"Internet Of Things (IOT) and the benefit it offers to the users-A review study"

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Abstract

This paper has emphasis on the benefits what offers to the user through Internet of thins.The Internet connects people together via business and social communication or with systems via business transaction such as internet banking or e-commerce. On the other hand, the emerging Internet of Things (IOT) is all about connecting machines and systems together via sensors and actuators, so that meaningful information from these systems can be collected and actions taken to enhance human productivity and efficiency. We're talking about IOT driving the proliferation of connected devices from around a billion plus today to over 50 billion in the next decade. By doing so, IOT takes the meaning of inter-connectivity to a whole new level. While IOT promises a way to reduce wastes, costs and inconvenience while increasing efficiency, the biggest appeal of this technology trend is for us to lead environmentally cleaner, productive and a better quality of life.

Key words: Internet of things, benefits, users, e-commerce, automated process, Chargebacks

Introduction

The benefits of the IoT for business depend on the particular implementation; agility and efficiency are usually top considerations. The idea is that enterprises should have access to more data about their own products and their own internal systems, and a greater ability to make changes as a result.

IoT (Internet of Things) is an ecosystem of smart devices that have access to the internet and can communicate with each other. IoT changes the ecommerce industry not only from the consumers' side but also from the inner one. (e.g., processes like inventory management, logistics.)

The advent of Internet of Things (IoT) devices has brought with it a corresponding shift in the ecommerce space as consumer lifestyles keep changing and becoming more adaptive.

Similarly, the increasing rate at which online shoppers have adopted the internet has seen ecommerce grow steadily, and is expected to be the future of retail as most of the growth is happening in the digital space.

Almost all the segments of market have been covered by IOT. The ultilisation of IOT is used in all sectors .Below are the some figures has been displayed

IoT Endpoint Market by Segment, 2018-2020, Worldwide (Installed Base, Billions of Units)

Segment	2018	2019	2020
Utilities	0.98	1.17	1.37
Government	0.40	0.53	0.70
Building Automation	0.23	0.31	0.44
Physical Security	0.83	0.95	1.09
Manufacturing & Natural Resources	0.33	0.40	0.49
Automotive	0.27	0.36	0.47
Healthcare Providers	0.21	0.28	0.36
Retail & Wholesale Trade	0.29	0.36	0.44
Information	0.37	0.37	0.37
Transportation	0.06	0.07	0.08
Total	**3.96**	**4.81**	**5.81**

Source: Gartner (August 2019)

Internet of Things helps to ecommerce

There are four traditional **types of ecommerce**, including B2C (Business-to-Consumer), B2B (Business-to-Business), C2B (Consumer-to-Business) and C2C (Consumer-to-Consumer). There's also B2G (Business-to-Government), but it is often lumped in with B2B.

1.Better tracking and logistics

With IoT, retailers get greater visibility over the process of order fulfillment, so they can meet the demands of consumers who shop more online.

IoT technology offers ecommerce retailers the benefit of tracking customer orders from the moment they're placed to the second they reach the customer's doorstep.

Retailers can now track each piece of inventory via management systems such that they automatically locate the goods regardless of where they are.

Cloud based technologies such as GPS and RFID (Radio Frequency Identification) also offer retailers data such as traffic status, weather, location, and personnel identities, making logistics management more efficient.

It also helps automate shipping and delivery to eliminate issues of missing shipments, while optimizing vehicle routes.

2. Automated management of inventory

Ecommerce retailers like having control over the items going out and coming in of their warehouses to know what is in and out of stock.

With such tools as IoT sensors and RFID tags installed in inventory systems, business operations can be much easier, plus retailers need not hire store managers to physically check merchandise as they get real time information on their stock.

In this way, IoT benefits ecommerce as it collects and sends out fresh and relevant data on the items to the ERP systems.

It also reduces human error in stock taking and ordering/reordering of items.

Additionally, with smart shelves and temperature-monitoring sensors, retailers can not only track inventory, but also check optimal temperatures for items that are perishable and get instant alerts when they're needed.

Fig: Field covers under IOT

3. Enhances relationships between manufacturers and end consumers

IoT ensures that a good relationship is established through the connected appliances such that the durable goods manufacturers and customers enjoy a long-term relationship.For example, manufacturers of printers can offer cartridge replacements from the printers themselves.In this way, the brand remains in the minds of the consumers over the product's lifetime.Similarly, IoT can provide fresh revenue streams for retailers by creating new business models like offering ongoing services such as predictive maintenance, remote monitoring, and performance analytics for specific products.

4. Personalized information and actions

IoT also brings together personal data and that of brands to deliver more personalized experiences. In this way, ecommerce retailers can leverage the consumer's connections to offer more personalized information and actions, while interweaving data to personalize their experiences further to households and each member. A good example is where there's a connected car, the driver gets to receive offers tailored to him/her. Alternatively, a family with a smart fridge can receive experiences tailored to their preferences. As digital marketers gain access to more data and insight into consumer behavior, they can use it to appeal more to their customers and influence their shopping decisions on the customer journey.

5. IoT-oriented ecommerce websites

The online shopping trend has increased and with it comes the pressure on retailers to ensure the user experience is made easy. With IoT, retailers have to figure out how to use the data that comes in from different sources and devices, being responsive not just to smart devices like phones or iPads, but to other

objects that are connected. Thus, retailers can create responsive websites that make the most out of IoT to enhance the user experience online.

6. Automated shopping processes

With IoT, automated checkouts are now becoming a reality, like what Amazon Go is introducing. This means the buying process becomes automated so customers walk in, buy, and walk out with the cost billed to their smartphones.Additionally, in the future, predictive systems will know when customers are ready to go shopping and pack the products ready for them to pick up based on their shopping lists. Once they send the details of the products they want to purchase to vending machines, all they do is pick up from the drive through and they're good to go.

Rank	Company	Founded
1	Amazon	1994
2	JD.com	1998
3	Alibaba	1999
4	Suning.com	1990

Fig-1 IOT and Ecommerce   Table-1- List of Largest ecommerce
Companies in the World

The above table shows that the largest ecommerce companies are stand on the platform of IOT. And achieve the great success in the market.

Chargebacks in ecommerce

Chargebacks are one of the most expensive costs an e-commerce store deals with. The most common type of e-commerce fraud is chargebacks. First-party fraud, also known as friendly fraud, occurs when an online shopper buys something with their credit card and then requests a refund from the credit card company after receiving the goods they bought. For some retailers, these chargebacks can account for up to 80% of all fraud losses.

Chargebacks are the gift that keeps on giving. Beyond the loss of goods, you may be hit with non-refundable chargeback fees that can range up to $50. That is in addition to transaction processing fees paid for the initial purchase. The cost of shipping is lost as well. While you can dispute the chargeback, often the time involved can be lengthy and success rates are low.

Multiple chargebacks can hurt your business risk and reliability rating and cause bigger problems or even higher fees on future transactions. If your business goes above a credit card company's chargeback threshold,

fees increase for chargebacks. Some credit card companies will force you to pay for a credit review before allowing additional purchases.

Ways to Reduce Chargebacks

No matter how you slice it, chargebacks are bad news. Even if you do everything right, the best-case scenario is you lose the time it takes to fight them. The best advice is to do what you can to prevent them from happening in the first place by following these best practices.

1. Accurate Product Descriptions-Make product descriptions and details as clear as possible to avoid disappointing customers when they receive goods.

2. Accurate Inventory Counts-Inaccurate inventory counts can lead to stock-outs or delay shipping. Frustrated customers may ask for chargebacks because something hasn't shipped on time — even after receiving the items.

3. Record Keeping-Keep a detailed record of purchases that are easily accessible for your staff and your customers.

4. Track Shipments-Use tractable delivery services that provide delivery receipts and consider requiring signatures for delivery.

5. Return Policies-Have a return policy that makes it easy for online shoppers to return goods.

6. Great Customer Service-The better you take care of your customers, the less likely they are to file for chargebacks before reaching out to you.

7. Easily Identifiable Business Name-Make sure customers can easily identify your company when looking at credit card bills (DBA Name).

8. Check for AVS Mismatch-Address verification services (AVS) will flag credit card sales if the billing address used during checkout does not match the billing address on file with the issuing bank

9. Email Analysis-By implementing a reverse email lookup, you can analyse emails to create risk profiles and minimize potential fraud.

Conclusion

IOT is the best supporter pillar of ecommerce**.**

As much as there's growth in ecommerce owing to the emergence of IoT technologies, there are definitely some challenges that come with it, but these opportunities make it worth the while.

Ecommerce players need to keep in mind that the IoT ecosystem is fundamentally about internet-connected things.

Therefore, ecommerce enabled by IoT is less of a revolution, and more of an evolution. Ultimately, the potential of IoT technology will significantly enhance ecommerce as more devices gain smart features and get connected.

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