

Zero Shrink

Tracking 213,501 jewelry items without a single loss in a pilot RFID project at the world's largest jewelry showroom vault

The Challenge

Traditionally, inventory counting in the jewelry industry is performed either manually or with bar code scanning. Both measures are inaccurate, labor-intensive and too infrequent to provide concrete value. At the wholesale level, stock counts are typically performed every six months and involve closing the facility for at least one day, so items can be removed from displays and weighed manually. The result: lost sales and discovery of shrinkage when it is far too late to make a difference, creating a high-risk environment for both merchants and financiers.

These concerns were magnified at the world's largest wholesale jewelry showroom vault. Located in Dubai, the facility is designed to provide a consistent supply of gold jewelry to local and international retailers and wholesalers at competitive prices. Combining the aesthetic advantages of a showroom with the security of a vault, it covers 550 square meters of floor space and can accommodate one million pieces of gold jewelry.

Before financing inventory on such a scale, banks needed assurance that the showroom vault could provide uncompromising control of its gold jewelry stock. This required implementing an exceptionally accurate inventory tracking system before the facility could open its doors – accuracy which only an RFID-based system could deliver.



The TJS Solution

TJS's ZeroShrink gives jewelers a faster, more effective way to keep track of their inventory. Using high-speed scanners and tamper-evident RFID tags, jewelers can count inventory within minutes, increase accuracy to 100 percent, and reduce, if not entirely eliminate shrinkage.

Unlike barcode technology, RFID does not require line-of-sight to scan the tags, enabling each handheld RFID reader to accurately count thousands of items within minutes.

In Q3 of 2006, TJS delivered the world's first large scale RFID-based inventory control system for jewelry stock, providing the showroom vault with inventory tracking of unprecedented accuracy. The ability to count high-value stock in record time not only enables efficient daily counts, it also eliminates human error associated with manual inventory.

The Trial

To demonstrate the system's viability, a real-world full-scale trial was launched between July 2007 and March 2008. The trial began by securely tagging over 200,000 pieces of jewelry purchased from suppliers, using TJS's tamper-evident RFID tags. Attributes of each piece of jewelry (weight, description, supplier, date of purchase, location, etc.) were entered into the system database to create a record associated with each tag.

TJS partnered with Brink's Global Services, a leading global security firm, to serve as an independent monitoring agent. The firm was entrusted with day-to-day supervision and verification activities while relying on TJS control systems for accurate tracking, reporting and auditing.

During the trial, TJS conducted tests that spanned all inventory counting and monitoring operations. Brink's Global Services oversaw stock counts every morning while the showroom vault was open for business. As items were sold to customers, the system automatically deducted them from the count, while items returned were automatically added.

- ▶ On-demand visibility into stock decisions including trend analysis and reporting.
- ▶ 100 percent accuracy not found with traditional counting methods.
- ▶ High-speed scanners track hundreds of items in minutes.
- ▶ Eliminate fingerprints and potential damage with touch-less counting.



The Results

The table on the right summarizes the turnover during the trial. As the table demonstrates, there was zero shortage in the number of pieces and zero discrepancy in the physical weight of the items. Most importantly, the system weight at the end of the trial matched the actual physical weight.

| | Pieces | Weight in Grams | Est. Gold Value |
|----------|----------|-----------------|------------------|
| Tagged | 213,501 | 1,498,919.44 | \$33,155,041.62 |
| Returned | -111 | -1,119.22 | -\$24,332.11 |
| Sold | -213,390 | -1,497,800.22 | -\$33,130,709.51 |
| Net | 0 | 0.00 | \$0.00 |

The Impact

Today, the TJS system is redefining the way enterprises monitor and control their highvalue stock, providing unparalleled speed, accuracy and reliability while meeting the stringent demands of a large scale wholesale operation. The impact also extends beyond merchants' balance sheets. For example, with trusted inventory accuracy, banks are implementing new asset inventory financing models that benefit both lenders and merchants. Contact TJS to learn how ZeroShrink can make a difference for your business.

**Revolutionizing
inventory control**

**After eight months,
no shortages or
discrepancies**

About TJS

TJS was founded in 2005 to explore more efficient inventory financing structures for the gold jewelry industry, using RFID to improve certainty about the location, authenticity and ownership of jewelry items. In early 2006, TJS rolled out its inventory tracking platform to a small retail jeweler in Dubai and has since expanded into the world's largest RFID jewelry deployment thus far. As a result, TJS was named a finalist in the 2006 RFID Breakthrough Awards.

With TJS products, organizations can achieve complete visibility of their products and assets with unprecedented ease and accuracy. Retailers, financial institutions, and security service providers are using TJS products to monitor their high-value items across multiple locations.

TJS's item tracking software is deployed across Asia, Europe and North America. Tracking over 2.5 million jewelry items valued at over \$800 million.

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