Digital Fitting Rooms
The Latest in Retail Technology
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THE PROBLEM

One of the most important parts of any retail business is creating high conversion rates. It is a great victory to draw a customer into your store or get them to buy a product online, but is that enough? The key to success is getting consumers to make a purchase at the counter and reduce the number of returns from online buys. Increasing in-store conversion rates can be done by reducing frustration and time spent in fitting rooms, while creating a unique, positive experience for the customer. Additionally, providing a way for online shoppers to assure the right size and fit of desired clothing without going to a physical location, can prevent unnecessary returns or exchanges that effectively cost money and waste time.

THE SOLUTION: DIGITAL FITTING ROOMS

Virtual fitting rooms, also known as digital fitting rooms, are an emerging trend in retail stores and on e-commerce platforms. The ability to “try-on” clothes in a digital world is no longer a thing of science fiction, but a reality that many retailers and consumers are quickly adopting. It is now possible to stand in front of digital mirrors (magic mirrors) that portray the customer dressed in a 3D rendering of in-store products. There is also the ability to use a body-scanning machine to create an avatar of a shopper based on their measurements, which then tries on the clothes virtually.
BENEFITS

The possibilities are endless and benefits are seen by brick and mortar locations as well as online sellers. In-store shoppers are not forced to wait in long lines for the next available fitting room as the process of “trying on” clothes is much shorter. Online shoppers are less likely to return an item after realizing that they had purchased the wrong size or the fit wasn’t right for their body. Magic mirrors have the ability to record the customer virtually trying on outfits and take snapshots of their favorite items, which can be streamed live to users’ social media sites. This allows for brand advocacy through peer recommendations with an increased visibility on social media platforms, which are considerably more important than ever before in the marketing side of any business. Whether it is a 2D display on a shoppers’ smartphone or a 3D rendering on a mirrored image of the customer, digital fitting rooms create a differentiated and individualized customer experience which increases conversion rates. “Data from online clothing retailers using Fits.me shows an improvement in conversion rates of up to 62% compared to shoppers using a traditional size chart and a reduction in returns for reasons of fit of up to 77%.”¹ At the same time that fitting room lines are drastically shortened or completely eliminated, the frustration and inconvenience of physically changing clothes becomes a thing of the past. Shoppers who normally browse without buying as they are hesitant to try on outfits in a time-consuming sometimes overwhelming process, may be more inclined to stand in front of a digital sign to virtually browse, try on, and even purchase items in one quick stop. This increases the number of in-store purchases and can increase customer loyalty as data on measurements that can be tailored to a specific brand’s products can be stored and easily accessed for future purchases. The biggest problem for online retailers is that “…customers return…15-25% of online clothing

¹ http://www.crunchbase.com/company/fits-me
purchases, and…70% of people have returned clothes because they were ‘the wrong size.”

By having the ability to see how the fabric hangs on a person’s body and by testing how tight or loose an article of clothing fits, digital fitting rooms account for personal style that traditional sizing charts cannot manage. This increases the likelihood that items delivered to a consumer will be the right style and fit and drastically reducing the number of returns.

TECHNOLOGY

- Three-Dimensional Display: allows for visualization on individual client’s customized avatar that is created from inputted measurements.
- Two-Dimensional Display: outfit builder applications allow users to see what garments look like together
- Body Scanners: sizing and product recommendation
- Digital Signage/LCD Displays: for magic mirrors and customer interaction with digital product inventory
- Tablets and Smart Phones: for mobile applications and interaction with a store’s digital inventory
- Internet Connectivity: sharing on social media sites and connection with inventory system
- Cameras: record video and take snapshots for customer use
- 3D Cameras: facial detection and body mapping for magic mirror display and avatar creation
- Motion Detection Technology (like Kinect): to show how the clothing responds to a customer’s movements
- Multi-touch Technology
- Bluetooth Connectivity
- Inventory Management and Synchronization Software
- Robotic Mannequins: for size and shape imaging in the creation of digital fitting room databases
- Cloud Database Technology

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2 http://www.fits.me/files/Fits.me_Pretty_Green_Case_study.pdf
Some current products on the market that are used for applications to digitally try on clothes and create virtual experiences for shoppers include Fashion3D, triMirror’s Virtual fitting Rooms, Me-Ality Size Matching Station, Mipso’s FiT, Intel’s Magic Mirror, and Macy’s Magic Fitting Rooms.

**Fashion3D**

Users can stand in front of a life-size screen mirror which will use augmented reality software to overlay the user’s image with realistic 3D renders of clothing and accessories. Users can try on individual garments or choose outfits virtually and take pictures which they can share on social networks.

- **Technology:** Kinect motion detection technology
- **Interaction:** Clothing can be selected using gesture based or iPad interfaces.

**triMirror’s Virtual Fitting Room**

This product allows shoppers to try on clothes on real-dimensioned, highly customizable avatars. The user sees where the garment is tight or loose, juts out or sags down, and how it behaves when they move around in various ways. The triMirror virtual fitting room streams a live video back to users live over the web.

- **Platforms:**
  - Online
  - In-store (with gesture control, avatars, or virtual mirrors)
  - In a gaming environment
  - On mobile platforms

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Me-Ality Size Matching Stations\textsuperscript{5}

A body-scanning booth takes exact measurements of every inch of the user’s body. Me-Ality can provide a shopping guide that can be used to filter by style, fit, brand and price. The system then provides a printout of a custom-made list of items that are best suited for the customer’s size and shape.

Benefits:
- The scanners bring online shoppers who want to be sized into a physical location to utilize the stations, which creates business for brick and mortar stores struggling to compete against the shifting preference of customers to browse and purchase items over the internet.
- If the consumer has already made the trip to be sized and has a list of items currently available in the store with recommendations, they are likely to make the purchase in store, rather than going through the hassle of trying to find the same product online.

Mipso’s FiT\textsuperscript{6}

Technology lets shoppers enter a few measurements and receive a size recommendation tailored to each of a brand’s specific products. At first, the feature will be available for online purchasing, but FiT also enables an in-store service that lets shoppers scan products in-store to receive size recommendations.

Benefits:
- Decreases hassle of trying on multiple sizes for a brand-specific item which reduces—or completely eliminates the need for—fitting room wait-time. It also reduces customer frustration, effectively increasing conversion rates. Clothes from different stores may fit differently based on tailoring and style, which may not correspond to a shopper’s usual size.
- The technology creates customer loyalty as the consumer is more likely to return for more products because their measurements are already stored on the company’s website and can be used to find the best fit on each product offered.

\textsuperscript{5} http://iq.intel.com/changing-rooms-digital-dressing-rooms-fashion-a-fitting-future/
Magic Mirror by Intel Labs

Magic-Mirror-enhanced screen is reachable by computer or smartphone. An avatar “tries” on outfits in a Virtual Dressing Room, detects movements, and reflects an image in 360º, allowing shoppers to see how the clothing looks from all angles. The ability to move the avatar’s body shows how the fabric will fall on the body.

Macy’s Magic Fitting Room

These fitting rooms feature a large-scale mirror with multi-touch technology that interacts with a multi-touch tablet. Customers can browse, shop, and "try-on" items virtually. They can then send the whole experience to a Facebook page, SMS, or email. All of the items that they saw in the digital realm can then be found and purchased in store or online.

PRODUCT TESTIMONIALS

"We couldn't be happier with the Magic Fitting Room. Reaching out to and engaging with the digital savvy, young consumer is something all retailers are striving to do. The Magic Fitting Room marries together our goals as a marketer and consumer's expectations perfectly." -Joe Feczko; Senior Vice President, Innovation, Macy's Marketing.

“In the first six months of 2012, our online conversion rate soared by 62%. We also discovered, through the data, that 40% of all purchases made with Fits.me are first-time customers of Pretty Green.” -Tim Kalic; Head of Digital at Pretty Green

“Fits.me provides [customers] more assurance that ordering from an e-commerce retailer will result in a properly sized garment. As a result, the conversion rate has more than doubled among [international customers] who use the Virtual Fitting Room.” -Antony Comyns; E-commerce manager for Hawes & Curtis, Internet Retailer Magazine

10 http://www.fits.me/files/Fits.me_Pretty_Green_Case_study.pdf
11 http://ironcreative.com/blog/virtual-fitting-rooms-can-they-reduce-return-rates
WHAT THE FUTURE HOLDS

The virtual fitting room is an emerging technology that presents an opportunity for retailers to increase conversion rates and provide a unique experience for the tech-savvy shopper of the modern world. However, no one can say for certain how consumers and retailers will react to such a drastic shift in the shopping experience. Will the majority of retailers choose to adopt and retain the technology? Who benefits more: online retailers or brick and mortar locations? Will the visual fit be enough to satisfy customers, or will they be turned off by the inability to physically feel the fabric on their skin? For now, these questions may go unanswered, but it is clear that the technology is here, the benefits are great, and the virtual fitting room meets an unmet need for both online and in-store shoppers.

We hope you found our whitepaper on Digital Fitting Rooms beneficial and informative. Stay up to date on retail technology and the industry by clicking on any of the following links. Then, feel free to share this paper with your colleagues and clients.