How Augmented Reality Can Help your Start-Up

Abstract

Augmented reality (AR) is considered as a technique that combines a live view of various things in real-time with virtual computer generated images, creating a real-time 'augmented' experience of reality. It has been one of the biggest sector of research for decades by the modern scientists. Augmented reality actually seems like the technology of the near feature.

AR is going to change the shape of commerce thoroughly shortly. The core advantage for business in augmented reality development for smartphones and tablets is that the hardware is available, and the usage is intuitive and understanding. Augmented reality can be applied to various industries as and when required.

Introduction

Augmented reality has been a hot topic in software development circles for a number of years, but it's getting renewed focus and attention with the release of products like Google Glass. It's true that AR is still entwined with games like Pokemon Go and fun activities like using Snapchat filters. But however, the potential benefits of Augmented Reality in the business world adds to the list and it can be seen that AR is not confined to these entertainment providing domains only.

The different applications of AR can become the backbone of the start-up and small scale industry to transform themselves into large scale business. Apps are being developed which embed text, images, and videos, as well as real–world curriculums. By using augmented reality, we will be able to contribute to the business applications of AR Kit and create a couple of concepts to grow our business market.

AR in Business

There are over 200 different meanings for the acronym "AR," and in this era of tech-speak, we want to make sure we know exactly what everyone's talking about when we hear startling statistics like the fact that "68.7 million people will use AR at least once per month in the U.S." or that the global AR market is expected to grow to about 198 billion U.S. dollars by 2025.

The AR technology has entered into different business verticals and has turned out to be successful in giving a drastic transformative look. It has proven to be a perfect weapon to taste success in the present competitive market.
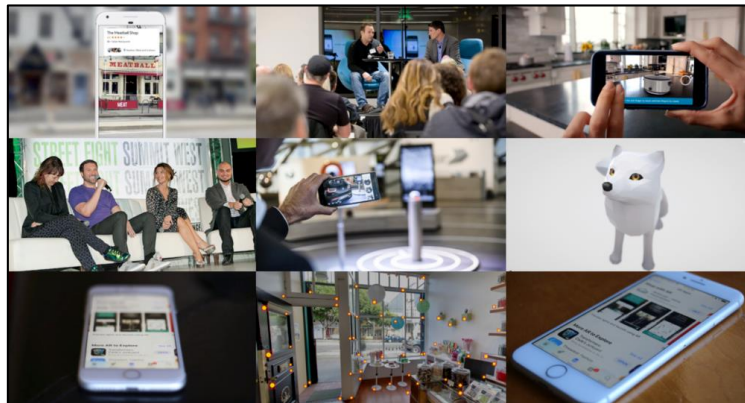
Recently, a research carried out to investigate success factors for Augmented reality business models. The research is divided into three parts, the business aspect, user aspect, and technology aspect.

Music and concerts were considered one of the best areas where immersive augmented reality would bring most value to consumers. The survey was conducted across the world in 2019 and it was found that 55 percent highlighted these two areas. Sports and movies was next with around 50% voting in favour of them.

A ripple effect of which can be seen from the fact that the AR market size, which was of USD 67.5 million in 2019, is anticipated to reach USD 1848.9 million in 2025 along with a CAGR of 28.6%.
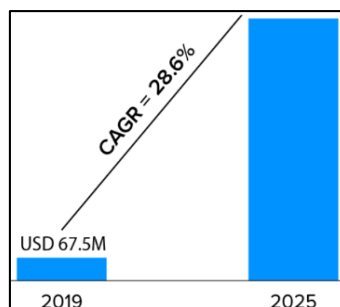
But, I know as a beginner in the start-up sector, no doubt you know what is AR, you are still clueless about the benefits of Augmented Reality (AR) in business spectrum, mainly for the successful growth of your start-up.

This article is going to be a good read for you and the best guide to help you out. Here, I will help you to get an understanding of the role and impact of Augmented reality in various sectors and processes. And this way, aid you to prepare your start-up for a 'digitally augmented reality'.

Before we begin to know how augmented reality can really help us to boost our startup, let's get our basics clear and try to understand what Augmented Reality (AR) technology is and the working of AR. So that we do not get swayed by the misconception that there's no difference between AR and VR when we hear these same rhyming words.

Both Augmented Reality (AR) and Virtual Reality (VR) are presented via 3D high detention video and audio. And both technologies stem from the same idea of immersing users into a digital environment. But while VR is completely immersive, AR only partly overlays virtual objects over the real world.
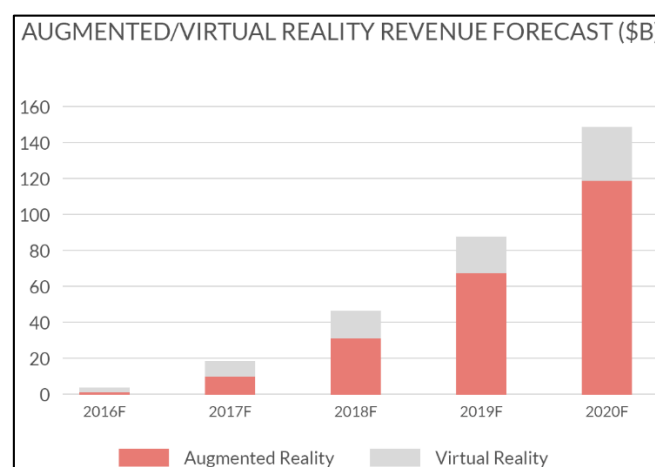
The latest data suggests that Virtual Reality and Augmented Reality hardware unit shipments are estimated to be around 25.3 million units in 2024! AR shipments by themselves are predicted to reach 24 million units! Hence, the future is going to be kind to the AR market.

Why Augmented Reality is beneficial to us?

Though not at its full bloom, augmented reality has a lot many advantageous characteristics to offer the business domain. Due to its high - demanded features, it is considered to be more appealing to the market than virtual reality. According to Digi-Capital's recent report, AR applications can reach 3.5 billion installed base and up till $85-90 billion within 5 years. Meanwhile, VR's numbers are 50-60 million installed base and $10-15 billion.

Augmented Reality can provide a number of key benefits to start-ups, their brands and the organisation too. Let's see some of the specific benefits.

Benefits:

- It attracts a broader audience as there is no need for additional devices.
- Brands have access to detailed analytics enabling them to truly understand their audience.
- It is mobile and personal and, therefore, hugely accessible to a rapidly growing smartphone market.
- It is a buzz worthy and noticeable technology.
- It makes the user experience through its application memorable.
- It results in increase of engagement and interaction and provides a richer user experience.
- It creates personalized content to improve engagement.
- Research has shown that AR increases the perceived value of our products and brands.
- Well implemented AR activity conveys innovation and responsiveness from forward thinking brands.
- It is an inexpensive alternative to other media platforms as no specific media needs to be purchased.

"Augmented reality promises to be as influential to our society as the smartphone."

- Tim Cook,
CEO of Apple

AR in Start-ups

$542 million amount of funding was achieved by an AR startup called Magic Leap. Just like its name, the funding leap was made possible by contributors such as Google, Kleiner Perkins Caufield & Byers, and Andreessen Horowitz. So, not just large companies, but AR start-ups can also scale big with a good idea!

Now, as we have come to know the main concept behind AR and its beneficial characteristics, let's uncover how this technology is used in start-up businesses across different industries. This would surely help us to plan how to come up with interesting augmented reality business ideas and eventually, gain higher profits for our start-ups.
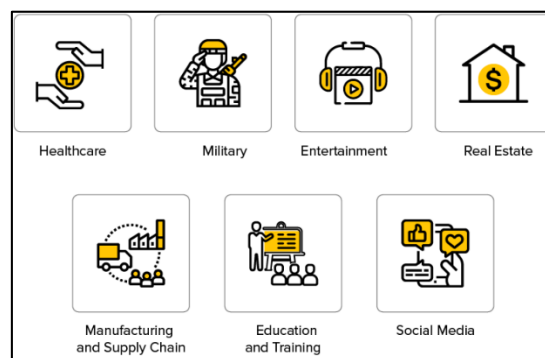
When discussing the industries in which AR has entered, gaming, retail, food, and travel & tourism are on the top of the list. However, the use cases of AR are not confined to these business verticals. Augmented Reality technology has helped Entrepreneurs address core challenges and make better profits in various other industries. Some examples of industry specific applications are as follows:

1. Automotive
   o AR in car dashboards helps to provide drivers with a wide range of technical and travel information.
   o It acts as a virtual instructor for everyday maintenance (i.e., changing oil, checking tyre pressure)

2. Consumer/Retail
   o It benefits driving product sales through activating additional brand content (i.e. music videos, TV footage).
   o It activates virtual product demos using AR enabled packing.

3. Education
   - o It increases engagement in learning by augmenting historical and cultural locations.
   - o It helps to provide augmented induction processes for new HE students in a campus environment.

4. Manufacturing
   - o AR can facilitate and accelerate the building processes at the factory.
   - o Project managers can monitor work progress in real time through AR markers on equipment.
   - o Besides, it can save a ton of time using digital maps and plants. Pointing a device into location shows how the piece of a machine will fit the final construction.

5. Financial
   - o Geo-tracking AR can be used to locate nearest bank facilities.
   - o AR activated bank cards can be used that allow us to check account details (i.e. balance, savings, latest transactions).

6. Tourism and Heritage
   - o Displaying augmented exhibition content for premium museum/gallery visitors.
   - o It gives virtual tour guides for specific city tour (i.e. culture, food and drink, historical)

How to integrate Augmented Reality into your startup?

1. Do market research
- Rather than going with the hype, the foremost requirement is that we dive ourselves deeper into your business market and target audience; and finally try to understand the potential of technology.
- It is a must that we invest most of our effort into augmented reality market analysis along with competitive analysis to see what can AR be used for, what is its future, and how the technology has helped to build a different image in the marketplace.

2. Examine internal business challenges
- While getting familiar with how others are making profits from AR will help us to frame our AR-based strategy, it is crucial to understand the limitations of your traditional businesses processes.
- That implies exploring the different segments of your business and bringing the individual teams on board to get a clear picture of what challenges they are facing.
- And later, discuss on how to build augmented reality apps for Android or iOS.

3. Bring Business and People together
- We should make AR implementation in such a way that it bridges the gap and creates opportunities for businesses to reach their target audience in real-time.
- This means customers can experience the products or services as they are meant to be in a much user friendly and effective manner.
- AR should be used as a powerful form of marketing to connect with the consumers meaningfully and creatively.
- This new form of marketing is not only effective but it is also budget-friendly as compared to traditional forms of marketing.

4. Train Employees
- Training and educating the employees using AR can be a highly immersive and interactive method of learning and familiarizing the employees the AR techniques.
- Trainees can run through AR scenarios as many times as they want to thoroughly understand a concept or a procedure.

- Furthermore, using AR for training creates an interactive and immersive experience across multiple senses, which can help the trainees perceive things better and learn faster.

5. Allow Customers to try before they buy
   - The common people normally have the tendency to try various products before buying them. Products which include cosmetic samples of women, and then doing automobile test drives are few things which makes customers go crazy to try and then choose the best item to buy based on their test and effectiveness of the sales strategy.
   - To make this try and buy system a better one for customers, augmented shopping plays an important role here by allowing them to taste the products before they buy.
   - The applications of augmented reality in this sphere have already begun to multiply as more businesses have started to realize the benefits of its presence.
   - For e.g.: Brands like Sephora, L'Oréal and Perfect Corp have created the facility to allow their customers to see how makeup would look on them digitally with the help of augmented reality technologies.

6. Augment Branding Materials
   - Augmented reality has the power to take branding materials like business cards, pamphlets, leaflets and brochures to a high level of advertising and publicity by implementing the virtual component.
   - Customers can now easily scan printed materials with their mobile devices in order to access a range of features and giving them more information and options to connect themselves with the product.
   - For instance, a user can scan a brochure in the right spot to bring up a video highlighting some aspect of the information being conveyed, bringing a dynamic element to the static text on the brochure.

Augmented reality is more than just a novelty or a new frontier in start-up world for entrepreneurs. It stands to be one of the driving forces behind sales and marketing innovations over the next decade. Using AR, forward-looking businesses will be able to upgrade the experience they offer to their customers, leading to increased business opportunity and sales.

Some AR Start-ups

1. WayRay – Holographic Navigation Systems

    - In order to pay constant attention to the road and gather out all the necessary information about various locations and mapping is only possible with the help of augmented reality through holographic navigation systems.
    - They do so by integrating the virtual world into the real world to provide ongoing localization and mapping.
    - For example, Swiss startup <u>WayRay</u> adds augmented reality to the route to show drivers the exact direction which can be adjusted simultaneously during the vehicle's movements and interaction with other cars. It uses holographic optical elements that result in the AR projection on the windshield.

2. Continental – Warnings and Alerts

    - Augmented Reality in the mobility sector is very crucial for the safety of drivers, which is why providing immediate warnings and alerts is a feature of most AR devices.
    - On analysing the situation of the road and calculating speed limits, they provide an immediate warning if a driver is about to leave the lane.
    - For example, German Continental's subsection startup works on an Augmented Reality device that combines intelligent adaptive cruise control (ACC) with the sensor head-up device, which in combination computes the distance between cars, their speed, and their driving manner to warn the driver if abnormal behaviour on the road is detected.

3. Yeppar – Driver Experience

    - Augmented reality in automotive sector not only affect the driver's experience, but it can turn out to be just a useful tool for passengers — providing them with relevant surrounding information via various Augmented Reality interfaces.
    - For instance, Indian startup Yeppar develops an Augmented Reality display on the front screen of a car that shows important information regarding upcoming traffic conditions, weather forecast, map navigation, and driving controls.

4. Creaxt: The Enlightening Union of Education & AR

- It believes in creating insanely great products which redefines the traditional infrastructures and stereotypical systems which we are following from ages.
- As it stands, Creaxt Inc. has been able to tie up with 18 kids stores in the city of Pune where products manufactured by Creaxt Inc. are in a state of regular delivery owing to the increasing demand of the products.

5. Grib
- Grib is for 3D modeling with no need for 3D software skills. We can easily grab the app and start modeling. All we need to have is a pen, a paper, and your mobile.
- It gives a whole new experience to build upon primitive shapes and/or simple 2D sketches, create 3D parts, put them together, modify and make even complex models.
- At the end, we can share, import, or print our work.
- So it's just said, "Grab your phone and start gribbing!".

6. Oho Cards
- Oho Cards makes the best application of augmented reality technologies to design beautiful and realistic looking greeting cards.
- It also allows the customers to send greeting cards that play video in Augmented reality.
- Oho lets us order augmented reality cards right from our phone with a simple click.
- We make it simple and fast for our customers to make high-quality cards that our friends and family will love.

7. Figurama

- Figurama is a 3D Media Platform where artists create the end product and sell it directly to the end users.
- Artists don't need to build a software or sell their art to companies who do.
- They can build 3D scenes with speech bubbles, create life-like situations with low production costs compared to other 3D products.
- We take the idea of Comics into 3D.

Conclusion

Of course, the augmented reality technology is a bit crude yet and still in its infancy. But we foresee its fast development and evolution because of some key drivers as an increasing number of phones and tablets and their extended functionality or increasing internet speed. Today is the best time to get started with an app that will draw your customer's attention to the product or can become a part of a brilliant marketing campaign.

The possibilities of AR are almost endless. They will enter into almost all areas of our life starting with social networks and ending with electronic commerce. However, it will go much further than that, and soon we will see many surprising applications of AR. Moreover, it has a bright future in the world of business and will revolutionize how you interact with the world.

Company managers that don't have AR as part of their business strategy may regret as there are endless possibilities in this new technology. AR will enter almost every sphere of our life beginning with social media and ending with e-commerce.