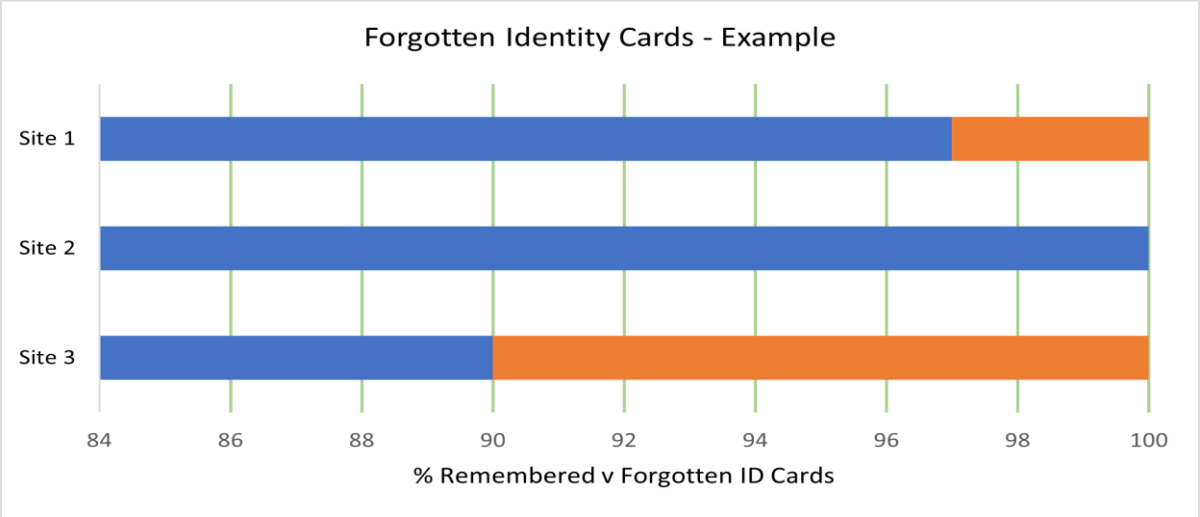
Recent articles within the press have sliced the police statistics and taken the latest available figures to the end of September 2023 as a starting point, rather than the April to March figures typically used. By adopting this approach, there were a reported 402,482 shoplifting offences to the year ending September 2023, as opposed to 304,459 offences to the 12 months ending September 2022, a 32% increase. (Bear in mind, these are reported offences, the actual number is probably higher).

While this figure is accurate, it might have been affected by other factors, such as the reported drop in footfall in the year to the end of September 2022, meaning fewer people were shopping, with perhaps fewer people shoplifting. Added to this, as publicity on shoplifting grew, it is probable that reporting increased, adding to the numbers at the end of September 2023.

Lagging Indicators – Key To Security Risk Management

Statistics, through the collection and analysis of data are a critical part in determining if an organisations security regime is being effective in delivering its core product, Managing the Security Risk. It is by ongoing analysis that the in-house Security team can provide assurance to individual managers that controls on one aspect of their risk are having a positive effect, with early warning if they are not.

The graph below, *Forgotten Identity Cards - Example*, is an illustration of the use of statistics through Lagging Indicators, ie it is something that has already happened. In this illustration, the risk is the Loss of Information, with one of the controls being the identification of authorised staff through the use of ID Cards. The graph presents data



collected from three sites regarding staff forgetting their ID Card. Site 1 is the exemplar, as 3% of staff forget their ID Card on any given day. It is an average figure, arrived at over time and which accepts that people will forget their cards. In contrast Site 2 indicates that no one has forgotten their card, which is suspicious as it is expected that some people will, while conversely, Site 3, demonstrates a higher than normal rate of forgetfulness.

The data is just the numbers, but through their analysis, statistics will illustrate, for example:

- If there were days on which cards were forgotten more often than others.
- If the reported incidence was more prevalent, depending on who the security officer at reception might have been.

Enabling A Response

- Identifying individuals who forgot their cards on a regular basis.
- If there were higher than expected numbers from a single department.

It is through those statistics that decisions can be made on:

- The potential requirement for additional security officers to be on duty, on days when there is a prevalence in cards being forgotten. This to ensure that the possibility of anyone slipping through security is reduced and to reinforce the message of remembering and displaying ID cards.
- Establishing if the security officers on duty are complying with assignment instructions, not only in relation to ID cards but perhaps elsewhere.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- Whether those individuals who persistently forget their cards should be subject to disciplinary action.
- Investigate any prevalent department further, not only to find out why their staff are non-complaint, but to establish the compliance of that department to security instructions more generally.

It is the ability to produce statistics on any of the controls that are in place and being able to judge the effect that they are having, which enables potential areas of compromise to be established. From that and with other information, corrective action can be taken to get ahead of the game and reduce the possibility of a breach in security from occurring.

Statistics - They're Not Just About Shoplifting

Is there a shoplifting epidemic? There might be and it is possible that individual retailers maintain statistics to suggest that there is. However, with the publicly accessible and verified figures from the Police Recorded Crime Statistics, even with their shortcomings, it is difficult to say. However, what can be seen, is the effect that statistics have had, whether it's pronouncements from retail executives, widespread coverage in the press, government intervention or pressure on the police. From that perspective, statistics have been proven to work and have had a desired effect – a focus on shoplifting.

More widely and within Security Risk Management, statistics have to be built into the product being delivered to an organisation. In itself, Security probably doesn't "own" many risks, as these tended to be owned and managed by individual departments. They rely on Security's expertise to evaluate and advise on any controls necessary to mitigate those risks.

It is Security's responsibility to manage those controls, extract meaningful data from them and together with a range of other information, present a clear picture on how security is impacting on individual and collective risks.

Although security can fail at anytime, as a general rule, the more serious the breach, the longer the period of time that conditions have built up to enable that breach to occur. By actively collecting data from individual controls on an ongoing basis and over a protracted period of time, not only will indicators be established on their effectiveness but allow remedial action to be taken.

For further information on how RedLeaf Consultancy can help in understanding the numbers behind your controls, please email: info@redleafconsultancy.co.uk

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