



THE POTENTIAL IMPACT OF VIRTUAL REALITY ON THE AEROSPACE INDUSTRY

Abstract

Virtual reality is one of the trending technologies of this era and is being supposed to available in most of the countries by the next year. The approach behind this paper is to introduce an informative paper that can support the understanding over the impact of the virtual reality in the Aerospace industries. This report highlights the various impacts those could be gained for managing the various aspects of the aerospace industries. It is one of the riskiest industries throughout the world and is capable of introducing the various features those could alternatively improve the aerospace experience leading to an efficient and safe air travelling.

Windows User

[Email address]

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Part one – Research

Technology

Virtual Reality or VR can be described as the computer-generated simulations of the three-dimensional environment or images for whom, it is possible to interact in the real way for the person who is using the device at the same moment. It is a helmet like structure with an in-built screen allowing the users to view the programmed and simulated videos in 3-D.

Industry

Aerospace is one of the riskiest sectors as compared to that of the other industries causing direct threat to the life of the individuals who are using and operating the services for the different travellers. No doubt the market of the Aerospace is increasing broadly considering the aviation, cargo, passengers and others. the same growth can be seen in the risks, despite of the various security measures.

Part two – Brainstorming

Impact 1

The virtual reality can be used for training and preparing the pilots. It can simulate the danger situations virtually that seems to be real and thus, preparing them for the worst scenarios and keeping them prepared for the better decision-making that can improve the scenarios of emergencies. It is highly effective and efficient in assuring that the pilots are ready for whatever be the situation.

Impact 2

The advancement can establish a real time communication with the real scenarios that can help the technicians and engineers in improving the maintenance even staying at the distance. It can be incorporated in the helmet or box like structure that will reflect the actual scenario to the end tutor and hence, it could guide them to take necessary action that can improve the scenario. Real-time video transmission can assure that the best decision is being taken for the maintenance and delivery of the improvement factors.

Impact 3

Training programs can be improved and more sophisticated in addition to the high effective and efficient results for the users. Embracing the trainees through VR can introduce various scenarios as real and thus, stating the best strategy that can support the entire operational activity delivery related to the training. It

can merge the theoretical and practical knowledge for the decisions in which the trainee should do what is best as per the scenario. Hence, the staffs could be motivated towards efficiently accomplishing the daily operational activities in much effective way.

Impact 4

The safety in the Aerospace industry can be improved to the optimum level as the strategies being introduced will allow the system to be much more effective and efficient. The technology can pave the path for the future of aerospace engineering and industry. It is highly cost-effective and efficient way for managing the training and improving the safety factor for the organization.

Focus Impact

The focused impact is on improving the efficiency of the staffs and enhancing the security factor through using the VR in the training programs. This strategy could efficiently and effectively allow the staffs to be more trained and adopt the suitable strategies those could support the ongoing operations of the organization.

Part three – Regulation and Ethics

Market

The present condition of the market does not state it as the most popular technology however, it has many applications in present time including entertainment, games, civil constructions and many more. Some of the practices are being introduced however, the future application of the VR can be a revolutionary attempt towards introducing a product that is acceptable and approved by everyone in the aerospace industries.

Law

There is not certain law established that could state how to use the technology and what for the technology should be used. However, there should be certain laws those must be adopted to make sure that the technology is of no harm for anyone.

Physical

The name itself defined the technology as it presents the virtual images those seems to be really due to the 3D effects. It is nothing but a simulation of the real world in the virtual space.

Ethical

There is not any physical protection that is always necessary for a certain technology, social effects and user isolations are other considerable ethical issues related to the application of the VR in the aerospace industry. VR can also be used as a torture and could lead to game trauma for weak heart individuals. Virtual traveling can cause impact on the various business including the government tourism programs and hence, raising ethical concerns on whether it should be adopted for such vast application or not.

Part four – Disruption

Process Impacted

The way of the training program and quick reaction of the staffs on certain actions are the considerable impact of the VR in the Aerospace. The security is one of the major concerns in this industry and hence, the virtual reality experience could effectively contribute in enhancing the security for the travellers and tourists.

Process Factors

Events

1. Training program
2. Simulation of the toughest situations at different levels
3. Evaluating the efficiency of the staffs
4. Allowing to adopt and make the real time decision for best positive outcome

Activities or Tasks

1. It can be used as a communication medium or learning program for the staffs working in the Aerospace industry.
2. Pilots can be introduced with the VR video simulations to learn better flying under various circumstances.
3. The training programs could be improvise resulting in better and highly efficient staffs.

Decision points

1. Whether the technology will be reliable for the final results
2. Should it be used for generating the circumstances those changes the scenario that is in actual not happening.

3. Whether it should be allowed every individual to use it or there should be certain laws for discriminating between the different authority levels.
4. Should it be given that much priority that it could only determine the efficiency of the staffs.

Actors (people and/or objects)

1. Pilot
2. Air Travelers
3. Aviation industry
4. Aerospace Industry
5. Developer
6. Companies building VR

Outcomes

Highly skilled and staffs could be introduced to the aerospace industry for managing and delivering the operational activities in the planes and other sectors. The engineers could also take the best decisions and better actions those could be taken in worst scenarios. It can be a cost-effective strategy for the organization to manage it in an efficient and effective way.

Process Description

The users can be introduced to the VR box for allowing to have the real experience of the virtual simulations based on the 3D animation causing realistic effect. The processes can be implemented in the various sections of the aerospace workshop allowing the different individuals to have an efficient and effective strategy for the different scenarios those could be helpful and effective in adopting the best actions for supporting the worst scenarios.

Business process diagram



Figure 1: VR in Aerospace

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