WEARABLE'S: RE-LOADING TECHNOLOGY FOR A BETTER TOMORROW

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ABSTRACT

Today we all operate consume and create in a world that is truly digital. It seems as if the days of manually doing routine tasks such as shopping and health care are slowly fizzling into obsolescence. People in both developed and developing countries are reshaping their daily lives and interactions as Wearable Technology becomes intertwined with their everyday activities. More than 70 percent of the business leaders stressed the importance of tailoring technology to meet the needs of consumers in emerging markets, citing the fact that developed-world solutions are often ineffective. Businesses have understood that to be profitable, they need to provide value offerings that meet the needs of the customers, identifying unarticulated or unmet needs, latent desires of their target customers by learning about them and uncovering behavioral insights. These insights are used to improve or develop new value offerings to satisfy their needs. Hence this paper will focus on Wearable's in India, its future and critical factors that could be significant contributors to the possible success of wearables in the Indian Market.

Keywords : Wearables, Technology, Digital, CAGR, Innovation

I. Introduction

Business-as-usual in organizations presents a series of business challenges faced on both short and long term where innovation is paramount. There are ten identified business challenges in which innovation is the answer. Businesses have understood that to be profitable, they need to provide value offerings that meet the needs of the customers, identifying unarticulated or unmet needs, latent desires of their target customers by learning about them and uncovering behavioral insights. These insights are used to improve or develop new value offerings to satisfy their needs. Businesses that invent new technology can either sell their technology for other business to uncover its usage, or identify usages on themselves and profit from it.

Commercializing technology into the market requires research on how users behave and interact with technology. This informs technology usage by turning technological invention into innovation. How users use technology enables features and experiences to be created through innovation. In some cases, they may need to redefine or change its future direction on what business they are in and which market they should be doing business at. Therefore, converting a vision into reality is achieved by creating innovation roadmap that is designed to scale for growth through iterative strategic planning. Companies as varied as large mobile network operators, equipment manufacturers ,health based companies, tiny start-up and other service providers are circling on huge potential market of wearable technology .There has been a lot of hype ,greater skeptism and fueled by speculation whether these wearable devices will have a positive or a negative impact in our lives .Hence this paper will focus on Wearables in India, its future and critical factors that could be significant contributors to the possible success of wearable's in the Indian Market.

Technology leads to Innovation

Wearables are basically small electronic devices which comprises of one or more sensors that possess computational capability. They are easily attached to the body, user's hand, feet, wrists. They resemble a watch, eyeglass, clothing etc. Two early pioneers are Georgia Tech's Thad Starner and Steve Mann.

Research on intelligence is mostly about investigating how brains work or building intelligent machines or creating "smart" environments such as a house that can identify and track its occupants.The practice known as "human-centered design" is one that reshapes an entire enterprise and its capabilities system around the customer or user experience. This practice is critical to the success of wearable devices—design thinking must be embedded in disruptive strategy and innovation, with a focus on optimizing the customer experience. Much of what is on the market today lacks this critical process element. The category is still in its infancy, though, and as innovation speeds along, human-centered design will emerge as a key differentiator—and a key driver of wearable success.

In purely technological terms, the wearable revolution could take shape much faster than the mobile revolution that preceded it. while smartphone manufacturers had to master the tricky art of providing dependable mobile Internet service, wearable manufacturers can piggyback on those innovations using simple Bluetooth or other protocols to communicate with a smartphone and thus with the outside world. With all that prebaked hardware and wireless connectivity—and huge preorders from crowdfunding platforms like Kickstarter—it has become possible for tiny companies to dream up, build, and sell wearable devices in competition with big companies, a feat that was never possible with smartphones.

II Wearable's In India

As a country with a strong bias towards technological achievements and one that churns out 1.5 million engineers every year, it's natural that entrepreneurs would gravitate towards the market for wearable technology. Helping the young innovators are the many platforms available for crowd funding and angel investors who are willing to invest in innovative technology no matter where it originates in the world. Even as wearable tech becomes fashionable in the west with offerings such as Google glasses and Nike's Fuel Band, India—home to technology heavyweights like Infosys and Tata Consultancy services— is upping the stakes in the wearable gizmos market with a slew of startups from Bangalore to Chennai and Hyderabad innovating and looking towards world domination.

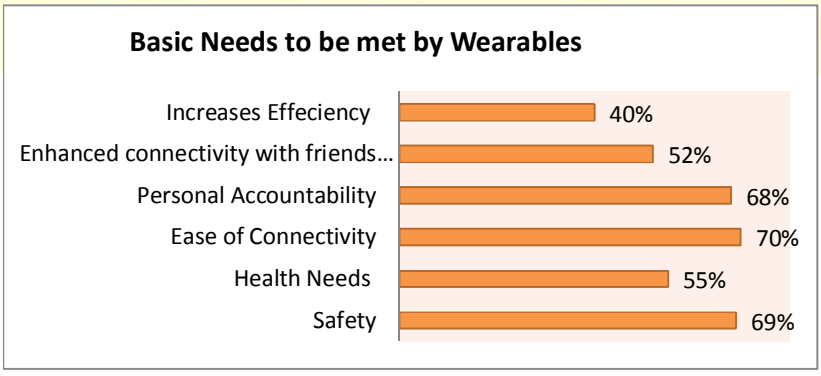
ABI Research estimates that over 50 million wearable devices were shipped in 2013, with the number going to 540 million in 2018, when the size of the market will be around $25 billion. According to another survey The global consumer smart wearable

technology market is expected to witness significant growth at a **CAGR of 32.78 percent** during the forecast period during the period 2013-2018. Indian Smartphone market has experienced a phenomenal growth in the last few quarters. Rising demand for Smartphone's over the traditional bar phones has fuelled the growth of Smart Wearable devices (Smart watch and Smart band) market in India. According to 6Wresearch, India Smart Wearable market shipments value reached over $3 million during CY H1 2014.To substantiate the possible growth of wearable technology in India with specific reference to Bangalore an Internet based survey of 300 students on the wearables and its usage has been conducted .There are several well-known criteria that are essential for adoption and utilization of wearable products and services in India to assess the opinion of wearable's ,failure in one can lead to overall failure of the product or service. However these criteria alone are not sufficient, this will help for a better insight on the perceptions and expectations of wearable's in India. This study focuses on five criteria

1. Fit/Comfort factor
2. Selectability /Adoptability
3. Usage
4. Integratability/Compatibility
5. Overall Utility

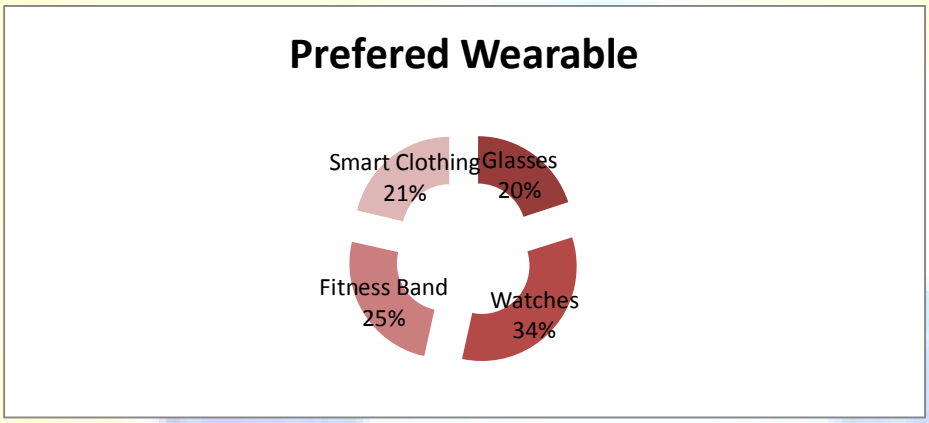
III Findings:

Graph 1



Graph 1 indicates the consumer's needs to be met by wearable technology, ease of connectivity emerged at the top of the list followed by safety needs and personal accountability. This was followed by health needs and enhanced connectivity. Consumers feel that connectivity in terms of seamless integration of technology with our daily life has gained importance. Safety needs in terms of potential safety applications is considerable. Health needs like eating healthier, exercising smarter and accessing relevant health information was considerably important to the consumer.

Graph 2

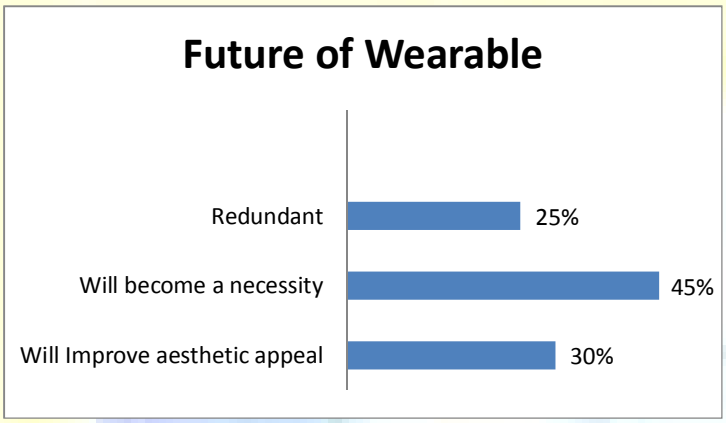


Graph 2 indicates that the consumers' willingness or preference towards smart watches, fitness bands ,glasses and smart clothing .Smart watch was the most preferred wearable device with 34% followed by fitness bands with 25% ,smart clothing and glasses with 20-21%.

Graph 3

Graph 3 indicates that the expected information from the wearable devices to be notifications about the retail deals with 45% followed closely by the notifications of dietary, medical help with 35% and lastly by notifications on the exercise by 20%.The consumers feel that wearable technology will give a competitive advantage to the business by bridging the gap between business and the consumer by providing positive feedback loops.

Graph 4



Graph 4 indicates the perception of the consumers on the overall utility of the wearable technology .Majority of the Consumers feel that wearable's will become a necessity in the coming years. 30% consumers opined that wearable devices will improve the aesthetic appeal and the rest 25 % consumers feel that it will become redundant in the future.

Other research studies indicate that the market in India is yet to take off both in terms of companies manufacturing them and consumers willing to use it. However smart watches and health care wearables are showing positive trend in the Indian Market.

Other General findings:

- There is a steady increase in the awareness about wearables from the years 2013 till date.
- A very few do own a wearable device in the form of smart watches and other wearable devices.
- Majority of the respondents have strongly asserted that it will not replace the existing technology.

- A considerable group of respondents felt it may help the organization to advertise their products better.
- The respondents who own them felt it helps them in better diet, exercise, accountability improved access to medical care.
- Respondents in the age group of 20 - 35 who are actively gaining more knowledge on wearables prefer to use for more immersive and fun experiences and high sophistication of gaming solutions.
- Many internationally available wearable gadgets are bought easily on Amazon India, Snap Deal and Flipkart

IV The Wearable Category Is Ripe With Opportunities To Deliver On Unmet Needs.

Research has also revealed tremendous opportunities for wearables to wow consumers and win them over with meaningful relevance—territories where the category is only now on the cusp of transforming our behavior in ways that improve our lives. Key territories that emerged include stress reduction through more streamlined technology and human-cantered design, strengthened connections to family and friends through more multi-sensory ways of interacting; improved personal accountability via devices that encourage goal-directed behavior; and improved customer service by way of reactive and precisely targeted real-time data.If projections are correct that sales of wearables could reach 130 million units in 2018, that opportunity is a big one. For now, it's certainly enough to spur ad companies to move products into development and out of the lab. ***In a market that is saturated with technology for innovation's sake, what are needed are more meaningful applications.*** Technology companies' interest in health and wellness have sparked the creation of a myriad of wearable devices, from fitness bands that monitor activity and sleep patterns2 to flexible patches that can detect body temperature, heart rate, hydration level and more.

V Implications

Wearable technology has yet to gain widespread popularity, advertising companies are already conceiving of ways to deliver marketing messages directly to people who sport computerized watches, glasses and headgear. After all, the thinking goes, where there's a

screen, there's an opportunity—and if projections are correct that sales of wearables could reach over 130 million units and gross almost $6 billion by 2018, that opportunity is a big one. Wearables allow opportunity for delivering advertising with much greater context and relevance to the user—solidifying the trend away from advertising as "interruption" and toward native advertising. The more relevant and engaging the advertising, the more it is valued content, the less it feels like interruption. It becomes part of a branded experience vs. something you put up with to get to the content. Wearables turn advertising into activity based engagement and integrate it even more closely with other content and experiences.

At the forefront of these requirements will be "human-centered design," a way of thinking that reshapes an entire enterprise and its capabilities system around the customer or user experience. This approach necessitates many attributes of a startup—prioritizing creativity, speed, flexibility and a willingness to take risks in exchange for greater rewards. Wearable tech, does not necessarily mean collection of data, but also to synthesize, analyze and draw meaningful insights from that data in ways that reflect true consumer needs.

In its nascent stages, wearable tech was focused primarily on its end user, the early-adopting consumer, pulled in by the lure of intriguing new gadgets. More and more, wearable tech products are being designed with business applications in mind, all ripe with the promise of improving workplace productivity and the overall efficiency of organizations. ***An important benefit of wearable technology is its potential to make us more efficient and productive at work.***

For companies in manufacturing and field service industries, the impact of wearable technology is already underway. Smart glasses can pipe instructions directly into workers' line of vision, allowing them to solve issues faster—and save considerable cost along the way. Brands that prefer to remain competitive in the future must lead the charge for that trust and prepare with strategies to leverage the value of wearable tech for both employees and consumers.

CONCLUSION

Technology has changed every aspect of our lives, no wonder it has had an enormous impact on the industry. With the aid of technology, professionals can now do what they are meant to do. Technology has also given us the power to integrate and harmonize across various domains. Besides in the era of connectedness, collaboration has become immensely vital. Using technology they can connect with people across the globe. Though wearable's may still be in nascent stages, the enterprise movement will unfold over the next decade — and by 2020, what one can expect to see is a shift toward business centrality, according to a report examining the evolution of the enterprise wearables market. What's more is that the market for company-provided wearables will be larger than the consumer market within the next five years, as wearables represent the next phase of the mobile revolution. India's unique advantage is its huge pool of engineering plus design talent and a young population passionate about creating as well as using technology that puts us ahead of others. Further to the above the research also reveals that the most preferred wearable device is the smart watch with the specific need being the ease of connectivity and safety followed by other factors. It also proves to be one of the top ten technology trends for the year 2015.

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