



IN STORE

Security Robots



RoboCops on Duty: The Future of Retail Security is Here

CH.1

Today is the big day. You've been developing a pitch for a high-profile client for weeks, and now it's finally time to present it. Nerves have plagued you all morning — so much so that you left your coffee at home. Fortunately, you're early, and there's a GalactiMart just around the corner from your office. As you exit the store, your favorite flavor of AstroBrew in hand, you feel a tap on your shoulder. The GalactiMart Guardtron stands behind you, its screen blinking yellow. You forgot to pay! Surprised, and a bit embarrassed, you swipe your hand in front of the display on its "head" to complete your payment. The Guardtron chirps "Thank you" and waves you off, its screen turning from yellow to green.

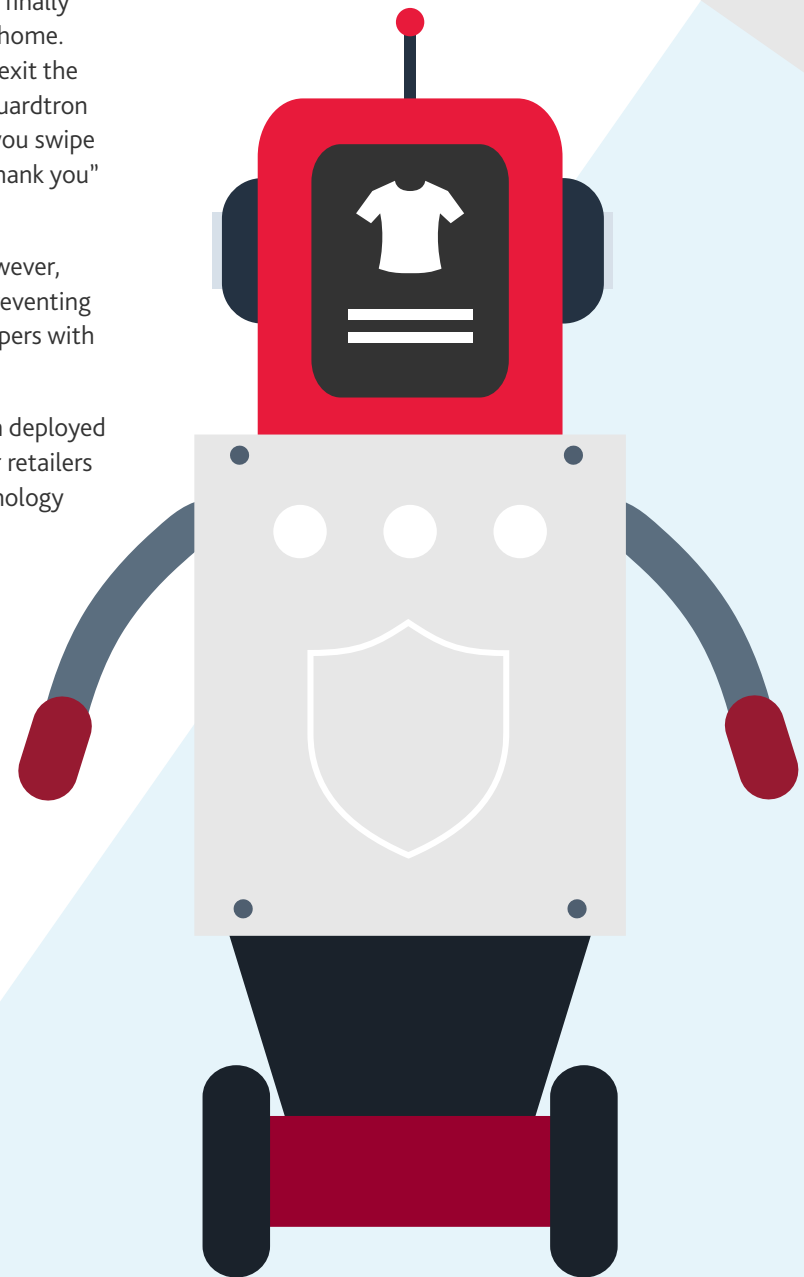
Initially, when GalactiMart unveiled its new line of Guardtrons, you harbored some skepticism. However, their impressive customer service capabilities quickly won you over. Beyond their primary role in preventing theft, these robots strategically position themselves in high-traffic areas of the store to assist shoppers with transactions, answer product inquiries, and offer additional support.

Security robots are not a novel idea. According to [Military.com](#), these robotic sentinels have been deployed at high-security locations since the early 2000s. Over time, their popularity has surged, with major retailers recently beginning trials of roboguards to combat theft, as noted by [Business Insider](#). As the technology evolves and becomes more economical, smaller retailers will eventually be able to use similar advanced bots that are more cost-effective and tailored to their specific needs.

Autonomous robots offer retailers an array of potent tools to reduce theft and bolster security. These bots can patrol store aisles, keep an eye on high-risk areas, and detect and flag potential theft in real-time, thereby significantly minimizing shrinkage. The sophisticated technology embedded within these robots enables retailers to identify suspicious behavior, deter shoplifters, and prevent loss before it occurs.

The advent of real-time data on store activities and customer behavior empowers tomorrow's security robots to transcend traditional loss prevention. With cutting-edge technologies like integrated facial recognition, thermal imaging, audio analysis, and advanced motion sensors, retailers can gain invaluable insights into foot traffic patterns, product quality, and customer sentiments. These insights are crucial not only for preventing shoplifting but also for enhancing customer analytics.

By integrating these technologies, retailers can significantly reduce theft-related costs and glean valuable insights into store operations. This approach not only boosts profitability but also fosters a safer, and more enjoyable shopping experience.



Bot-Powered Protection: Reduce Theft and Boost Cost Efficiency

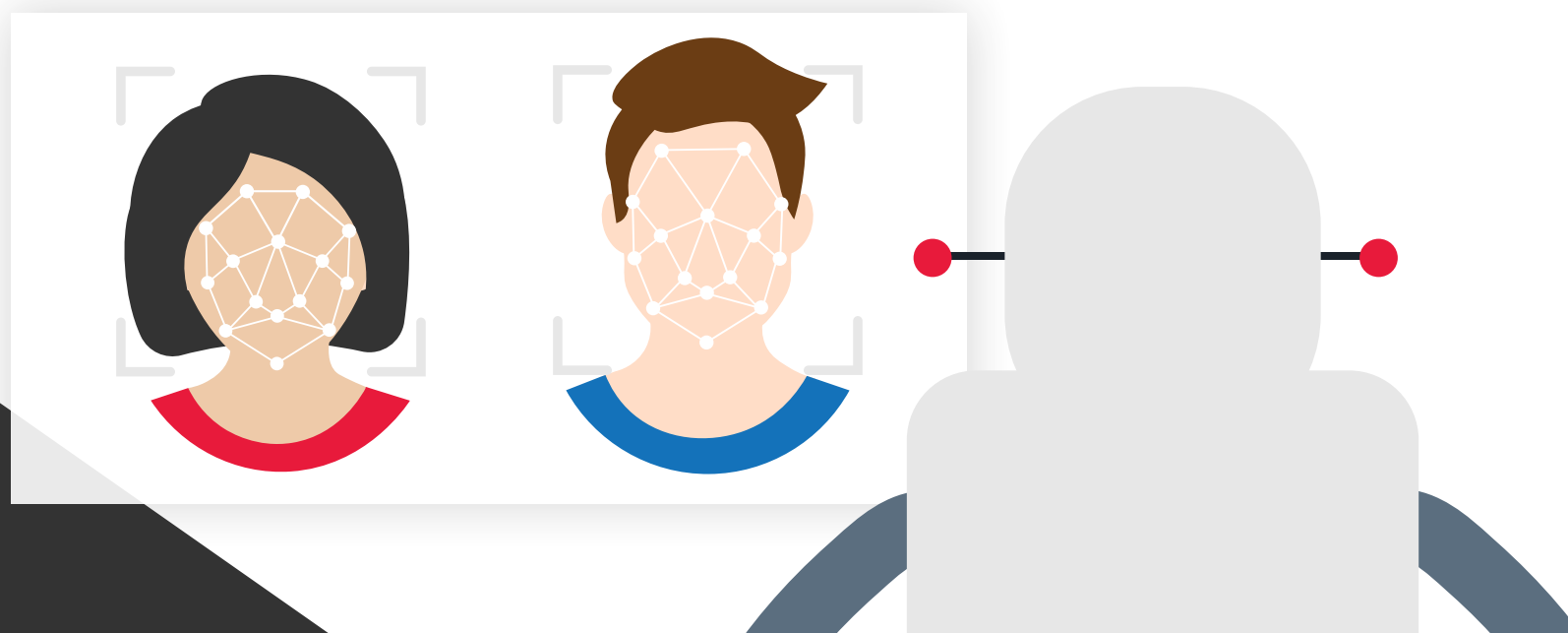
Retailers have ample reason to be vigilant about theft. According to the [Council of Criminal Justice](#), shoplifting rose 24% in the first half of 2024. This alarming rise, coupled with inflation and escalating labor costs, is driving retailers to explore innovative strategies to safeguard their assets and sustain profitability.

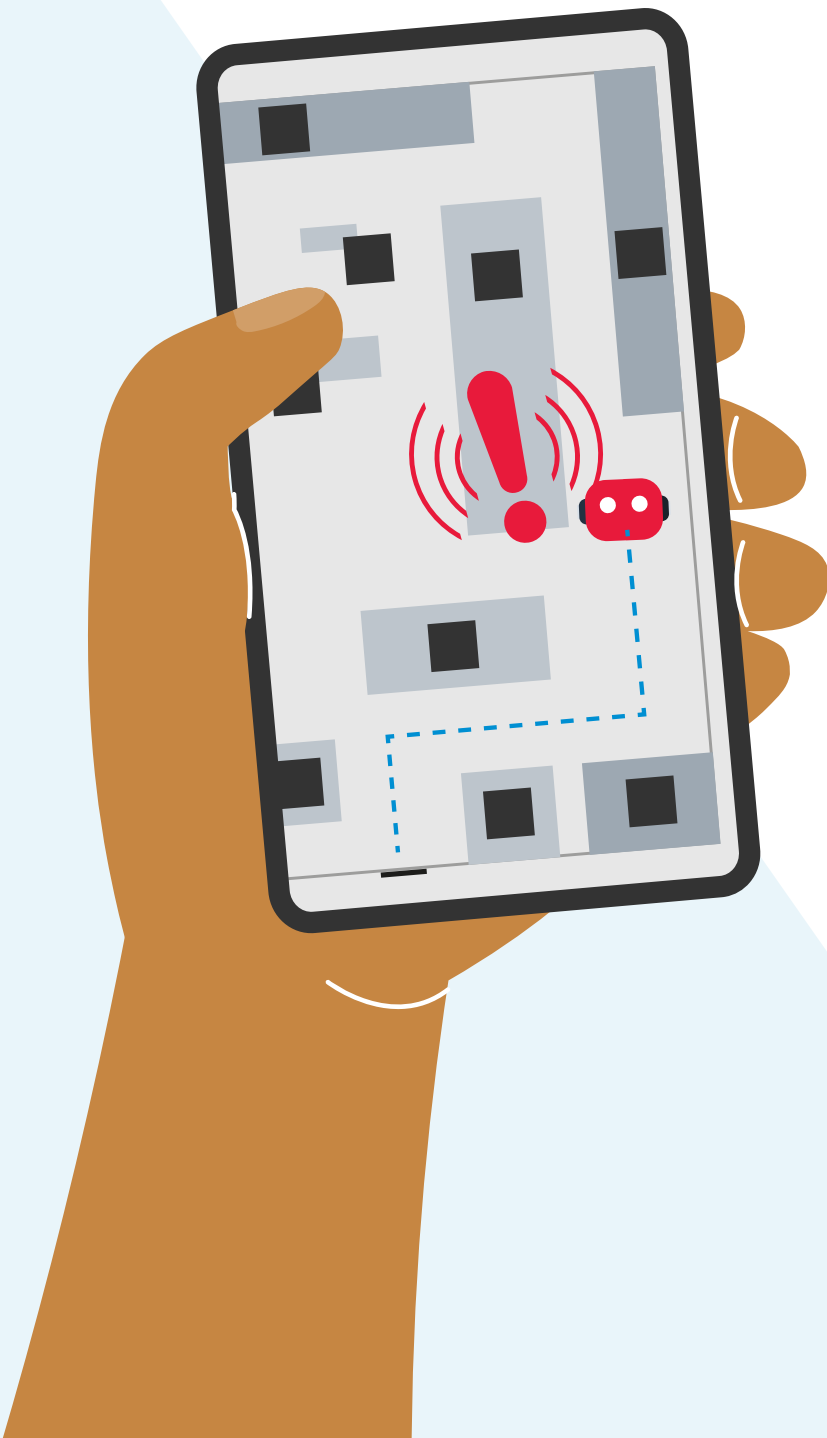
The foremost application for autonomous bots lies in theft prevention. These sophisticated machines are equipped with advanced features like facial recognition, serial number logging, and 360-degree video capabilities, all of which contribute to apprehending criminals. Facial recognition and secure device identification technology enable the identification of individuals who may have previously stolen from the store, alerting security to the presence of known thieves. With their integrated 360-degree cameras, these robots help prevent shoplifters from evading security measures or concealing their activities. The comprehensive surveillance provided by these cameras guarantees that the robots maintain a full view of the surrounding activities.

In the future, robotic security guards may possess the capability to assess a shopper's demeanor and predict potential criminal behavior.

For instance, if a customer displays actions akin to those of a known thief, the robot could flag these traits in the customer's profile for subsequent review, should the shopper engage in theft. Nevertheless, it is imperative that these systems are meticulously designed to avoid perpetuating harmful biases and to prevent unfair profiling based on stereotypes.

While autonomous security robots offer retailers a multitude of benefits, their integration will inevitably prompt questions regarding the impact on existing roles. Security robots' capacity for data gathering and analysis will augment and improve the roles of human security personnel, but judgement and empathy should always remain central to in-store security operations. Human security guards are better suited for tasks involving enforcement and emergency situations, while robots excel at detection and monitoring. To effectively collaborate with robotic systems, existing personnel will need to adopt new procedures and acquire additional skills, making the [upskilling and reskilling](#) of security teams essential.





Beyond crime prevention, the security capabilities of in-store robots can be expanded to gather data for other operations, such as store layout optimization, inventory management, and improving the customer experience (CX). Retailers can program their autonomous bots to alert when shelves require restocking or when products are nearing expiration. Additionally, these robots can track which areas of the store attract the most foot traffic, providing valuable insights for strategic product placements.

Robots can also perform double duty as customer service agents, guiding shoppers to specific products, providing detailed product information, and alerting shoppers to potential hazards such as ongoing construction or wet floors. This frees up human customer service agents to tackle more intricate tasks while acclimating customers to the presence of robots. Over time, this interaction can positively influence shoppers' perceptions, solidifying the role of robots as helpful and supportive aides within the store.

By integrating in-store robots, retailers can significantly mitigate inventory shrinkage, reduce the dependence on manual labor, enhance operational efficiency, and optimize resource allocation — culminating cost savings across multiple domains.

Despite their numerous advantages, customer safety and privacy concerns remain paramount for retailers considering the deployment of autonomous robots. Recent technological advancements and a surge in data breaches have heightened customers' wariness, with many concerned about the security of their personal data. In an era where customer trust is critical to maintaining loyalty and driving sales, retailers should prioritize transparency and clearly communicate any changes to their operations, practices, or policies.

Wired for Protection: Safeguarding the Privacy of Personal Data and Adhering to Surveillance Regulations

In today's retail environment, earning and maintaining customer trust is paramount, especially when employing sophisticated technologies like security robots. These devices frequently collect personal data to bolster store security; however, if improperly managed, they can infringe on privacy, erode trust, and lead to legal consequences. To prevent negative outcomes, retailers must ensure that data collection, processing, and storage comply with the [General Data Protection Regulation](#) (GDPR), European Union (EU) tech regulations, and other relevant laws and regulations.

GDPR constitutes the legal framework in the EU for personal data protection, aiming to ensure that collected personal data is handled transparently, securely, and solely for the reason it was collected. This regulation also extends to organizations outside the EU that provide goods or services to, or gather data from, EU individuals, necessitating compliance from many U.S. companies. Non-compliance with GDPR can result in substantial financial penalties and damage to a company's reputation. Since GDPR's inception, privacy regulations have significantly evolved, [with various state privacy laws emerging in the U.S.](#) This trend suggests that even businesses not currently bound by GDPR should adopt compliant practices, as similar frameworks are becoming increasingly prevalent across the nation.

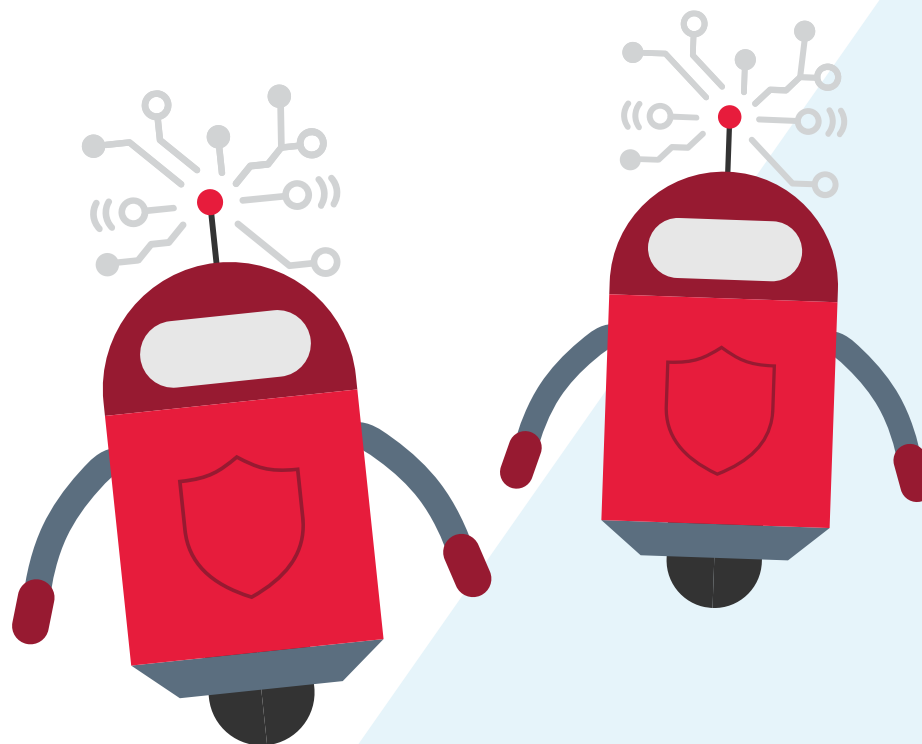
The GDPR framework is anchored in foundational principles that compel retailers to uphold lawfulness, fairness, and transparency, purpose limitation, data minimization, security, and accountability. Developing clear, actionable policies for data handling, consent, and security is paramount for maintaining customer trust and fulfilling legal obligations. Adhering to the following key privacy guardrails is essential when deploying security robots, to help maintain compliance with relevant regulations while addressing customer privacy concerns.



- ▶ **Clear Policies:** Develop transparent privacy and related policies that outline what data is collected, its purpose, retention period, hosting party, and access controls. Policies should be readily available to customers through online privacy notices and Privacy Centers should highlight how the company complies with the GDPR principles.
- ▶ **Consent vs. Legitimate Interest:** Allow for explicit consent when collecting and processing biometric data (e.g., facial recognition). However, collecting and processing biometric data may be allowed when based on legitimate interest, which requires a Legitimate Interest Assessment (LIA) to balance the interests of the retailer with privacy rights of the customer. LIAs help to confirm that the data processing is necessary when the customers' rights are overridden.
- ▶ **Purpose Limitation:** When integrating security robots into store operations, review data collection practices to ensure that data is not collected beyond what is necessary for enhancing store security or serving in a customer service capacity.
- ▶ **Data Minimization and Privacy Enhancing Technologies:** Collect only the data necessary for the intended purpose, and regularly review your data collection practices to confirm security robots only gather what is needed. Retailers can minimize unnecessary data collection and excessive monitoring by limiting surveillance and facial recognition to high-risk areas. Additionally, they should implement encryption and access controls to secure collected data so that video footage captured by robots is securely stored and accessible only to authorized personnel.
- ▶ **Data Retention:** Data should be retained only if it is necessary. Establish clear retention limits and accommodate customer requests for data deletion when it is no longer required for the original purpose or if consent has been withdrawn. Ethically, retaining surveillance footage for extended periods can be perceived as intrusive and excessive monitoring. Limiting storage duration demonstrates a commitment to respecting customer privacy, and balances security needs with ethical data handling practices. It helps in building a positive image and strengthening customer relationships.
- ▶ **Programming of Robots:** Robots must be programmed with a strong ethical foundation, avoiding any aggressive or overly intrusive behaviors. It is crucial that robots are designed to adhere to privacy standards, ensuring compliance with data minimization and collection principles, as well as ethical AI guidelines and regulations.

Data privacy compliance is an ongoing commitment rather than a one-time task. Retailers who routinely review their data collection and retention policies are better equipped to stay aligned with GDPR and other evolving privacy, AI, and technical regulations.

By diligently protecting customer data, retailers can avert substantial fines and reputational harm while cultivating trust, which translates into stronger customer loyalty and increased sales. For retailers exploring the integration of security robots or other data-driven technologies, teaming up with a privacy partner can be invaluable. Such collaboration facilitates continuous adherence to regulations through regular audits and updates to data protection practices.



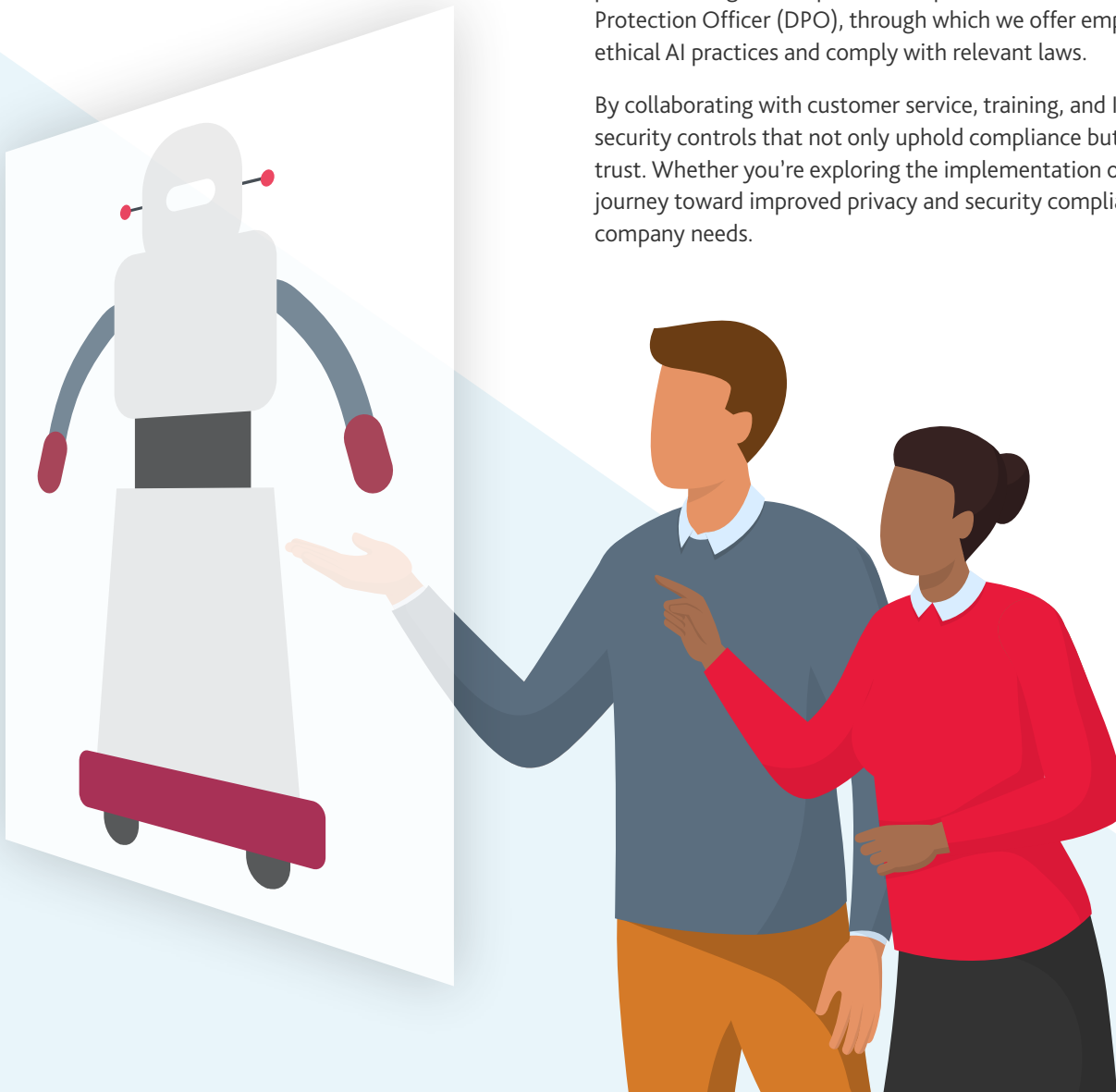
Rolling Out the Robots: How BDO Can Help

CH.4

Security robots are just beginning to make their mark in the retail sector, presenting an opportune moment to integrate them into your stores for enhanced theft protection and cost savings.

[BDO's privacy and data protection compliance professionals](#) offer a multi-pronged approach to implementing data protection by design and brand protection strategies before the integration of security robots. We provide comprehensive reviews of security policies, data encryption, storage, and breach response plans, focusing on compliance and post-breach resolution. Our team can also act as your outsourced Data Protection Officer (DPO), through which we offer employee training and ensure security robots adhere to ethical AI practices and comply with relevant laws.

By collaborating with customer service, training, and IT teams, we can help retailers implement effective security controls that not only uphold compliance but also enhance operational efficiency and build customer trust. Whether you're exploring the implementation of autonomous in-store robots or embarking on your journey toward improved privacy and security compliance, BDO can tailor strategies to meet your specific company needs.



Don't let privacy slip through the cracks — lock it down with smart controls and 'byte' into better protection.

BDO's [Retail and Consumer Products](#) professionals have deep industry experience and a comprehensive suite of services to help retailers understand their data privacy responsibilities today and into the future.



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