VIRTUAL REALITY –APPLICATION WITHIN TOURISM SECTOR FOR INDUSTRY 4.0

Keywords: *Virtual reality in Tourism*

Background to Case Study

General background to the Element being applied within the application selected within the Industry 4.0 context.

Virtual reality is a digitally simulated experience where a process or an operation are approximately imitated. This experience can be similar or completely different from reality.
VR has many applications on entertainment (i.e.video games), on education and training (i.e. flight and vehicular simulators),architectural designing (i.e. virtual models of buildings), health care (i.e. virtual reality exposure therapy),digital marketing (use of v.r. to show how a product will fit in consumers' homes), heritage and archaeology (i.e. 3d reconstruction of archaeological sites).
Virtual reality uses either virtual reality headsets or multi-projected environments (specially designed rooms with multiple large screens to generate realistic images), sounds and other sensations that simulate a user's physical presence in a virtual environment.
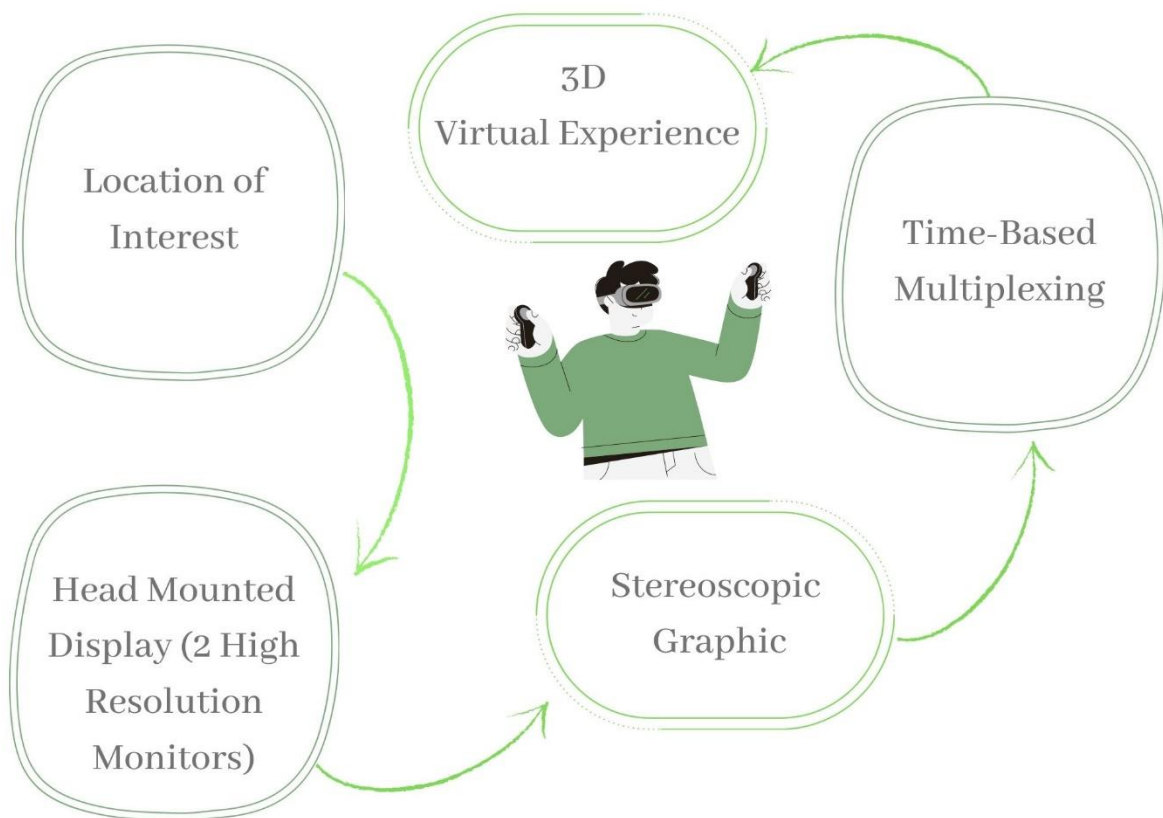 *A person using virtual reality equipment is able to look around the artificial world, move around in it, and interact with virtual features or items.*

Introduction to the Case Study and it's growth within Industry 4.0.

Virtual Reality is used frequently in the tourism industry in order to enhance the visitors' experience of a destination. The experience is that of a 360° experience, where the user can look down, up, right and left, as if he/she were present at a site of interest. A visitor can use VR applications to visit a museum, an art gallery, a historical monument. The experience can be that of attending a guided tour through a vineyard, a traditional cooking class or a destination, the making of artifacts such as pottery, handicrafts etc.   VR technology can be also used in the hotel sector to provide a hotel room experience to potential guests and help them make a reservation decision that will meet their individual needs. VR can help visitors plan the places they wish to visit in a destination, find locations more easily and take decisions on which landmarks to sightsee.

Due to Covid19 pandemic, travelling has stopped and VR experience, gave the chance to many people to visit museums and places that they would have otherwise visited by physical presence. Many museums worldwide have offered free VR tours during the lockdown months and when travelling from one country to another had been impossible.

The Case Study and Industry 4.0 Elements: A Pictorial Overview

Location of Interest

3D Virtual Experience

Time-Based Multiplexing

Head Mounted Display (2 High Resolution Monitors)

Stereoscopic Graphic

THE ELEMENT – TOPIC HEADING
APPLICATION WITHIN VR FOR INDUSTRY 4.0

The Element Explored within Industry 4.0 Application.	**OCULUS** *OCULUS is a subsidiary company of Facebook that is specialised in producing Virtual Reality Headsets. In 2020, the company was renamed "Facebook Connect" and the VR team was renamed "Facebook Reality Labs".* *The company produces two main models "Quest" and "Quest II", that can be used in various sectors such as gaming, medical training, military training, visitor's experience, virtual tours etc.* *One of Oculus applications "Space Explorers" offers the opportunity to users, to live the new age of space exploration. "Space Explorers" allows users to learn more about our planet, the galaxy and the universe through witnessing the missions of NASA astronauts.*
Application Target Audience	*Entrepreneurs in the tourism industry, IT software developers, Tour Operators, Museum Managers etc.*
Resources Used:	*https://en.wikipedia.org/wiki/Virtual_reality* *https://en.wikipedia.org/wiki/Oculus_VR*
Further Reading:	*https://www.oculus.com/*