A Step Towards Green Innovation

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Abstract: *Today's' concern for Global warming is environment changes due to excess utilization of natural resources and leaving the wastages that unbalance the eco system. To recoup the eco system, environmental experts advise all the users of natural resources to take care of necessary action from the product design stage to disposal stage of its full Life-cycle. This will determine the environmental impact at each stage of a product's life from raw material extraction through materials processing, manufacture, distribution, use, repair & maintenance, and disposal or recycling. The concept applies to the manufacturing process is avoid-reduce-reuse concepts to restrict the consumption of natural resources. Here we will see how the Green Innovation system is adopted in online Marketing process, to protect the nature from pollution and disaster. Handing over clean air, clean earth and clean water are the true natural gift that we can offer to our future generation. Once eco system is polluted, it will take its own time to rescue. To avoid such insistence to happen, we have to give first preference to product from pollution by implementing green innovation system. Green innovation system, along with Eco innovation system, Environment innovation system and Sustainable innovation system are the other notations repeatedly discussed in green innovation. Though all the four relate to one, little difference exits. Green innovation includes all the activities mentioned in these notations. Generally, our aim is to leave the non polluted nature to our future generation to enjoy. To ensure this, the steps that could be taken while performing online marketing are discussed here. We will also see what could be applicable for online marketing process to promote this green innovation system.*

Keywords: *Green Innovation, Online Marketing,Technology, Automation.*

I. INTRODUCTION

Communication plays a vital role in today's' life. Mobile phone and computer are unavoidable things in today's world and Internet is the nerve center to connect with social communication. You have to be connected with others, by means of some way or other; otherwise we will be not able to update the current development in and around us. Now the mobile phone is one of the effective communication devices to connect near and dears. The statistics shows nearly 40.9% of Indian population are using internet for communication or sharing their views with others through social media.

Moreover 60% of users are youngsters [1]. Gen Ys' earning power is high and willing to spend their earnings through online marketing to fulfill their day today needs. Now a day, reaching the retail stores in urban cities is tedious and time consuming journey due to heavy road traffic. Also comparing the prices and finding alternates are difficult in brick and matter stores, whereas these activities are very easy in online with few clicks at leaser time. Hence online marketing is convenient to all. The direct selling industry is doubled during 2011 to 2018 and reaches 126.2 billion. It is also estimated to reach 159.3 billion during 2021 with a compounded annual growth rate of 4.8%. As per Times of India study under taken by Assocham [2]. India's B2B e-commerce market is currently estimated at $53 billion [3] during 2018 and is expected to double to $100 billion by 2020 according to a recent report by British investment bank Barclays. So, the annual growth rate is more than 33%. With the similar growth rate, it exceeds the direct selling in the year by 2022.

II. ONLINE MARKETING VS TRADITIONAL MARKETING

Marketing is defined by the American Marketing Association as "the activity, set of instructions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large." All these activities are nothing but reaching the people with the product / service details to enable the consumers to select from the existing alternate to fulfill their day today needs. In Traditional Marketing, the information is exhibited through hard copies. Similarly, the billing, user manual and other data are provided with hard copies for each product or services. So, usage of papers – the natural resources along with printing consumables like chemical ink are unavoidable. In the life cycle, disposal of this product will decay with chemical ink result in environmental pollution. More than that, for preparation of printing design, printing and for distribution of the same, lot of man power is utilized. If any product design is modified or updated, then existing printed materials are to be discarded and fresh one has to be prepared. Whereas, these activities like product catalog, user manual, billing document and distribution are made through soft copies in online marketing. Any updates or development of new product, existing catalog may be modified or corrected in the soft form itself, hence no need of fresh printing. Apart from this, in traditional marketing showroom has to be established to exhibit the product. Further manpower has to be organized for showroom and for selling the product, including maintenance.

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The above requirements are not required for online marketing. Only die up with suppliers to be made in advance for sending the products to the consumers after receiving the payment. Online marketing consumers need not go to the showroom to buy the product, they can simply sit at home and go through the online site during his leaser time and review the product performance through the public media. After satisfied, they can buy the product through online and the product will be delivered to his door. In the financial year ending March 31, 2018, Bengaluru based Flipkart had a revenue of $3.8 billion (Rs26,925 crore) (excluding subsidiaries Myntra and Jabong), around 19% higher than Amazon's $3.2 billion, according to a recent report by British investment bank Barclays [4]. In fact that Amazon India had a much higher gross merchandise value (GMV), or the total value of goods sold on a marketplace than Flipkart. Amazon India's GMV stood at $7.5 billion for the financial year 2018, 20% higher than Flipkart's $6.2 billion, Barclays said. "Amazon's growth was driven by its B2C (business-to-consumer) unit, which continues to grow its lead over Flipkart's B2C business," Barclays said. These two online market places were discussed, since it covers almost 70% of Indian total online market places turnover.

III. TECHNOLOGY

The online sites are now being viewed in a shorter time due to development of new technology with multifold high-speed internet and at the same time the cost of internet also brought down to the bearable limit for the common men to spend. The Government of India also made lot of initiatives to boost online marketing. During 2014, the E-Commerce sector witnessed unprecedented growth through rapid technology adoption. The increased uses of smart phones and tablets that were accessed the internet through broadband and 3G. Further, 4G and fiber network connections were given to speed up the internet speed. Due to the above initiatives the online consumer base was increased. The developments were brought down to the middle-class cities that favored customer demographics to grow further. On the other hand, the huge investments pumped by the major online marketers like Amazon India and Flipkart exhibits the immense potential in this sector. After the acquisition of Flipkart by Walmart, their experiences gained in the other part of the globe in this field will push Flipkart to top performer in online business in our country. Similarly, Amazon had strong domain knowledge and best practices developed by their international partner will provide additional help to build strong foundation for their business since they have been in the market where the online marketing evolve and were aware of the challenges they faced in the earlier stage and the strategies they followed to improve this business. Amazon India introduces a new facility to buy the international products in Indian money. India's largest online grocer, BigBasket sales crossed Rs 3,200 crore by growing over 60% during the year ended March 2019 with 12 million customers. Partnership with the Chinese e-commerce giant Alibaba, BigBasket improved their delivery and logistics. Earlier, they used to deliver independently with van delivery and with bike delivery. Now they have integrated the two to optimize delivery. The

retailer, which has shifted from dark stores to large warehousing format, has also implemented Alibaba's bulk storage mechanism to optimize space. Experts feel logistics and distribution is the key differentiating factor for online grocery business. Indian business giant Reliance is planning to enter into this field in due course. Then every player in this sector has to revamp their marketing strategy to attract the existing and as well as new consumers to keep them in their fold.

Consumers use internet to purchase products through online because they believe

- Online is convenience to them to buy the product at any time from their convenient place that leads to time saving.
- Required information is available in few finger clicks.
- Websites navigation is easy to use with less shopping stress.
- More economic than to visit the traditional shops
- Enjoying the shopping fun
- Getting the products at their door step
- Can visit the site for any number of times to take buying decision
- Can review product performances through social media before buying
- Can review the latest model available in the market

In contrast to the above benefits, few set backs were also there in online marketing. Online payment security, personal privacy and trust, unclear warranties and lack of returns policies and personal customer service are the foremost barriers for online shopping. The benefits have out thrown the barriers and online shopping is growing at a study level to reach its target. Social media is a phenomenon that has drawn a whole lot of interest each to groups and individuals interacting at the networking landscape. It consists of all virtual media technology together with, digital video, blogging, podcasting, forums, review websites, social networking, cell phone images and wikis. Hence User Generated Content is a sum of all ways in which human beings make use of social media. The interactions between the commercial enterprise and the consumer should be an ongoing process, on continuous discrete basis with a view of seeing a consumer as a courting partner. It is located that Indian entrepreneurs are under making an investment the statistics analysis, accumulating insights and finishing the feedback loop on what worked, in addition to the way to improve future campaigns. This is pivotal for marketing to sustain scalable effect at the roll and constantly power the efficacy. Mobile is playing the primary role in online marketing. 95% of latest online users each month are connecting through this smart phone. Technology empowers today's entrepreneurs with platforms, equipment and automation that could make real-time achievement. Yet we discover that most marketers in India are not harnessing the true capacity of newer generation. However, many India marketers maintain to installation repetitive, time-consuming, manual, and often 'batch and blast' emailing practices.

Consumers are racing ahead in phrases of adopting technology, and Indian marketers need to fill up the gap by the way to efficaciously use automation within the online platforms. The Government, with its "Smart Cities" initiative, plans to create one hundred sustainable and innovative medium towns to provide sufficient infrastructure and smart solutions. India is likewise poised to turn out to be a virtual financial system with the Digital India initiative, focused on to create digitally empowered citizens. The vision of Digital India is to build digital infrastructure to each citizen with the following initiatives.

   i. High speed internet as a core utility shall be made available in all Gram Panchayats.
   ii. Cradle to grave digital identity - unique, lifelong, online and authenticable.
   iii. Mobile phone and Bank account would enable participation in digital and financial space at individual level.
   iv. Easy access to a Common Service Centre within their locality.
   v. Shareable private space on a public Cloud.
   vi. Safe and secure Cyber-space in the country.

All the above seven tasks will increase the online activities, and to create protection in every digital transaction. The authorities have kick began the system of giving a lift to the minimal mandated internet speed from current 512 kbps to at least 2 Mbps and more. It also prepares for rollout of 5G services in addition to a number of other applications targeted round internet-of-things (IoT). The telecom secretary stated India required faster speeds inside the wake of gradual transformation of the country into a virtual economic system. These encompass tasks inclusive of smart cities, Digital India programs, efforts on digital payments, and 5G. This digital revolution is for consumers, and the industrial revolution for manufacturers.

IV. IMPORTANCE OF MOBILE APPS IN ONLINE MARKETING

Amar Nagaram and his team of engineers at Flipkart were facing a unique challenge. The year was 2015 and India's largest online marketplace had taken a stand to be accessible to its customers only through its mobile app. It put the brakes on its mobile website, unhappy with the user experience it offered. Flipkart also planned to shut its desktop website that year. The company came in for a lot of flak and eventually reverted to its original formats. But Flipkart's focus on its app that wasn't suit for the mobile phones, whereas most online shoppers are using mobile phones. Nagaram and team acted quickly and decided to experiment with something new. They reached out to Google and, in a few months, developed a solution that wouldn't hog phone memory and yet be readily available on the device. A web page with all the characteristics of a mobile app was developed. Flipkart's progressive web app called Flipkart-Lite, is the company's second-largest channel in terms of transactions, after its Android app. The e-tailer's mobile web app takes merely 100KB to download, is 100 times smaller than the 10MB Android app, and 300 times smaller than its iOS app. Repeat visits take less than 10KB to download. The gambit paid off.

Flipkart now gets about one third of total customer visits from small cities and towns via its mobile web app. Nearly 70% of Flipkart's new customers from small towns and cities have come through its mobile web app that was rolled out about two years ago. Put yourself in the shoes of a person in a remote town village. Internet connectivity isn't great and your entry-level smart phone does not have enough space to download a shopping app. A progressive web app aims to solve both these problems so you get an experience similar to that on an app. Similarly Google lanched PWA (It is a program written in JavaScript, puts the company in control of how to respond to requests) that is reliable, fast and engaging. "Today, it is essential for companies to provide the best possible experience to customers on every medium of interaction to establish a good first impression of the brand and its value propositions," said Ajay Datta, group product manager, LinkedIn India. "In emerging markets, a large number of people are accessing the internet through low-cost Android phones. Their first source of content consumption is through mobile web. In India, 80% of the population accesses the internet primarily on mobile. The company, in the process, became the first in the world to successfully launch a PWA. PWA is a program written in JavaScript, puts the company in control of how to respond to requests. The company can, in a way, pre-decide—or in technology terms, pre-cache—what should appear on a user's mobile screen and load it quickly, whatever the network, and thus provide good experience. In the last few years, several sector leading internet companies including Ola, BookMyShow, Myntra, Twitter and LinkedIn have started seeing the merit in investing in resources to build PWAs. The logic behind this is a no brainer— you will get more customers, whatever their network connections, without them having to download an app.

V. AUTOMATION

Data analytics helps e-commerce players like Amazon and Flipkart to identify both loyal and new customers by using data extraction and segmentation for tracking browsing habits and spending patterns [5]. (2 min read. Updated: 16 Nov 2018, 01:49 PM ISTNikhil Agarwal). Have you ever noticed that online advertisements of a product spring up after you have searched for it on an e-commerce website? Such targeted advertising, meant to remind you of unfinished business, is a result of high-end data analytics, machine learning and complex algorithms to bolster sales. Amazon, Flipkart and other e-commerce players keep track of each click you create on their portals then predict what you're presumably to shop from them.
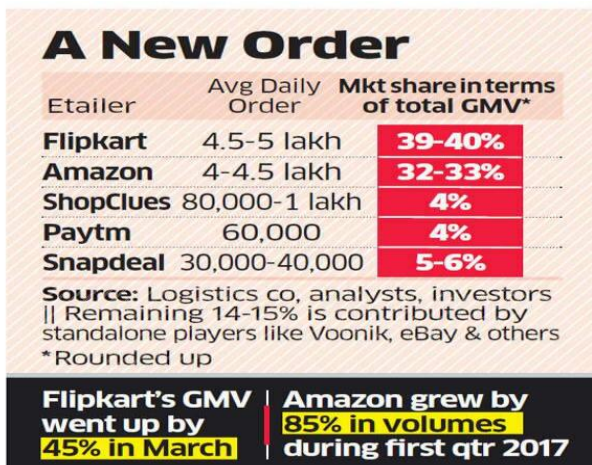
EY India's analytics expert N. Balaji, who advises several leading e-commerce players, says the identification of the target customer group to whom the web ads are going to be displayed on blogs, news websites and content streaming websites involve advanced machine learning. "This hyper-personalization of ads harnesses consumer data to deliver ads to the proper person at the proper time.

It is meant to anticipate individual needs and improve the general customer experience," he told Livemint. Data analytics helps to spot both loyal and new customers by using data extraction and segmentation for tracking browsing habits and spending patterns. The technology allows e-commerce companies to customize their offerings and promotions. Walmart backed Flipkart, India's largest e-commerce player that also owns Myntra and Jabong, analyses every click and touch in every user session to construct something called the 'journey' of every customer. "The journey of users helps us to understand their flow through the Flipkart app and predict their next purchase," a Flipkart spokesperson said for instance, when a customer researches through the catalogues of a product range, the search patterns are recorded and a persona is made for the customer in order that when he returns to the web site, the searching time is drastically reduced by showing the foremost relevant product that the customer might be curious about buying. Once you are buying a mobile, out of the many products within the catalogue, the system correctly matches the foremost probable product you'll purchase next -- a mobile case or a screen protector – an example of content-based filtering. Also, the system can recommend products supported the person's persona or the persona of an identical customer from an equivalent demography. "While this sounds really simple, to implement this on the size of a listing that has billions of products requires an outstanding amount of software and hardware. With the arrival of machine learning techniques, the recommender system has reached its next level in evolution," explains EY India's partner N. Balaji. Flipkart says each of its customers has one profile but it creates a singular session whenever the user returns to the location. All the sessions are then connected to complement the user profile and build the user journey on Flipkart, says a corporation spokesperson.

VI. METHODOLOGY

To understand the volume of transactions that was being carried out by the major online marketers in India on every day basis, collected the data from the internet. The first five marketers have contributed 85% of the transactions and the rest of the marketers contributed the balance 15%.

A New Order

Etailer	Avg Daily Order	Mkt share in terms of total GMV*
Flipkart	4.5-5 lakh	39-40%
Amazon	4-4.5 lakh	32-33%
ShopClues	80,000-1 lakh	4%
Paytm	60,000	4%
Snapdeal	30,000-40,000	5-6%

Source: Logistics co, analysts, investors || Remaining 14-15% is contributed by standalone players like Voonik, eBay & others *Rounded up

Flipkart's GMV went up by 45% in March | Amazon grew by 85% in volumes during first qtr 2017

As per the above source [8], the daily average number of orders handled by Flipkart is 4.5 to 5 lakhs, by Amazon India is 4 to 4.5 lakhs, ShopClues is 0.8 to 1 lakh, Snapdeal is 0.3 to 0.4 lakhs and by Paytm is around 0.6 lakhs. The total no of transaction carried out by the top five marketers works out to 10.2 lakhs (4.5 + 4.0 + 0.8 + 0.6 + 0.3 = 10.2 lakhs).For others 15% of 10.2 lakhs is approximately 1.5 lakhs. Hence the total daily average online marketers' transaction is 11.7 lakhs. For processing such a volume of orders per day, highly automated process are needed. Manual processing of this much amount of transaction will take lot of time, consumables and prone to error. Online marketers developed their own way of automation to handle such volume of data processing from initial stage of exhibiting their products to the final stage of delivering the products to the consumers. The step by step process involved in the online marketing is as below.

1. Organizing their site in a proper way to exhibit all their products to the viewer in an attracting way.
2. Link all the product details to the viewer for easy understanding and create desire to buy the product.
3. Online ordering system.
4. Flawless online payment system to buy the product.
5. Acknowledge the order receipt.
6. Advise the sub vender to pack the item and inform the shipment detail to the buyer.
7. Pack and ship the item through their authorized courier service.
8. Provide the delivery tracking system to the buyer to follow it up.
9. Alert the buyer about the arrival of packing at their doorstep.
10. Deliver the product and get acknowledgement from the buyer.
11. Get feedback from the buyer to improve the process.
12. Update the site with latest information, etc..

In this automation process, they avoided hard copy billing, transportation documents and acknowledgement documentation etc.. Now a day, user manual will also be given in soft copy rather than hard copy. This automation helps them a trouble free, quick and with package tracking facility, which update the current status of delivery to the consumers. Due to this automated process, the marketers need not stock all the materials in their stockyard. They can be made the tie up arrangement with their business partners and instruct to deliver the product to the customer's address on behalf of the marketers.

The total process ensures a paperless transaction process which improves the green innovation.

VII. RESULT AND DISCUSSION

At length, we discussed about the paperless transaction volume of 11.7 lakhs per day (for the major five online marketers plus other @ 15% [8]) in online marketing. The technology that helps the consumers to shop in the easy environment and the automation process in data handing etc. helps to reduce usage of natural resources. For green innovation, the automated online marketing process helps by eliminating the printing of pamphlets, advertising materials, billing process, transportation documents, acknowledgement documents, payment process documents etc., for such a volume of transaction per day.

VIII. CONCLUSION

The study shows for manufacturing every ream of A4 (500papers) papers, one tree is cut, Based on that we can imagine how much papers would have been consumed if the paperless process is not developed. So, that much of trees were not cut to safe guard the nature for our future generation. Similarly, so much of chemical inks used for above printing, manpower utilized for the above printing and distribution were totally eliminated. The consumer movement to brick and mortar stores to buy these products has also been eliminated; as they buy the product by go through the online web sites during the free time at any place and at any time. This reduces the fuel consumption to visit the showroom and search for other alternates. They can also compare the prices and go through the consumers review before buying decision. Added to this the power consumption to maintain the showroom is also avoided. If we bought any product from the traditional market, it was our responsibility to bring the product to our door step. For which we have to spend the cost for transportation for such individual item. We are incurring fuel consumption for transportation, whereas in online marketing mass transportation was done and minimize the fuel consumption. Thus pollution is minimizes. The online marketing saves lots of fuel, power, time, consumables and lays a path towards green innovation.

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