

How Wearable Devices are Shaping the Insuretech Industry¹

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ABSTRACT

The use of data has been revolutionizing every aspect of human life – both personal and professional. Every individual today is a source of digital data generation, and every business can benefit from access to such data if it is able to shape its strategies on the basis of insights derived from such data. Insurance has been a sector that has relied very heavily on mathematical modelling to devise policy plans that are appealing and beneficial to the target user groups as well as viable for the insurance provider. While such mathematical modelling relied on humongous data volumes, the growth of wearable devices has thrown up even more exciting possibilities ahead. Wearable technology data as a managed service is expected to have a size of \$462 million globally in 2027. Wearable devices promise accessibility to live data of various body parameters of a huge population of users, which can help insurance companies build models to develop plans that have a greater utility and are more affordable. With a total of 533.6 million units shipped in 2021, representing a 20% growth over the previous year, we can be certain that as IoT and 5G technology improve, we will see far greater adoption of wearable devices. Along with aiding the development of more market-friendly insurance products, such devices can also help to a large extent in offering proactive healthcare.

INTRODUCTION

The use of data has been revolutionizing every aspect of human life – both personal and professional. Every individual today is a source of digital data generation, and every business can benefit from access to such data if it is able to shape its strategies on the basis of insights derived from such data. Insurance has been a sector that has relied very heavily on mathematical modelling to devise policy plans that are appealing and beneficial to the target user groups as well as viable for the insurance provider. While such mathematical modelling relied on humongous data volumes, the growth of wearable devices has thrown up even more exciting possibilities ahead. Wearable technology data as a managed service is expected to have a size of \$462 million globally in 2027. Wearable devices promise accessibility to live data of various body parameters of a huge population of users, which can help insurance companies build models to develop plans that have a greater utility and are more affordable. With a total of 533.6 million units shipped in 2021, representing a 20% growth over the previous year, we can be certain that as IoT and 5G technology improve, we will see far greater adoption of

wearable devices. Along with aiding the development of more market-friendly insurance products, such devices can also help to a large extent in offering proactive healthcare.

MAIN BODY

Revolution in IoT technology combined with growing awareness of the importance of healthy lifestyle on the part of the customers has led to a massive spurt in demand and consequently, an unprecedented invasion of the market space by health devices, especially in the past two years. Not surprisingly, a large number of start-ups have emerged in this space realizing the potential of the business. This productivity has led not only to an exponential increase in the number of wearable devices but also prompted an upswing in the prevalence of IOT.

Most importantly, with the continued usage of these devices, a huge amount of usable, insightful data is generated that can be further tuned and analysed to reach impactful decisions. Insurance companies are relying on advanced data based systems to manage this data and make profitable decisions. When a key source churns data, it shifts to a predefined data

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platform, for more refined processing, implementing business rules and producing discussion points for use in the business model while at the same time taking into consideration data surge in the acceptance by consumers and real time and robust customer data have cleared the path for the use of wearable devices in the modern world. Further, the integration of data from these devices and the other necessity of today, smart phones and similar devices has given the end consumer access to data. All the major names in the technology space such as Google, FitBit, Samsung and Apple are in the market with a wide range of wearable devices that allow consumers to have a go at various functions. Also, the rapid evolution of communication technologies like NFC, has not only improved connectivity but data sharing too.

An additional advantage that customers avail is that they can keep a track of their biometrics while using these wearable devices that helps them adhere to their health goals. Not surprisingly, predictions are for an exponential growth in the usage of these devices. The revenue from wearable electronic products globally is expected to be over \$ 26.43 billion by the end of 2022.

This data from wearables helps insurers to keep a track of their customers. Even employers have started motivating their work force to use fitness devices, in collaboration with life insurers. The data from these wearable devices helps insurers to regularly monitor the health state of their customers. Also, whenever there is a significant change in the vitals, for example blood pressure or heartbeat, it immediately alerts the insurer.

IMPACT OF WEARABLES ON LIFE INSURANCE

Wearable devices are going to influence all aspects of the life insurance consumer cycle. The wearable ecosystem will have numerous meeting points with the various stages of the value chain. As more and more consumers start hitting the wearables market, and make it an intrinsic part of their daily lifestyle, the life insurance value chain is going to see certain changes in the methods used to collect data from the usage of wearable devices.

ACCELERATED UNDERWRITING

The life insurance business has experienced phased transformation from the initiation of fluid-testing and preferred strata to the use of data sources that better understand mortality risk: motor vehicle records, prescription history, and mortality scores derived from public records and credit attributes. Insurers have utilised various approaches to expedite underwriting for consumers applying for fully-

underwritten products who may qualify to have their medical exams and fluid-testing renounced. When fluids are waived off from underwriting it becomes vital to optimize the use of given data and to implement new information to precisely classify risk. Physical activity details can be added to the toolkit, alongside other information sources and predictive models, to enable high accuracy through processing while alleviating the additional mortality risk.

With an applicant's agreement, insurers can explore historical wearable data at the time of application and use a methodized approach to quickly determine whether the data points towards a healthy lifestyle. Consumers with favorable wearable data can be categorised into the best risk classes while those with lesser favorable traits would need additional underwriting, or could only qualify for standard rates. When merged with a predictive model and/or underwriting rules engine, this method can reduce time to issue from a month to just minutes. Healthy consumers who are not ready to deal with the hassle of the fully underwritten process or the increased price of simplified issue products will now have access to life insurance by giving details of their wearable data.

TRADITIONAL FULL UNDERWRITING

While accelerated underwriting is made possible by wearable technology, in cases where such fluid-less underwriting is not possible such as in the case of elderly policy applicants or people with pre-existing diseases where a more careful review is in order, the data from wearables could certainly complement the results of fluid tests. For example, the step count data can help in judging whether a person's lifestyle is sedentary or physically active. Research also has indicated how resting heart rate as well as duration and quality of sleep have a bearing on health and mortality outcomes. Such inputs would complement the results of standard diagnostic tests such as blood pressure, BMI, cholesterol, along with personal and family history. Thus, data from wearables would help in obtaining better insight into various individual risk factors and therefore, help the insurer in offering a plan that can be better personalized for an individual policy-holder belonging to a higher risk category. With algorithmic underwriting through the use of sophisticated predictive models is already becoming commonplace among insurance players, their experience with using wearable data could help them incorporate the data inputs in such predictive models to predict mortality for policy-holders. Over a period of time, such practices coupled with high-capability Artificial Intelligence systems would help unravel newer insights on mortality and risk factors, thus serving as a guiding factor for personalizing life insurance premia in

accordance with the risk and lifestyle of each individual policy-holder.

FRONT OFFICE IMPACT

The marketing and product development departments at the insurer's front office will be immensely benefited by tapping into the data generated by wearable devices. The product development team has an altogether new set of highly pertinent insights to refer to which gives it information on the needs and requirements of different segments of policyholders. Consequently, they would be able to devise plans that have high utility value for the risk category that they are devising them for. Also, they would also be able to customize plans for individual policy-holders on the basis of inputs obtained regarding their health and lifestyle. Such plans would therefore be easier for the sales and marketing department to promote. Also, because the plans are devised and priced appropriately, insurance companies can stand to benefit from enjoying higher profitability of their plans.

BENEFITS FOR POLICYHOLDERS

There are two inter-connected ways in which policyholders stand to benefit from the increased adoption of wearable data by the insurance industry. Firstly, healthier-than-average individuals belonging to a category that would traditionally be classified as high-risk would not be punished for simply belonging to the category. What this means is, a person who is above 60 but has no history of major ailments and has good vital signs on a consistent basis need not be charged with a high premium simply for belonging to a higher age-group. Thus, there is a reward for maintaining good health, which brings to the second point. Good health takes effort to maintain. Insurance companies can prescribe various health goals (such as, say, X number of steps to be covered daily on an average) and the same can be tracked by both the insurers and the policy-holders. Knowing that meeting the criteria can help them benefit from lower premiums would motivate the policyholders to maintain a healthy lifestyle which would generally improve their quality of life (because having to make a claim on a policy comes only during times of distressed health).

CHALLENGES INVOLVED

One of the main challenges faced by the wearables industry is that the Indian wearable market is price-sensitive, where most of the customers prefer devices priced below Rs 5000. Importing sensors as well as developing and building the final product outside India escalates the base price of Wearable by

a great margin. Battery technology is turning vital for the wearables market. Users want batteries that last longer and are easy to recharge or replace. Wireless charging and longer-lasting batteries are needed and hence investment in better battery technology. As there is excessive air traffic and bandwidths are already compromised, this is one major hindrance. As people are already fatigued by a gadget ruled lifestyle, adding another device might not be a welcome idea. In a world full of technological innovation, flexible usage of devices is an issue faced regularly by the wearables industry. Since wearable devices are heavily dependent on the usage of sensitive data, the transmission of information needs to be fool proof. Radiation is the root cause of severe health issues and if there are certain frequencies or components that emit any harmful radiation is a cause of major concern. Wearable devices need to be always trending and ahead of the fashion game. Any data theft incidents will be a major blow from which there will be no redemption. Emerging, all-encompassing mobile applications are an easy replacement.

CONCLUSION

As the wearable devices vertical becomes more deeply integrated in the insurance business, carriers must customize themselves to address the changing business domain. Insurance providers should be aware of the factors that will impact the changing dynamics and how this will revamp claims, distribution, underwriting and most importantly pricing. With this understanding, they can start to hone and specialize the skills and talent, and adapt to the changing landscape.

Like any emerging industry, there are a certain set of challenges which the wearable device industry will have to overcome. The biggest challenge is to overcome the design constraints as the strata of consumers that use such devices are fashion conscious and desire every gadget to be a style statement in itself. Currently, these devices consume high power as they are dependent on GPS, wireless networks etc. The high price tag is a major deterrent that dissuades a large segment of the population from buying these devices. Though such devices are pretty small in size, they do store a large amount of sensitive user data and information. Since the probability of losing or misplacing such devices is high, the customer tends to be sceptical. Last but not the least, there are certain places (casinos, movie theatres and even certain restaurants) that do not allow customers to wear this technology.

Concludingly, though this market is still evolving and there are certain key issues to be addressed, with time and need and evolving technology, wearable devices are surely here to stay.

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