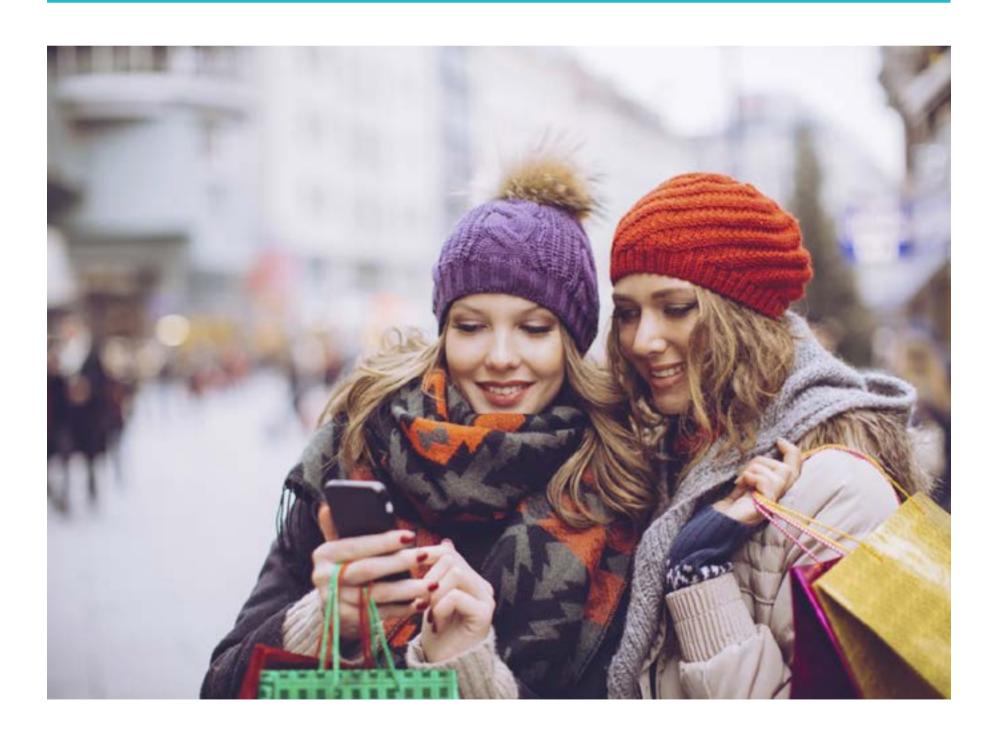
Augmented Reality Now An Ecommerce Reality

Spark online retail success in a new technology era



ugmented reality has made its presence known among consumers and companies, and is projected to reach \$162 billion in revenue by 2020 according to a 2016 IDC report. The report predicts that augmented reality will contribute more revenue than virtual reality after 2017. This white paper introduces the augmented reality boom and the technology behind it. It also discusses how augmented reality can be used to drive user engagement, ecommerce sales, and marketing success based on the example of Apollo Box, an emerging augmented reality shopping application.

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AR is here Companies are Thriving

The world of augmented reality (AR) is beginning. Snap Inc introduced an elementary version of augmented reality to smartphone users around the globe back in 2011. Now they are one of the biggest tech IPOs in the market. While media and businesses are buzzing about Magic Leap's impressive demos, now many AR companies are offering their technology to well known brands in different industries. Google and Microsoft are focused on creating hardware that is built into glasses or goggles. Microsoft Hololens just designed an interactive tour with NASA that will transport people to Mars.

The augmented revolution is here and this technology will soon be something that ordinary people will engage with and use on a daily basis.

Companies in different sectors have started incorporating AR technologies into their business and providing AR experiences to the public. Maybelline offered customers the ability to virtually sample nail polish. Medical company AccuVein developed a scanner to virtually display veins and valves in a patient's body. The British Museum gave children the ability to engage with the Parthenon with an app that brings museum pieces to life after a quick scan. Winewoo, a French wine recognition app, allows users to discover information about brands and make a purchase by scanning a wine label.





AR For Online Shoppers

The technology has arrived and consumers are interested. Over 200 million users have installed e-commerce applications, and this number is projected to grow to nearly 700 million by 2020. Shoppers now make 51% of their purchases online. Augmented Reality gives online shoppers the chance to engage with products without having to be physically present in a store. It helps consumers make informed decisions and triggers purchases. 40% of surveyed Americans said that they would be willing to pay more for a product if they could use Augmented Reality to experience it prior to the purchase.

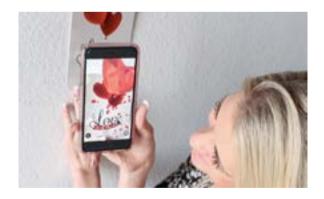


Marker and Markerless

Many companies are experimenting with marker-based AR, which uses a device to recognize an object/marker and presents its information. In contrast, markerless AR does not need to recognize a predefined object. It is able to places virtual objects directly into people's real environment.

Markless AR and Marker-based AR both have their advantages and draw-backs. Markerless AR works immediately and does not need to depend upon any device in order to perform. The popular gaming app "Pokemon Go" is a perfect example. As soon as a user opens up their Pokemon Go app, different Pokemon instantly appear on their smartphone screen and are pictured in the player's current environment. The app user does not have to scan an object in order to see the characters and participate in the game.

One challenge of markless AR is establishing content awareness. Marker-based AR in contrast automatically creates a content based AR experience, relating information to particular objects. The dependency upon an object/marker is a disadvantage of Marker-based AR. A related marker needs to be registered in advance for computer recognition and AR functionality.







Markerless AR

No

Need a printed marker? Yes

Display content anywhere?No
Yes

Use ScenarioAdd additioal information toBlend virtual content intoexisting objectsreal world

Markerless AR Shopping the Case of ApolloBox

Despite technically being present in various media for many years, the overnight sensation of Pokemon GO opened the floodgates for augmented reality in the eyes of the public. After the success and popularity of Pokemon Go, Apollo Box combined their own augmented reality technology and e-commerce platform to create an elevated online shopping experience.

Apollo Box developed an augmented reality shopping portal, AR Teleport, in their ecommerce app using markerless AR technology. It offers app users:

- A 360-degree view of featured products
- Product information and coupons
- The ability to view the product in their current environment
- The ability to virtually test and examine product functionality



1. Place a virtual couch



2. A coach appeared



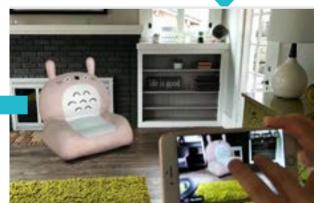
3. Move the couch



6. The coach rotated



5. Rotate with two fingures



4. Coach moved to new position

AR Teleport carries about 100 products ranging from home decors to electronics. Although AR technology has been used by other popular online retailers like IKEA, Lowes and Wayfair, Apollo Box's AR Teleport differentiates from others by allowing users to view and purchase a product within the same app.

Result #1 Enhance User Engagement

Around 75% of Apollo Box's app users have viewed virtual product catalogue powered by augmented reality technology. Within five months of launching the AR Teleport feature, app users have displayed products in augmented reality for over 100,000 times. A recent user interview suggested that most users viewed the augmented reality feature as a fun and rewarding experience.

Users are encouraged to continue playing with the app as new product and AR features, such as coupon searching, are introduced to enhance their experience. Apollo Box found a 20% higher retention rate among users who tried AR Teleport compared to those who did not use the feature.

The augmented reality shopping feature also attracts user to spend more time within the app. AR Teleport users spent an average of 16 minutes in the app per session, whereas other users spent an average of 6 minutes per session.

Average app session time with AR Teleport feature.

Average app session time without AR Teleport feature.

6 mins

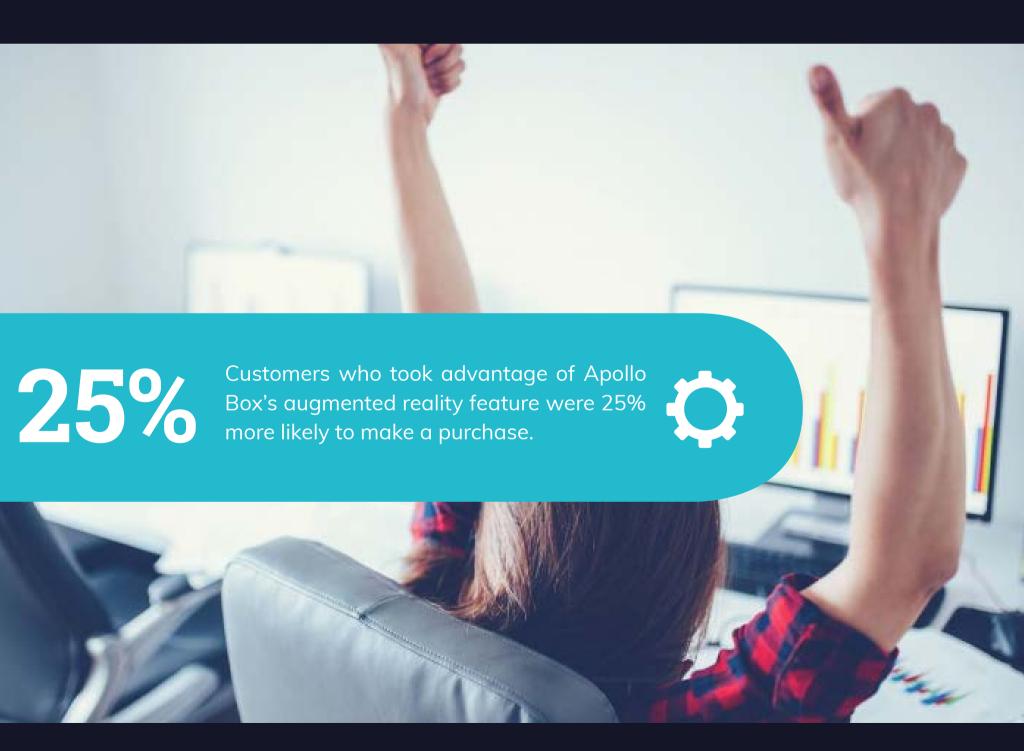


Result #2 Increase Sale Conversion

Augmented reality is more than just a game. Customers who took advantage of Apollo Box's augmented reality feature were 25% more likely to make a purchase.

With augmented reality customers can see a detailed representation of a product and how it fits their room before their purchase. This can reduce some of the uncertainties in online shopping and simplifies the decision making process.

When customers pose for a picture with a virtual object, they feel a deeper attachment to that product and to the online retailer. Thus, they're often eager to reopen the app, browse and shop new products in augmented reality.



Result #3 Enpowering Marketing

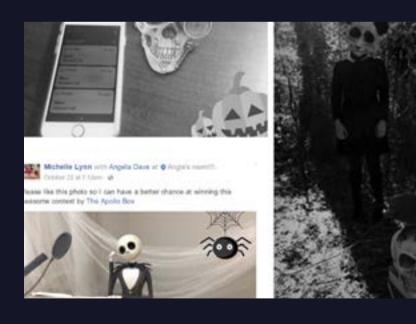
Augmented Reality paired with social media marketing has been proven to increase engagement, reach and profitable leads. The majority of Apollo Box customers are referred to the store via social sharing. They designed several augmented reality social media campaigns to familiarize viewers with the technology and give them the opportunity to engage and play.



ELFY Go Augmented Reality Raffle Game

Participants were asked to search through Apollo Box's ecommerce site and scan product images with their mobile devices. They were randomly rewarded with coupons or the grand prize, an ELFY Smart Lamp. Over 13,000 players participated in the two-months event with an average of 20 minutes spent in the app. This event helped Apollo Box cut down the cost per acquisition (CPA) by 50%.







Halloween Spooky Augmented Reality Photo Contest

Apollo Box invited participants to play with creepy Halloween products in augmented reality using their app and pose them in spooky photographs for a chance to win prizes based on Facebook votes. About 1500 contestants participated within two weeks, with 60% being new app users

50%

Augmented Reality marketing campaigns help Apollo Box cut down user acquisition cost by 50%.

3

Magic Valentine's Day Card

Apollo Box offered complimentary greeting cards to customers with qualified Valentine's purchase. The card presents a romantic illusion with crystal heart and rose petals in augmented reality when being scanned. Over 300 cards were claimed during the event and an average user scanned the card eight times for presentation and photo shooting.



Augmented reality campaigns and contests provides users with fun experiences and makes them more likely to become repeat customers. These campaigns take social sharing to a new level by seamlessly blending the virtual and real world though augmented reality.

About Apollo Box

Apollo Box is an ecommerce platform for customers to discover, collect, and share unique, fun and creative products from all over the world. To make online shopping more fun and reliable, Apollo Box integrated augmented reality technology into the online shopping experience. Customers can engage and play with a virtual 3D model of the products in their environment before they purchase them.