**Solid-state Battery**

**Abstract**

The conduction of the research has mainly considered the use of solid-state batteries and the issues that are being faced by the users. The considerations have been made on an overall analysis of the situation and the management policies have been made accordingly. On the other hand, the management policies have to be managed in accordance with the business development process in order to make significant changes that are going to ensure a proficient development in the technological perspective.

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# I. Introduction to the topic

The technology that have been considered in this segment is related with the battery technology a revolutionizing aspect has been introduced by the companies and in this segment the solid-state battery has been taken into consideration (Zhou *et al*., 2017). A momentous innovation has changed the technical industry in a drastic manner.

The technical revolutions have made a significant impact on the business modification process and it is further observed that the modified technology has made mobile machines more advance than before (Kerman *et al*., 2017). It is one of the recent hypes in the market not only for technical advancements but also for the service ease, it has provided to the people. The increasing demand of mobile technology has intrigued the research and development department of the battery developing organizations to consolidate the modern technology to grass root thinking and develop a system like this (Mitra and Agrawal, 2015). The demand is significantly high in the market and hence from the investor’s perspectives it is a major segment to consider (Asif and Singh, 2017).

The following segment is going to help in finding the historical perspectives of the technical advancement, and the methodologies associated with development of the older options. On the other hand, knowledge gathering, making proper kind of service management is a major factor to consider in this research. Apart from that the current perspectives of the topic has to be managed with proficient analytical data. After that, conclusion will be provided to meet the requirements of finding discussion at the research end.

# II. Historical perspective on the topic-

It is one of the most recent technologies, which have been managed and made modified. According to Richards *et al*. (2015), the previous days were mainly considering Lithium-ion related batteries and in the recent times, the main concerns were raised due to the fast exhaustions of those batteries. From the viewpoint of Wang *et al*., (2016.), the main consideration related to stabilizing solid electrolytes in lithium metal has been analysed and managed in a spontaneous manner in order to meet the requirements of the market. The procedure of solidification is the main thing to consider. According to Luntz *et al*. (2015), the solid-state batteries are performing in a profound manner and that is being managed in a by the developers after studying the market minutely. As opined by Gao *et al*. (2018), the main component of this technology is the dendrites that are crystallized build up of the lithium metal that starts in the anode. It is a major issue for the technology. According to Zheng *et al*., (2018), the development of such crystallized form often results in high amount of electric discharge, which is a major factor to consider regarding safety assurance.

The initiation occurred after research made by Michael Faraday on solid electrolytes silver sulfide and lead (II) fluoride. In the 1950s the first trial of making solid state batteries have been developed and in the recent days they are being used in the delicate health care treatments and other cases. According to Xu *et al.* (2019), healthcare system has been revolutionized after first incorporation of the technology where life-threatening diseases have been careered with the help modernized thinking and service management. Fromm the viewpoint of Tian *et al*. (2017.), the concerns are still present regarding anomalies that have been found in the technology and the service providers have to think of something new that are related with the business management process.

According to Zhao *et al.* (2018.), it is a revolutionized modification in the battery industry and the Cobalt Nickel battery making cost has been drastically normalized. On the other hand, Nie *et al*. (2015), stated that they have managed to formulate iron-sulfur chemistry based cathode, which promise high-energy deposition in a profound manner. According to Jung *et al*. (2015), battery technology or to be precise DC current was the initial phase of electrical science and this has been developed to meet the expectances proficiently. In accordance with Mauger *et al*. (2017), the use of batteries in different car manufacturing companies have been revolutionized recently to meet the client specifications and market competition and it instigated the other researchers to meet the minute details of solid-state batteries.

The business development and amalgamation of the demand analysis is an important thing to be managed. According to Luntz (2015), the customer related issues are more related to the safety concerns and the developers are facing issues associated with the manufacturing and developing the current aspects of the technology. According to Xu *et al.* (2017), the solid-state batteries have shown high energy density related issues which has often resulted full breakdown of the electronic devices. The issues can be managed after a deep down analysis. In accordance with Wang *et al*. (2018), the solution is related with the Lithium metal used batteries because it has lowest potential of -3.04 V and highest theoretical capacity of 3860 mAh g-1. This is going to ensure a safe ambience for the service development process. In accordance with Luntz e*t al.* (2015), for the researchers and developers the main issues remain the same and it is associated with safe ambience creation for the people. It is seen that the developers look for those materials that are non-inflammable and with electric carrying capacity.

# III. Current perspectives on the topic

According to Wang *et al.* (2019), the main aspect to consider is having a better and safer ambience for the users and the service providers are looking forward to make some drastic change in the business management process. According to Kato *et al. (*2016), the battery markets are looking forward and trying to emancipate the abilities of the metals in the periodic table. From the viewpoint of Dawson *et al*. (2017), the main issues are related with proper kind of service modification, which is going to help in making the batteries cheaper, and the quality improves. The researchers are looking forward towards a cost effective option, which is not giving proficient results to them.

The analysis of these factors needs to be managed in a proficient manner and with the help of that the service providers have to think of change management in the technology. From the viewpoint of Jagjit (2015), the topic analysis is going to help in making a logical deduction of the scenario, which will give detailed data that can be considered for future betterment of the organisation.

Battery developers who are looking forward to have an access to the market and it are seen that the competition is rising high too. From the viewpoint of Xin *et al.* (2017), the companies are looking forward to market their achievements and that is why they consider digital platform in order to meet the strategic needs. Companies like Duracell, Exide and many others are in a competition to provide safe experience to the people.

According to Thangadurai *et al*. (2015), it can be elucidated that the service providers have to work hard to make the technology more effective. The probability of making a huge change in the business development process is higher than expected. The issues are going to be minimized and in terms of electrical engineering the involvement of this technology is going to rise in a drastic manner. From the viewpoint of Luntz (2015), the future prediction of marketers says that there is a possibility of raised demand in the market but that needs to be controlled to ensure a sustainable future development.

# IV. Conclusion

The main idea is to present the battery industry related innovation and the opportunities that have been bought to the market. The main aspect is to consider a developmental strategy, which is an important factor to gain information and have better kind of report on the corresponding issues. The main idea should be related with the performance analysis of the current technology and improvising innovative scientific thoughts to cater the issues.

It is found that there is a huge lack of research and the possibilities of betterment are evident. The study is important for better modification of the solid-state batteries and the necessity of change in the system to make significant modification in the business development process. Quality assured service in a cost effective manner is the main aspect considered in this research.

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# Appendix

**Reflective statement**

The process has helped me in making a significant data analysis of the situation in which the service management process needs to be considered as important. I have also learned that research is highly important and for that considering, the newest data bank is important for better kind of business management analysis. I think that a proper understanding of the matters is and making an approach in accordance with it is essential to make a significant data analysis of the situation. This is going to help in the research in future as well. On the other hand IU has considered the opinion of the future researchers regarding the opinions that have been stated briefly about the initial period.