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How Magical are Magic Mirrors? The Present and Future of This Buzzworthy Technology

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How Magical are Magic Mirrors? The Present and Future of This Buzzworthy Technology

There was buzz at this year’s National Retail Federation (NRF) Big Show surrounding Magic Mirrors, which have moved from the prototype stage to something everyone seems to be working on now. But are Magic Mirrors the wave of the fashion and retail future, or are they just another gimmick that won’t stick once shoppers become savvy to the novelty? Do they really enhance the shopping experience and better help the sales associate, or are they another step in the process, one that takes away from the excitement and human interaction of shopping, turning the act into something rote?

The Magic Mirror started as an augmented reality tool for shoppers to virtually “try on” different clothing items in front of a mirror outfitted with sensors enabling a motion-triggered virtual change of clothing. When the customer moved his or her arm, he or she would see a new shirt or pair of pants superimposed over their own live image. Product information was fed into the mirror from a linked tablet with which the customer could continue the experience by swiping through color palettes, sharing new looks with friends, and even making a purchase.



Retailers have been experimenting with this technology since 2010, when Macy’s rolled out its smart dressing room. Body scanning and measurement devices—such as MeAlity, which can create user profiles for better fitting clothes but requires a scanning machine, and Styku, which created a portable 3-D body scanning platform—have been interesting on a designer level, but not adoptive for consumer use. However, the basis of their technology has served to boost the development of enhanced smart mirrors, such as Intel’s Magic Mirror, which takes a 360-degree video and provides sizing data, and is just now being rolled out in a pilot program with Neiman Marcus. One of the other more interesting applications that is sure to gain traction for a multitude of uses is the development of facial recognition capabilities, as with ActiMirror, a magic mirror that analyzes 25 facial features to determine age, gender and ethnicity.

The applications of Magic Mirror technology range from being a fashion driver to enhancing the fitting-room process. The ultimate goal is to provide the customer with a fully integrated retail experience while giving the retailer and brand the ability to pull and track data, expand their customer loyalty programs and better monitor inventory.

The applications for this technology have evolved over the last few years, with today's key uses being:

1. Attracting customers with visual suggestions and options for complimentary fashion, style, wardrobe or makeup ideas;
2. Expediting the fitting room process and providing a hassle-free experience, enabling better customer-associate interactions;
3. Theft protection (in the case of RFID-tagged items) and inventory tracking and management; and
4. Most importantly: data collection, expanding loyalty programs, sales tracking and the social media sharing that occurs with each use.

While there are many variations in the application of this technology, most products can be grouped into one of two categories: Magic Mirror displays and fitting room technology. Some crossover does exist, based on a brand's customized user experience.

Displays and Mirrors

Magic Mirror displays focus on the ability to showcase products on a big display and provide an augmented reality experience for the customer. Installing tablets is the least expensive way to provide an augmented-reality experience. For Magic Mirrors, the hardware and software installation costs need to be justified by higher consumer purchases.



There are a few notable products undergoing pilot testing or a limited rollout.

Panasonic's interactive mirror allows the customer to look at herself (or himself) and see how she would look if she changed her makeup or was in different lighting. It points out flaws and makes suggestions for helpful products.

4D Retail Technology Corp.'s 4D Magic Mirror display features a virtual assistant named "Anna" and uses targeted voice recognition technology to answer a variety of questions regarding pricing and other detailed key selling points, and makes recommendations based on selections preprogrammed by the retailer.

Memomi's Memory Mirror tracks real-time movements using cameras and sensors, using the Magic Mirror technology that superimposes color changes onto the customer's live image, to show texture and movement, increasing the realism of the new look. It takes body measurements by allowing the customer to record a seven-second, 360-degree image as he or she turns in front of the mirror. The customer can then change sizes, colors and styles to see what that product looks like on his or her particular body. The customer can compare products side-by-side on a connected tablet and, of course, share them via e-mail and social media. One of Memory Mirror's benefits is that it doesn't require the use of RFID tagging, which can be labor intensive for retailers.

To excite their mirrors, **actiMirror** uses RFID tagging as well as motion sensors and facial recognition to analyze 25 different facial features. actiMirror's modular platform allows the use of various external plug-and-play modules. For object recognition, in addition to RFID tagging, one can also use an alternative scanning method such as barcode scanners. actiMirror has an open API platform for developers, and as technology improves, as long as one has a powerful hardware platform in place—which can include high-definition cameras for specific applications—actiMirror will easily integrate new generations of object recognition software.



Retailers without an existing RFID logistics system in place can use actiMirror in totems placed in prominent locations at their stores to promote new collections. This allows them to limit the number of items using RFID tagging, while taking advantage of the retailer's existing customer infrastructure.

Companies such as **The Big Space** have used Magic Mirror display technology to enhance brand experiences, such as with MAC Cosmetics, where RFID-tagged items pop up on a mirror while the customer is using them, providing detailed information about the product. The application is completely artist-driven (based on the artist's product choices). As its current pilot program is geared toward international and travel customers, there are several language options on the Mac-customized screen which can be implemented in airports and changed instantly to cater to a new set of international customers, if the proper logistics are in place.

Fitting Room

Most Magic Mirror fitting room technology is RFID-tag based. The customer walks into the fitting room and sensors in the mirror or tablet recognize the item brought in and offer additional wardrobe suggestions. These systems enable the shopper to call a sales associate immediately, pulling sizes and colors as needed, and reassuring the customer of the associate's attendance. Some systems have been customized to enable making a purchase while still in the fitting room.



Many teched-out fitting rooms use tablets such as iPads to allow the customer to request the assistance of a sales associate, receive new sizes or colors, see what's in stock in the store, and receive fashion suggestions for complimentary items, such as a belt to match the shirt just tried on.

Hybris offers an ecommerce, digital in-store and omnichannel experience, allowing the customer to select new sizes in the dressing room and facilitating notification to sales associates. Its cross-sale features comprise a full omnichannel journey, as the customer can see what products are ready and continue his or her selection with an online purchase if the products are not in the store.

CatLook offers a suite of in-store technologies including RFID-tagged item-recognizing mirror displays, touch-screen product browsing, and virtual interaction with associates for fitting room assistance. Another fashion-forward aspect of their suite is the Virtual

Mannequin, which allows the customer to bring a product to the screen and automatically completes the look for them.

Crossover

Most notable is EBay's interactive display at Rebecca Minkoff's stores. It blends in-store and online shopping habits, allowing the customer to swipe through options on a touch screen mirror and then have selected products brought to them in the fitting room where they can continue the experience. The lighting can be adjusted to various modes (such as evening lighting or daytime exposure) depending on where the customer plans to wear the clothing. The connected mirror is part of the connected store concept and is operated through EBay's software and hardware. Clothing is RFID tagged, but the mirror still functions as a reflective display.

The question still remains to be answered: Will consumers adopt this technology? Do consumers want a tablet to provide wardrobe suggestions, or will it seem like yet another advertisement being pushed, this time inside in the dressing room? Is virtually trying on an outfit a substitute for actually feeling how the fabric falls on one's frame?

Some of the larger obstacles include the use of RFID tagging in the store. There is also the cost of rollout as software and tablets may all offer a more financially attractive implementation, since the hardware cost of a Mirror implementation is significantly higher. The payoff will come in customization options including mobile checkout, motion-triggered response, voice activation and touch screens, as the retailer continues to hone in on the balance of benefits versus cost.

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