



Master in Planning and
Management of Tourism Systems

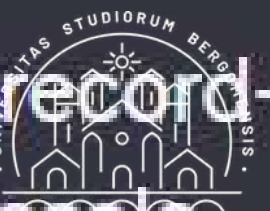


Virtual Reality & Augmented Reality

Nicola Cortesi

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resume this article in english: <https://www.ilfattoquotidiano.it/2023/10/12/il-caldo-record-mette-in-crisi-la-moda-solo-a-settembre-persi-320-milioni-felloni-penalizzate-piccole-boutique-di-quartiere-e-negozi-storici/7319212/>



e.g: use it to summarize and translate any online text



Finished browsing

The article highlights the crisis faced by the fashion industry due to unusually warm temperatures in September, delaying the purchase of winter clothing and accessories. This unexpected weather led to a 6% drop in sales in September, which further plummeted to 30% in the early days of October. The fashion industry's pre-ordering system faced challenges as consumer behavior shifted, impacting small neighborhood boutiques and

Update: now ChatGPT is finally connected to internet!

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riassumi questo video: https://www.youtube.com/watch?v=u4ZoJKF_VuA&t=153s



Used Video Summary



It can also summarize and translate any online video   

Il video che hai fornito è una presentazione di Simon Sinek intitolata "Commencez par demander pourquoi" (Inizia con il chiedere "Perché?"). Ecco un riassunto dei punti chiave:

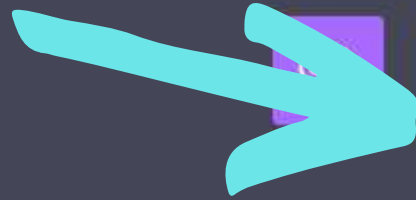
1. **Il Cercle d'Or (Il Cerchio d'Oro):** Simon Sinek introduce un modello chiamato "Il Cerchio d'Oro" composto da tre parole: Perché, Come e Cosa. La maggior parte delle aziende inizia dal "Cosa" (il prodotto che vendono) e poi si sposta verso il "Come" e il "Perché". Tuttavia, le aziende e i leader veramente ispiratori iniziano dal "Perché".
2. **Apple come esempio:** Mentre molte aziende vendono prodotti dicendo cosa fanno e come lo fanno, Apple comunica iniziando con il "Perché" (la loro credenza nel pensare diversamente) e poi si sposta verso il "Come" e il "Cosa". Questo approccio li rende distintivi e ispiratori.
3. **Martin Luther King e i Fratelli Wright:** Entrambi sono esempi di individui che hanno avuto un grande impatto perché erano guidati da una forte "ragione" o "Perché". Non erano né i

It can also resume youtube videos! (with the "Video summary" plugin)

4. **La biologia del "Perché":** Sinek discute di come il nostro cervello sia cablato. Il nostro

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which are the next big events in Milan?



Finished browsing



Here are the upcoming big events in Milan for 2023:

1. **Milano Fashion Week Women's & Men's:**

- The event is scheduled for February 21st to 27th, focusing on the Autumn-Winter 2023/2024 collections, and again from September 20th to 26th for the Spring-Summer 2024 collections. It's a significant event on Milan's fashion calendar, featuring big names like Ferragamo, Boss, Anteprima, Moncler, and Antonio Marras. Notable events within the fashion week include the Anteprima fashion show celebrating its 30th anniversary and the Cnmi Sustainable Fashion Awards on September 25th ¹.

2. **The Milano Carnival:**

- Scheduled for February 25th, 2023, the special Ambrosian carnival in Milan lasts four days longer than in the rest of Italy. It's a time for tradition and fun, with events, sweet pastry treats, traditional costumes, and masks for children ¹.

3. **MuseoCity:**

- From March 3rd to 5th, Milan transforms into a citywide museum with special openings, exhibitions, workshops, and engaging initiatives. It's a collaborative event where various

It collects info from **various sources**, merging many **google searches** in one

Regenerate

B

put them in a table with three columns: name, date and location



Certainly! Here's the information organized in a table as requested:

Name	Date	Location
Milano Fashion Week Women's & Men's	Feb 21-27, Sep 20-26, 2023	Various locations in Milan
The Milano Carnival	February 25, 2023	Atelier Teatro, Milan
MuseoCity	March 3-5, 2023	Various museums in Milan
Bill Viola Exhibition	Feb 24 - Jun 25, 2023	Palazzo Reale, Milan
Miart + Art Week	TBA	TBA
Inside Monet: Virtual Reality Experience	Apr 15 - Dec 31, 2023	Arco della Pace Milano
Museo del Design Italiano 2023	Apr 15, 2023 - Apr 14, 2024	Triennale Milano, Milan

.... and it gives you the flexibility to **manipulate the results** as you like

FIGMA 2023	Nov 7-10, 2023	TBA
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Create 5 tweets from this article: <https://www.ilfattoquotidiano.it/2023/10/12/prezzi-del-gas-in-forte-aumento-52-euro-per-le-tensioni-in-medio-oriente-nellultima-settimana-rincaro-del-40/7321232/>



Based on the given article, here are five tweets:



1. 📈 Gas prices skyrocket to €52 due to Middle East tensions. A 40% hike just in the last week! Stay updated on the energy crisis unfolding: [link to article] #GasPrices #EnergyCrisis
2. 🛢️ With a 40% rise in gas prices in just a week, households and businesses are feeling the pinch. Middle East unrest is cited as a major factor. Read more: [link to article] #GasPrices #MiddleEast
3. 🌍 The ripple effects of Middle East tensions: Gas prices soar to €52, marking a whopping 40% increase over the last week! Full story here: [link to article] #EnergyCrisis #GlobalImpact
4. 💰 Paying more at the pump: Gas prices hit €52 amid escalating tensions in the Middle East. A 40% surge in just a week is alarming! More details: [link to article] #GasPrices #MiddleEastTensions
5. 🚫 The surge in gas prices to €52, driven by Middle East unrest, is a stark reminder of our

You can also repurpose content from one format to another

INTRODUCTION

Virtual reality is a very popular technology in science fiction but it proved to be more difficult than expected to achieve

INTRODUCTION

in 1990s SEGA,
Nintendo and other
videogame companies
released to the market
the first headsets for
VR, but technology was
not mature yet

INTRODUCTION

VR was abandoned until 20 years later, when Palmer Luckey, an American teenager, in 2010 built in his garage the Oculus Rift, the first modern VR headset

Palmer Luckey

Oculus Rift



INTRODUCTION

He sold it through a **Kickstarter** campaign that raised \$2.4 millions and founded company **Oculus**, that **Facebook** acquired in 2014 for **\$3 billions**

Palmer
Lucky

Oculus
Rift



INTRODUCTION

In 2021, 80% of all VR headsets sold are the Oculus Quest 2 (later rebranded as Meta Quest 2). Facebook has sold 15 millions units at \$400 each

Controllers

INTRODUCTION

At 24 years he already had \$3 billions in his pockets.

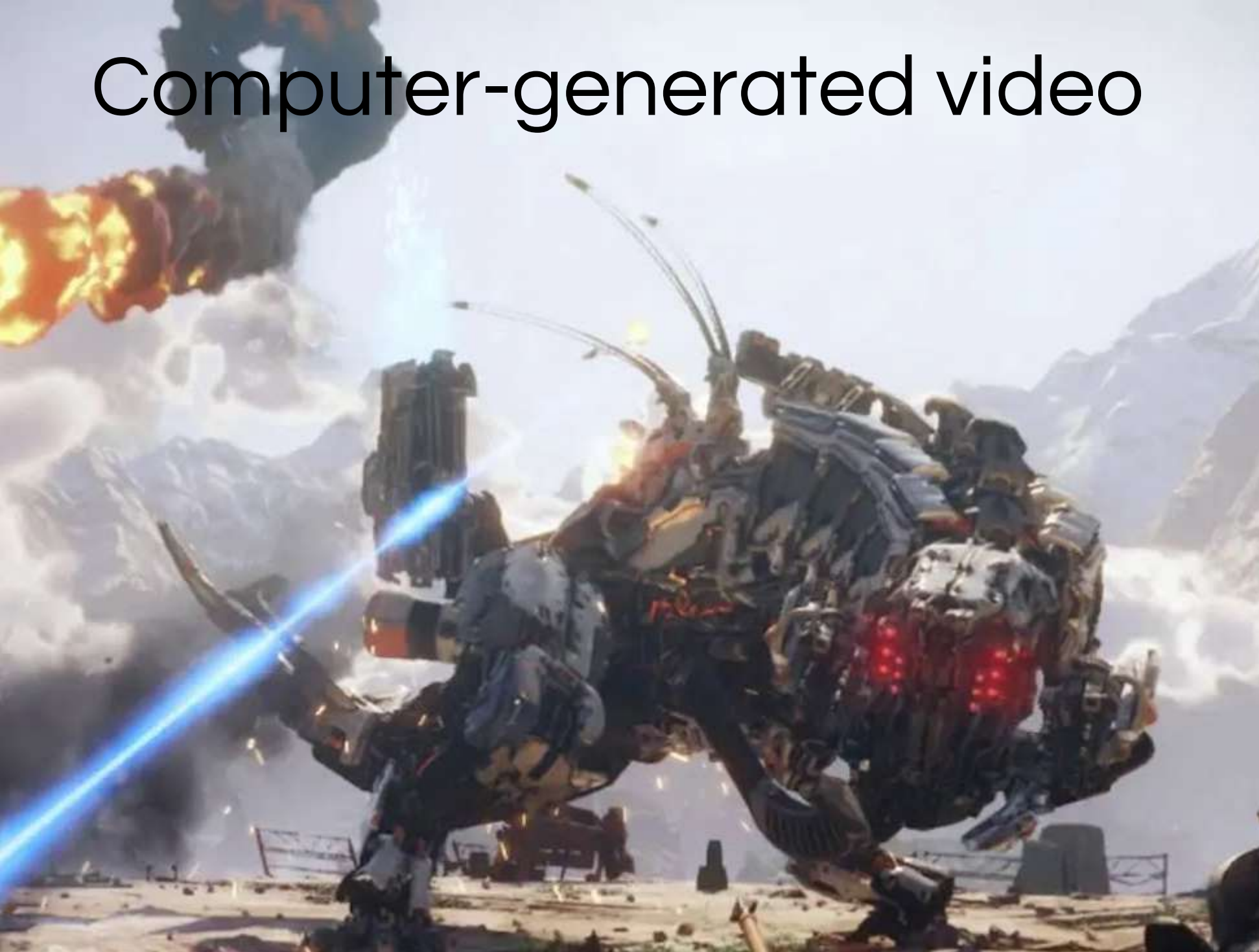
Palmer became a living legend; he left Oculus to create another company

Palmer
Lucky

Oculus
Rift



Computer-generated video



Real-world simulation



There are two different forms of VR: the first one employs computer generated imagery (e.g: VR games); the second one simulates the real world instead and is called 360 VR



360 VR

360 VR is perfect for marketing in the tourism industry, where it is important to show users a preview of the real location

360 VR VIDEOS

A 360 VR video captures every part of a location, enabling the viewers to explore the entire scene at 360 degrees, not just from a single fixed viewpoint

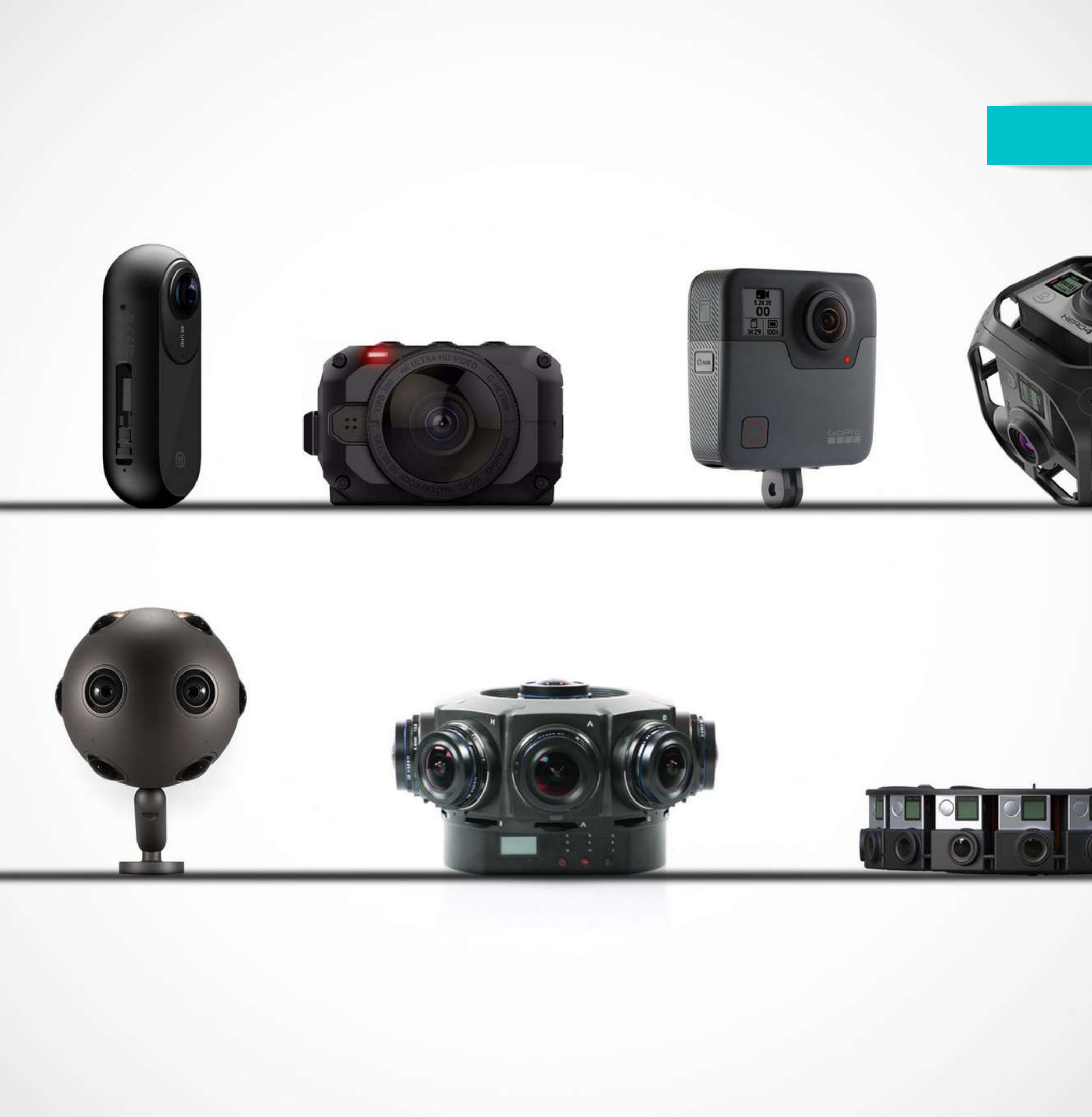
VR CAMERAS

This is achieved using omnidirectional cameras (VR cameras)



VR CAMERAS

VR cameras record
360 degrees
photographies in
order to build 360
videos.



VR CAMERAS

To generate the feeling of the third dimension, two images are generated, one for each eye, taken from a slightly different perspective (stereo projection)






There are three types of headsets: mobile headsets which combine a smartphone with a mount

A close-up photograph of a man wearing a grey VR headset. He has a joyful expression, with his mouth open in a smile, showing his teeth. The background is blurred with warm, bokeh light effects.

...Tethered headset that are just a display controlled by another device, like a PC or a video game console



...and **standalone headsets** that have all necessary components to provide virtual reality experiences integrated into the headset.



Meta Quest 2

Sony PS VR2



The most popular headsets in 2023 are the [Meta Quest 2](#) (standalone) and the [Sony Playstation VR2](#) (tethered)



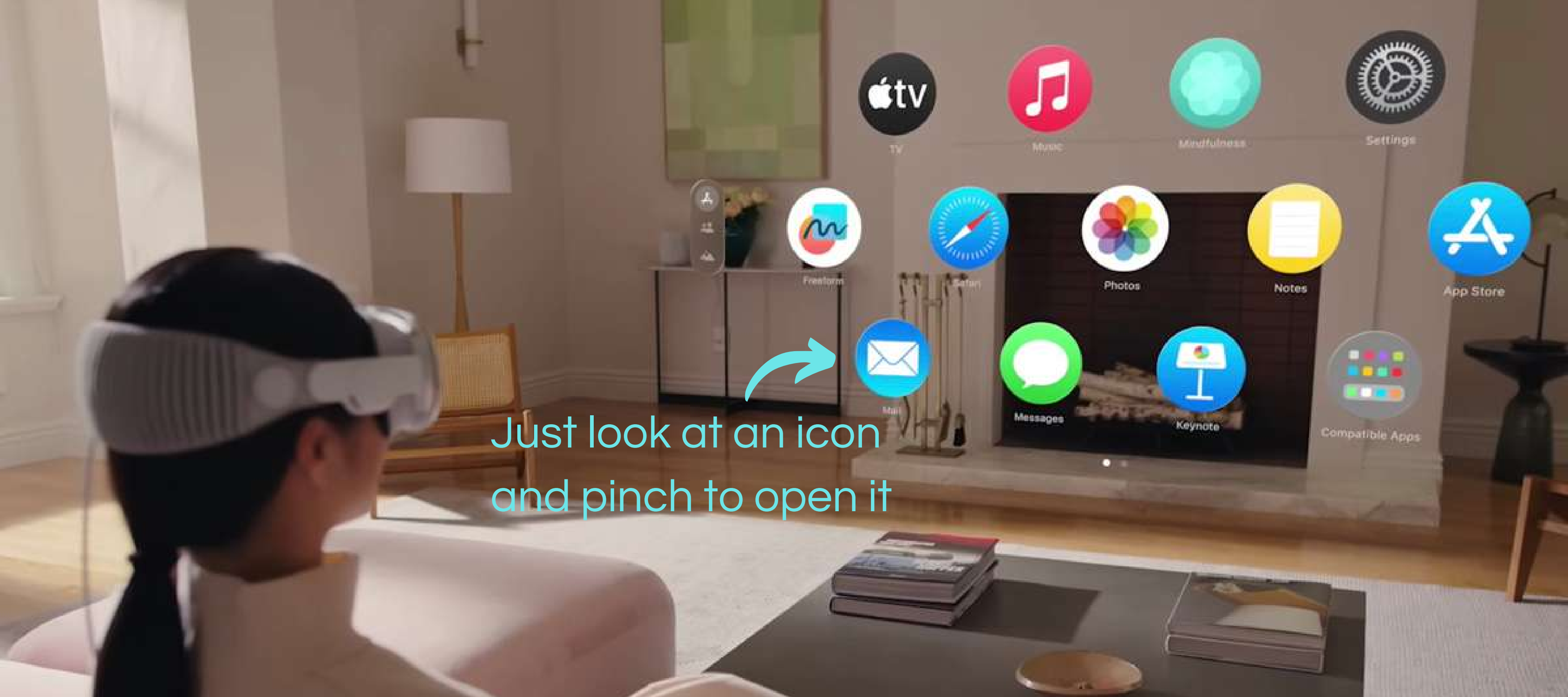
Apple recently announced its [Apple Vision Pro](#), that combines both VR and AR, both work and entertainment



Best processor
of the world

Dedicated
VR processor

With 12 cameras and a resolution of 4K for eyes, it has to be managed by two very powerful processors, M2 and R1



Just look at an icon
and pinch to open it

Its eye tracking system allows to replace mouse click with the pinching of the index finger and thumb together


VR TOURIST VIDEOS

There are two types of VR tourist videos/photo:

- Monoscopic
- Stereoscopic



Monoscopic VR tourist videos/photo work much like a normal video: they can be viewed on smartphones and PC too. The viewer can **click and drag the mouse on the screen** to rotate the field of view, similar to turning the head to explore a scene (e.g: **Google Street View**)

A woman is shown from the chest up, wearing a black VR headset and holding it with both hands. She has a joyful expression, with her mouth open as if laughing or speaking. The background is a vibrant, tropical beach scene with palm trees, a sandy shore, and buildings under a blue sky with soft clouds. The scene is presented in a stereoscopic format, typical of VR content.


Stereoscopic VR tourist videos only works for VR headsets and feature head tracking, so the tourists can move their head to explore the surroundings in a more realistic way

VR IMPACT ON TOURISM

There are three main types of applications of VR to the tourism sector:

- VR travel experiences
- VR for travel agencies
- Virtual hotel/city tours





VR travel experiences are stereoscopic VR tourism videos that create the same feelings and emotions of being in the real destination, giving users a taste of what it's like to be there

A man with a beard is wearing a black VR headset with a yellow heart logo and the text "Thomas Cook" on the front. He is also wearing white headphones. In the background, a woman with long blonde hair is sitting at a desk, looking towards the camera. The setting appears to be a travel agency or office, with a computer monitor and framed pictures on the wall. The background image shows a virtual scene with palm trees and a blue sky.

VR for travel agencies replaces classic brochures and screens inside the travel agencies, to offer prospective clients short video clips of virtual travel experiences instead

Virtual hotel tours are usually monoscopic VR tourism videos that allow users to explore a hotel with a 360° interactive tour in which the users can choose which rooms to explore



Examples



AirPano VR specializes in virtual tours of the most beautiful places of the world, e.g: Angel Falls in Venezuela

https://www.youtube.com/watch?v=L_tqK4eqelA

Thomas Cook Airlines offers helicopter flights over Manhattan. Their bookings tripled when they created a VR tour using 360° recordings of their helicopter flights





Visit Wales published some VR videos of dolphins to get more people interested in wildlife attractions tours and they doubled their bookings



Both British Museum and Louvre offer virtual tours

<https://www.britishmuseum.org/blog/how-explore-british-museum-home>

A large-scale VR projection of Van Gogh's 'The Starry Night' in a dark room, with a crowd of people watching. The projection covers the walls and ceiling, creating an immersive experience. The stars are bright yellow and white, swirling in a blue and purple sky. The crowd is silhouetted against the bright projection.

In Milan there is an exposition where visitors enter into the paintings of Van Gogh using AI-powered VR

<https://vangoghexpo.com/milano/>

A large-scale digital projection of Van Gogh's 'The Starry Night' painting covering the walls and ceiling of a room. The painting's characteristic swirling blue and green colors, along with its numerous bright yellow stars and a large crescent moon, are vividly displayed. A crowd of people is visible in the foreground, looking up at the projection.

AI is able to simulate **Van Gogh's style** to fill the room (physical or virtual) with every changing painting

<https://vangoghexpo.com/milano/>



Sandy Lane Hotel, Barbados

<https://www.youtube.com/watch?v=Lbq6lQgUkM&t=181s>



A guided virtual city tour of London

<https://www.youtube.com/watch?v=m9ECIKATVeQ>



360°

National Geographic made underwater VR videos

<https://www.youtube.com/watch?v=v64KOxKVLVg&t=51s>

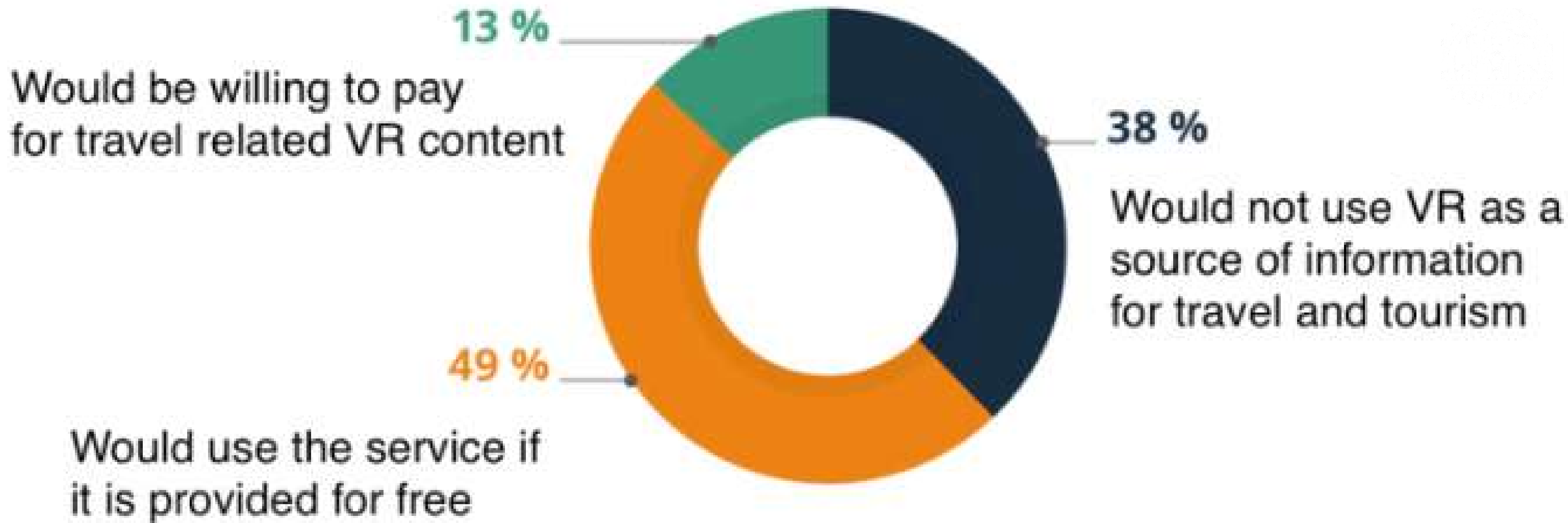
VR IMPACT ON TOURISM

The impact of VR on tourism is **still low** but it is expanding along with the technology, that is evolving at a **rapid rate**

VR IMPACT ON TOURISM

Advantages of VR for tourism sector are many

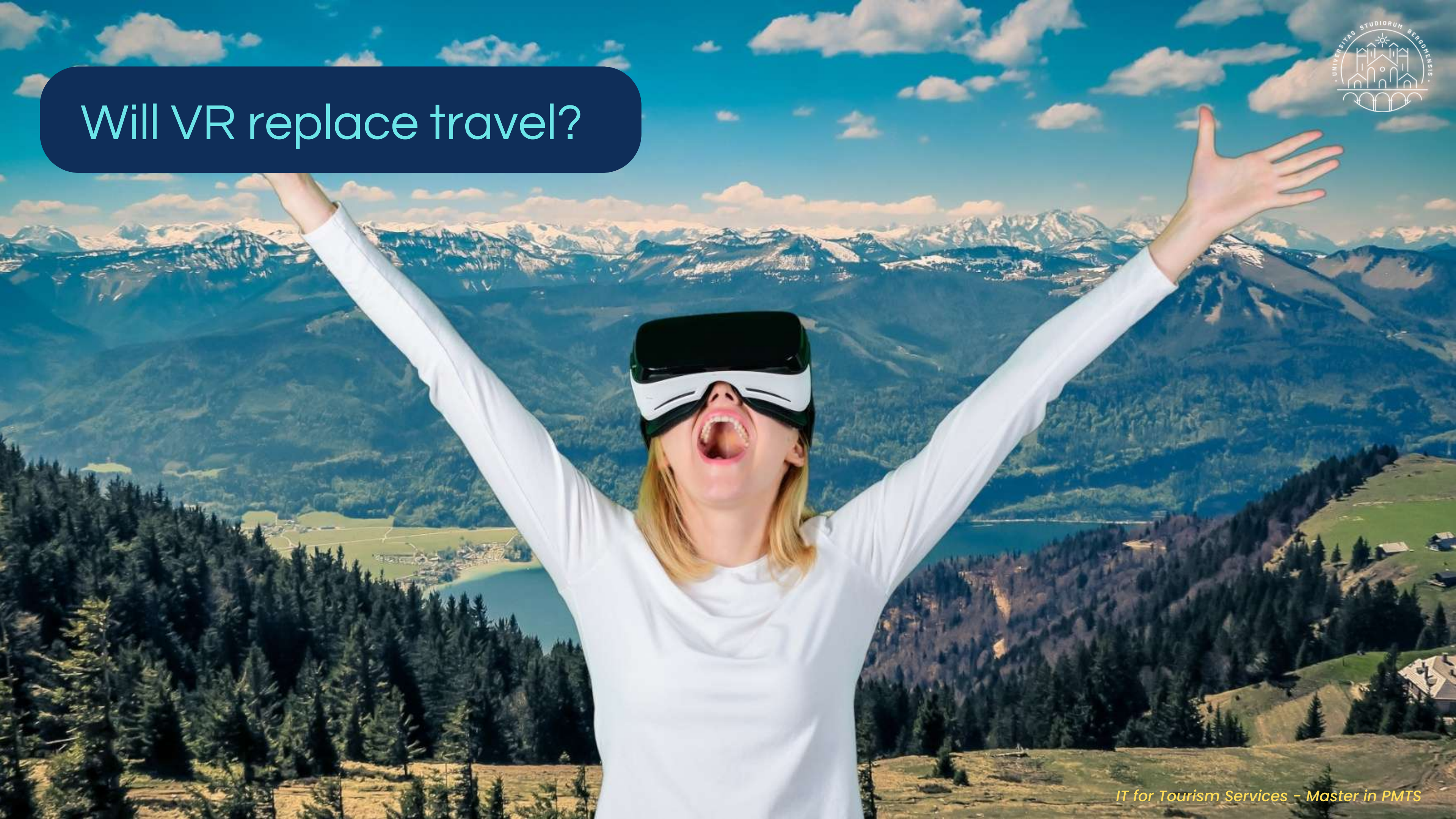
- Explore a location at will
- Try before you buy approach
- Make consumers think about travelling to places that they wouldn't have considered otherwise
- Reduce overtourism by simulating visit to vulnerable destinations
- Providing travel experiences to those who cannot travel (e.g: old or sick people)
- Allow travel companies to stand out from the crowd



Source: Statista Digital Market Outlook

50% of people'd use VR as a tool for choosing their holiday destination, provided it is free. 13% of people would be willing to pay for the VR

Will VR replace travel?



Will VR replace travel?

82% of people said **no**

92% said that visiting a destination in VR is **not the same** as in real life

77% cited **tasting local food** as being important to them

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It's pretty safe to assume that **VR won't replace travel** anytime soon. It is just a useful tool for **marketing**



VR has some issues to solve before becoming mainstream: motion sickness, eye stress, lack of vision of the surroundings, high costs and the screen-door effect

screen-door effect: the fine black lines separating pixels become visible in the displayed image

AUGMENTED REALITY





Augmented Reality (AR) is technology that is not as famous or popular as VR but it was adopted much faster than VR as the technical requirements are much lower and headsets are not obligatory, so there are no drawbacks

It is an example of **disrupting technology**: an innovation that no one expected and has a big impact on society





AR was made popular in 2016 by the game **Pokemon GO**. Its app was downloaded **a billion times**.



AR consists in displaying computer-generated content over the real world thanks to sensors that track the position and orientation of the device (e.g: GPS, compass)

For example, Google Maps has a feature called "Live View" that directs you to your destination thanks to virtual arrows and pointers



ВЫХОД В ГОРОД

ACCESS TO CITY

With app **Google Translate** let you point out your camera towards any text around you, and the app replaces it instantly with its translation



Cartoon 3D Style
by Snapchat

Even the social media **Snapchat** employs a form of AR to apply filters and add special effects



City Tour apps display info on the screen regarding places of interest, museums, galleries, and other tourist attractions



They can also include **audio**, announcing features of interest at a particular site when they become visible to the user

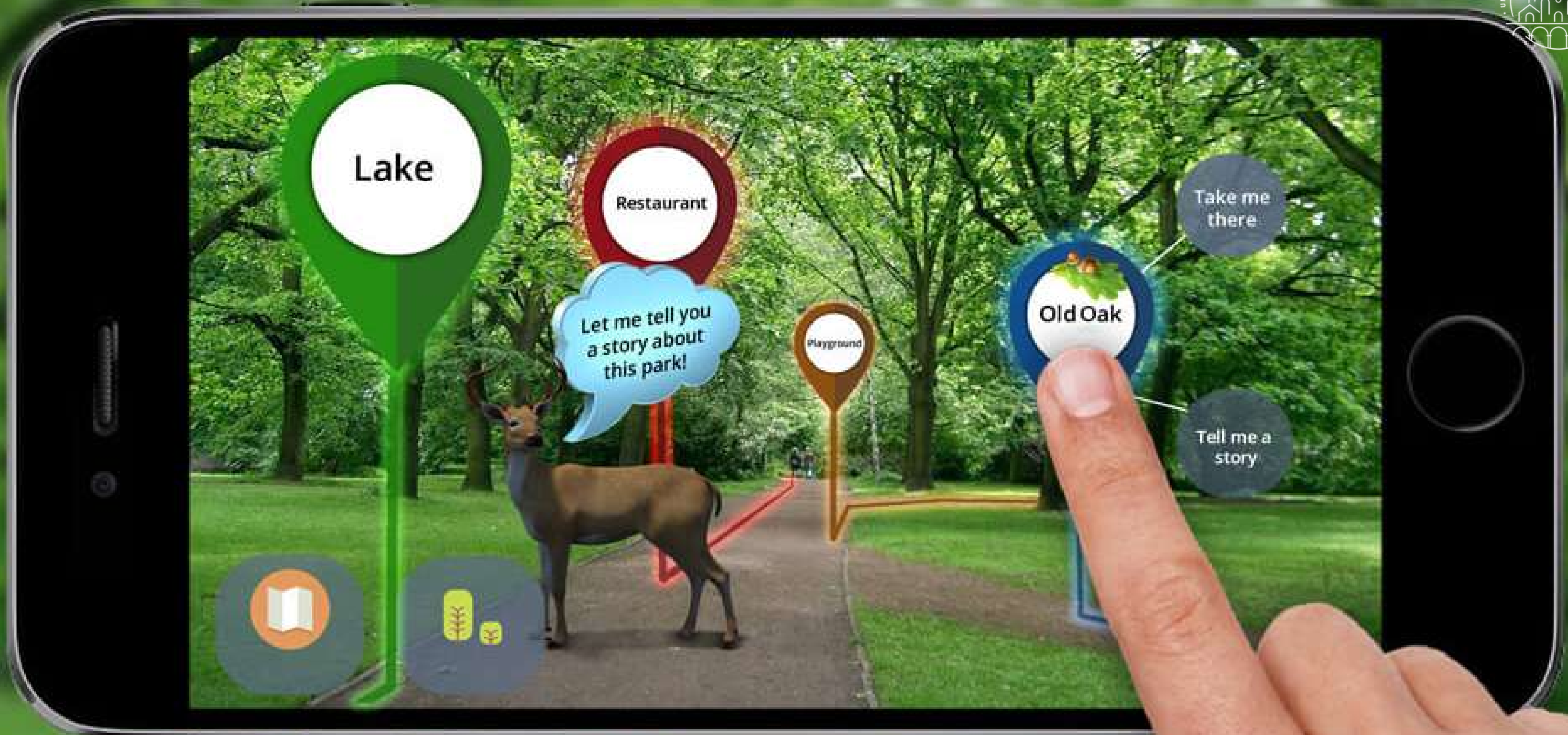


Some hotels attract guests by offering them AR gamification: interactive experiences (e.g: quests, treasure hunts) overlaying virtual objects into the hotel's rooms



A branchiosaurus head coming out of a virtual swimming pool of a Best Western hotel to entertain children





It works well also in other locations



<https://www.youtube.com/watch?v=RILcP5B7wbA>

Or to promote cities like **Alghero** (-> www.playalghero.it)

An ancient gate of Seoul was **rebuilt virtually** with AR. Physically it'd have been impossible as the city grew around it.



This is an example of **smart tourism**, e.g: of improving the experience of the tourists (in this case, explore a long-forgotten history of the city) thanks to IT

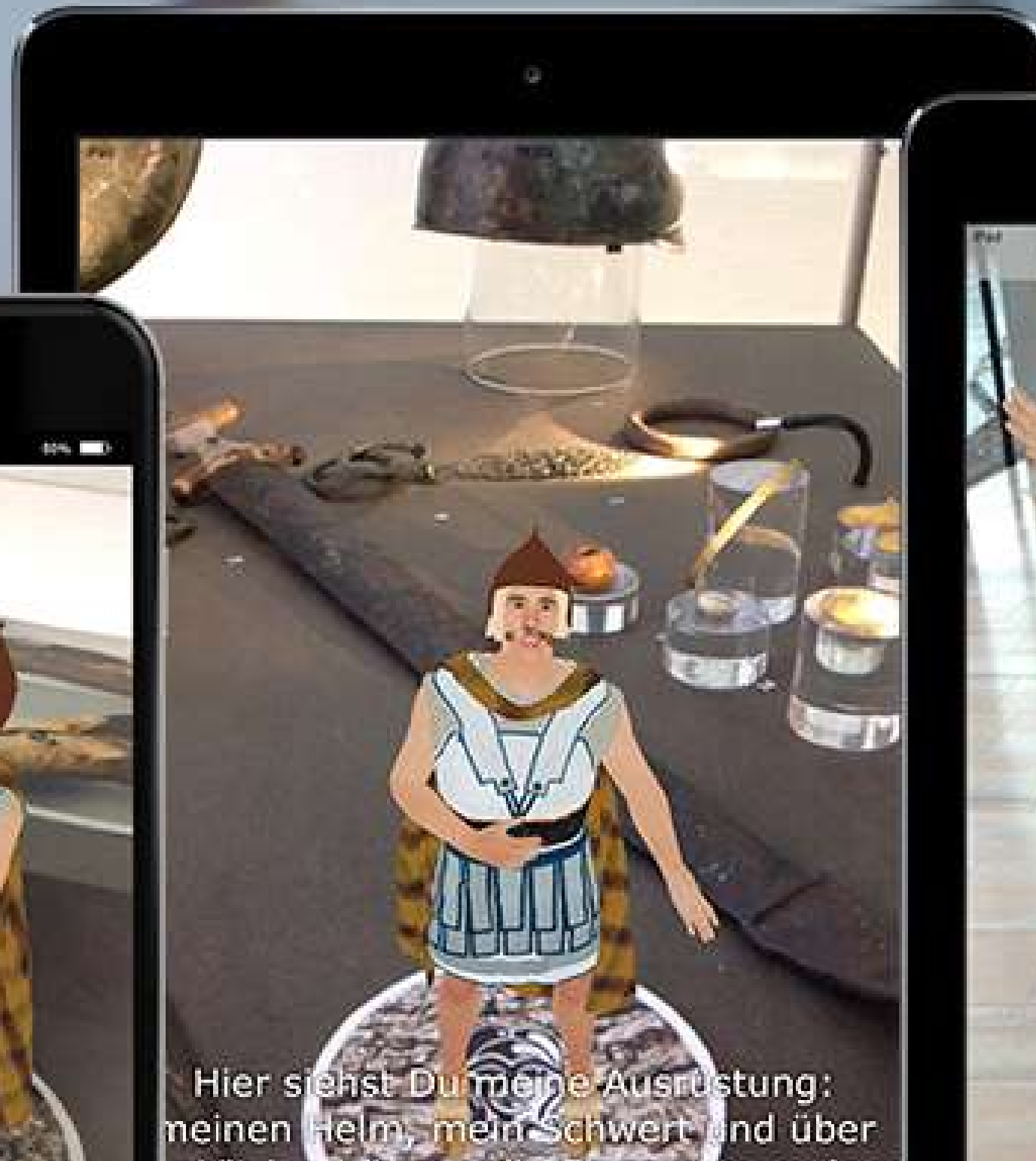




tant en essència com per la
immensitat de la natura com
un violent onatge que travessa

nificència es tradueix en un
na. on també hi té presència
persones accentua aquesta
el qual ens n'allunyem quan
de color, llum i moviment.

There are many possibilities for the use of AR in museums. The most straightforward way is to get more information when visitors view exhibitions



You can also display a virtual version of the artist or of the portrait subject next to the artwork, and make him/her speak to provide a narration of the artwork





...unless he/she prefers to leave the portrait



You can bring objects or scenes to life



You can bring objects or scenes to life



You can bring objects or scenes to life



Or restore broken objects to their original form

...and even recover paintings that were stolen



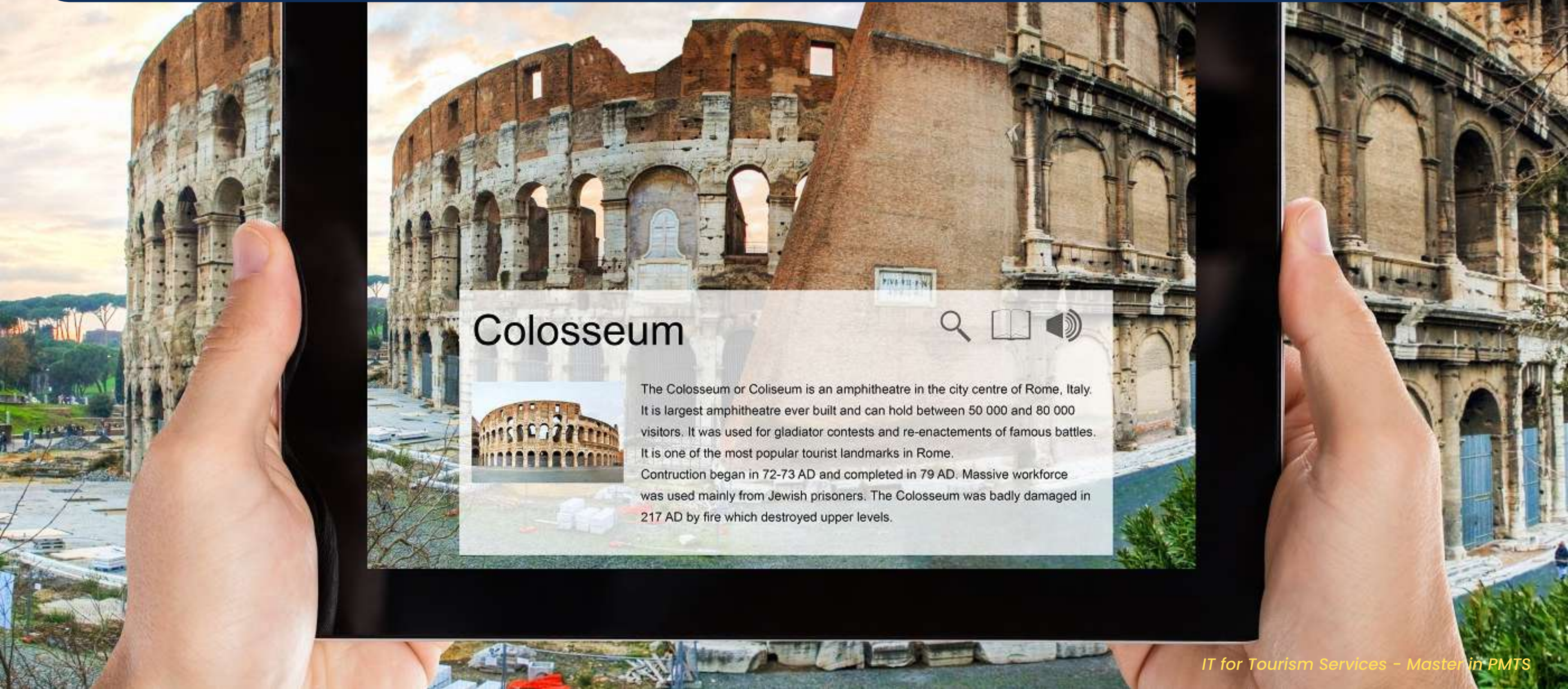
GIVE YOUR
ART
A LIFE
WITH
AR

Possibilities are endless

Travel agencies can also employ brochures that AR transforms in a 3D version to advertise the location



AR is less used than VR to advertise travels and locations. It is usually employed to enhance the tourist experience





Example of free AR apps less related to tourism

- Tschuggen 2521 m
- Drättehorn 2794 m
- Schwarzhorn 2927 m
- Rothorn 2526 m
- Glogghüs 2534 m
- Fulenberg 2374 m
- Hochstollen

ARAlpineGuide is a free app to identify mountain names



IKEA Place allows users to preview IKEA furniture in their houses

VALENTINE'S DAY

MAKEUP LOOKS



COLOR

YOUR HAIR



BACKGROUND

ERASER

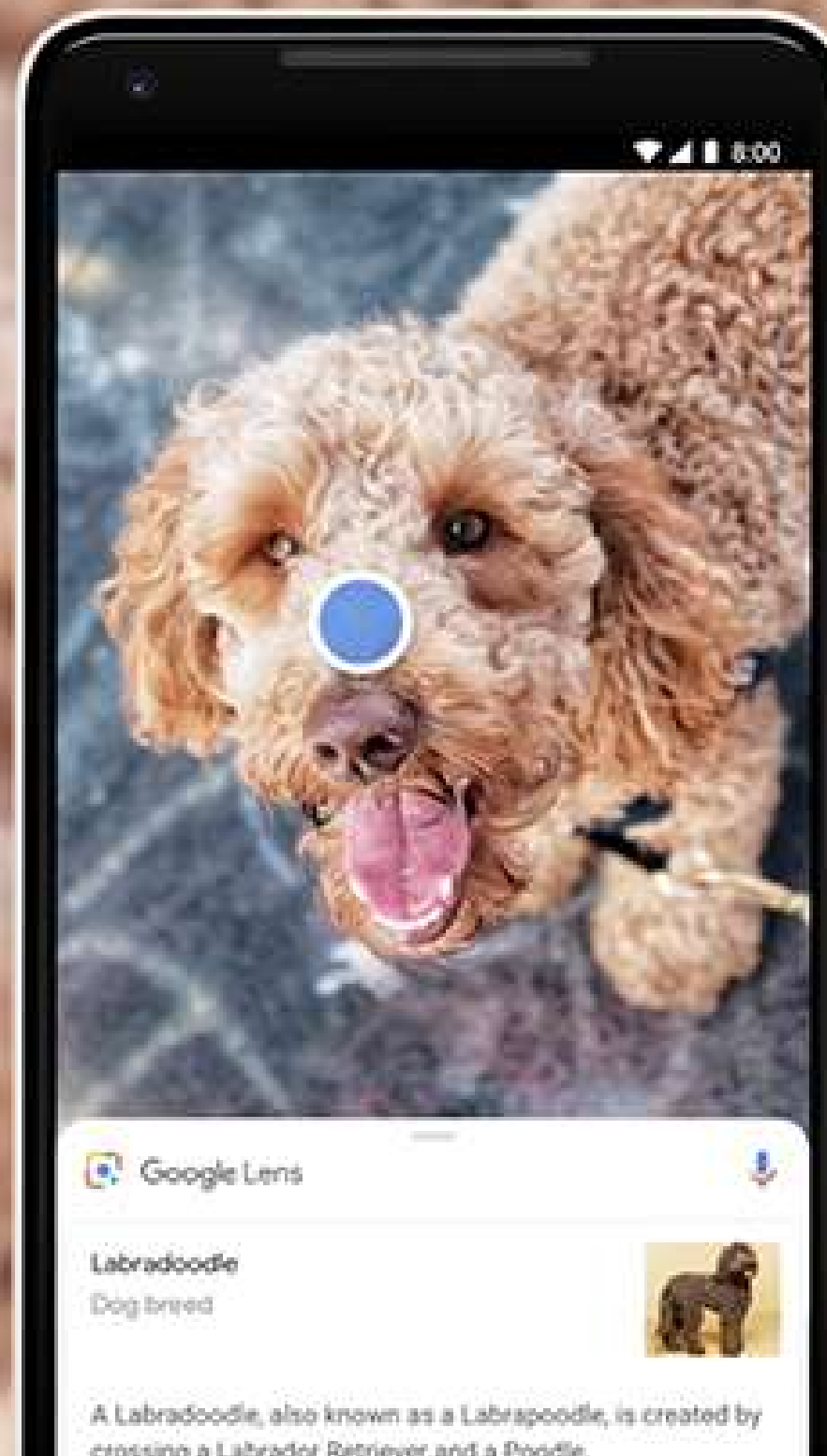


MAKEUP

FOR HOLIDAYS

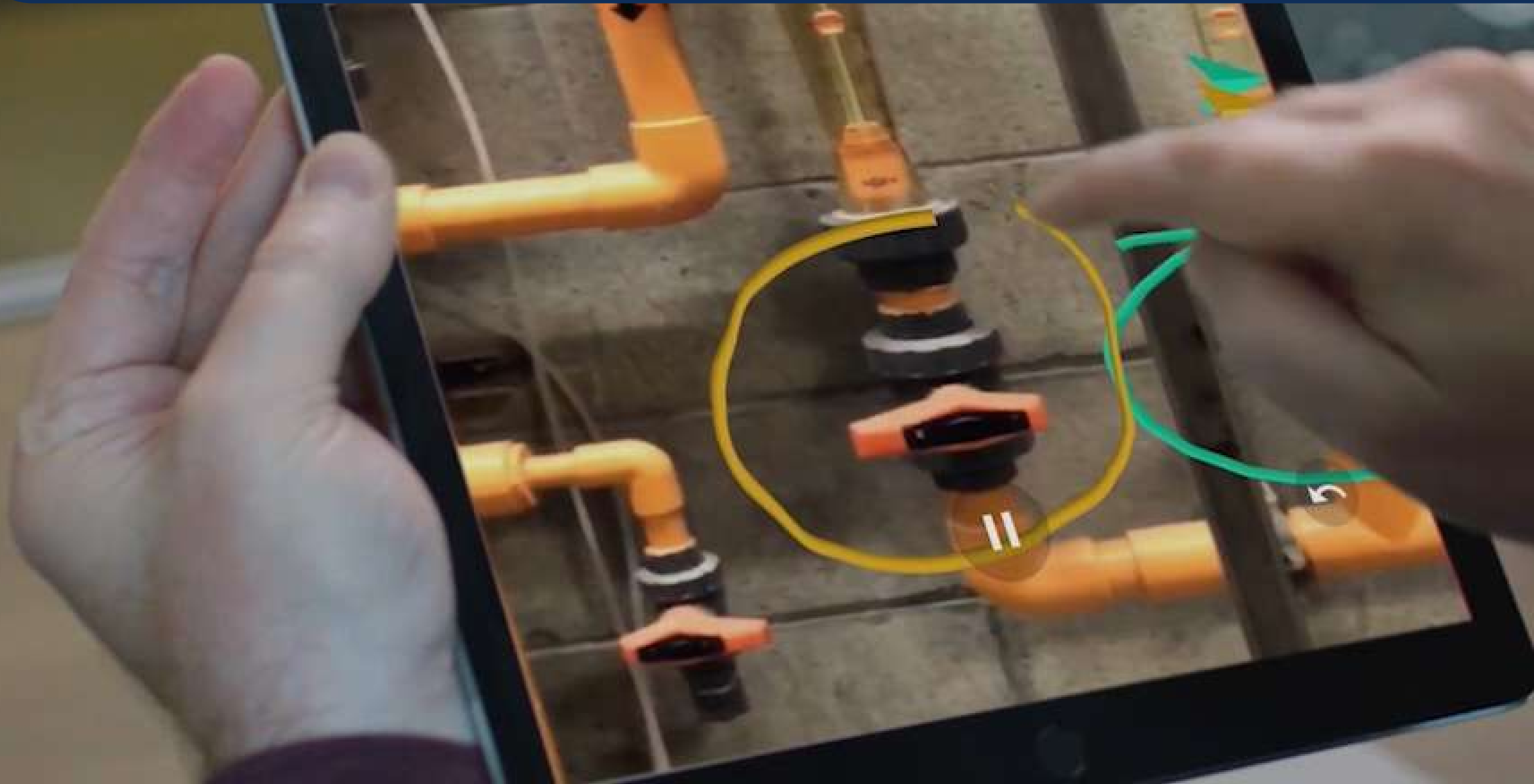


YouCam Makeup lets users virtually try on real-life cosmetics



Google Lens is a powerful app: users point the smartphone at an object to identify what it is, give informations about it and eventually where to buy it

Vuforia Chalk is a simple but useful app in which you can share your screen with another person that can draw on your screen with augmented reality chalk marks that work like **visual annotations**, letting you find the right buttons, switches and controls, without the confusion caused by verbal descriptions





2014.09.01 07:55 PM



LEPUS

Sky Tonight is one of the best stargazing apps: it displays star names, constellations, planets and other celestial bodies in real time over the sky



Holo app allows insert holograms inside your photos or videos



Contrary to VR, AR has a **bright future** ahead mainly because of its **accessibility**.



All it takes to access an AR system is a device with **GPS**, **webcam** and **internet connection** (standard in every smartphone, tablet or PC): AR is **within the reach of all**

VR, AR, Internet, Internet of Things (IoT) and Blockchain might also converge in the **Metaverse**: a network of interactive virtual worlds focused on social connections

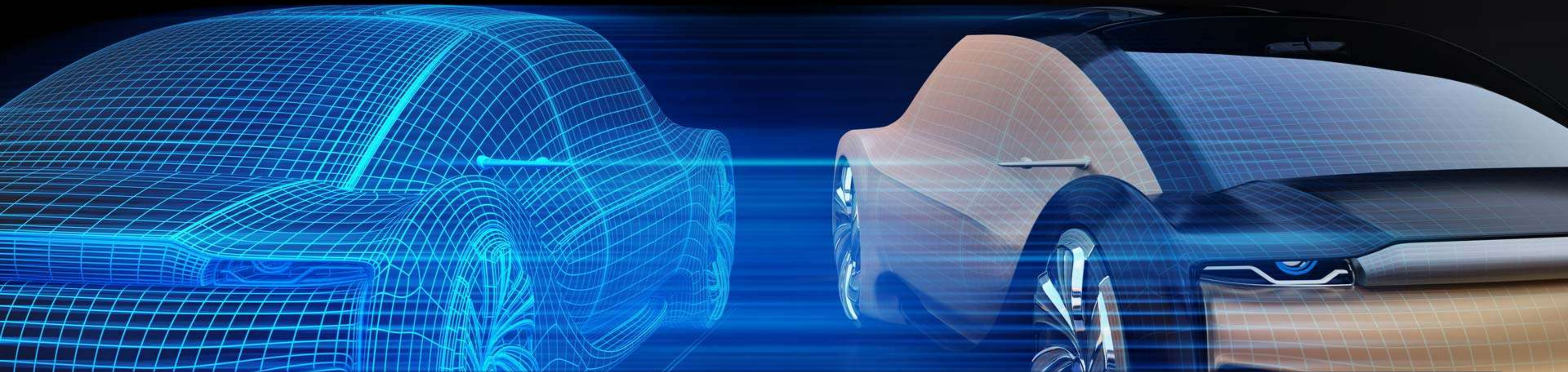


Metaverse is similar to **Second Life** platform, or **World of Warcraft** online game, or to the **Oasis** world of the "Ready Player 1" movie. **Facebook** bet so much on the Metaverse to rebrand itself as **Meta**



People will go shopping (paying with cryptovalues), meet their friends sitting around a table with them, go to work or school in virtual rooms, and even visit the doctor and do some sports together



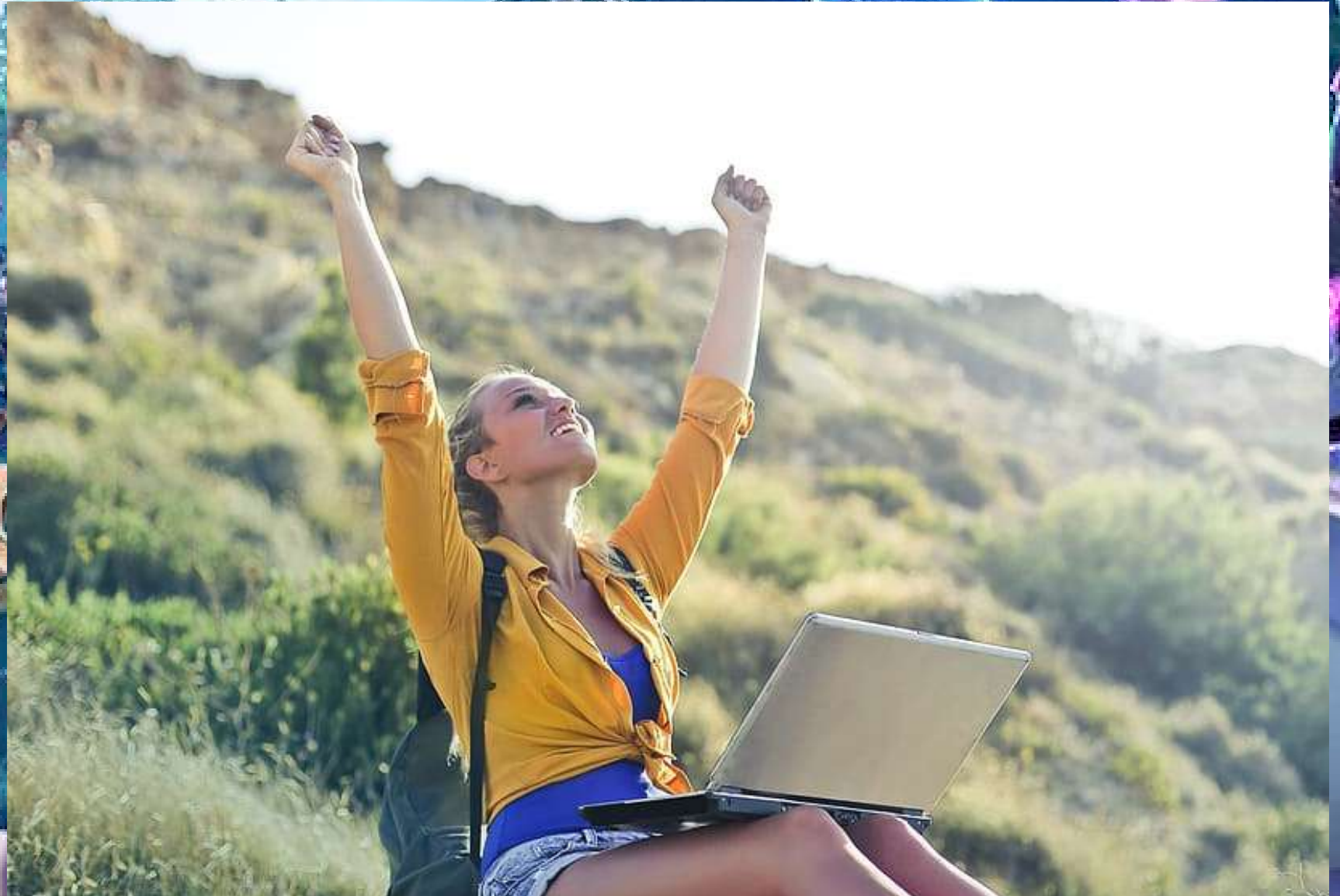
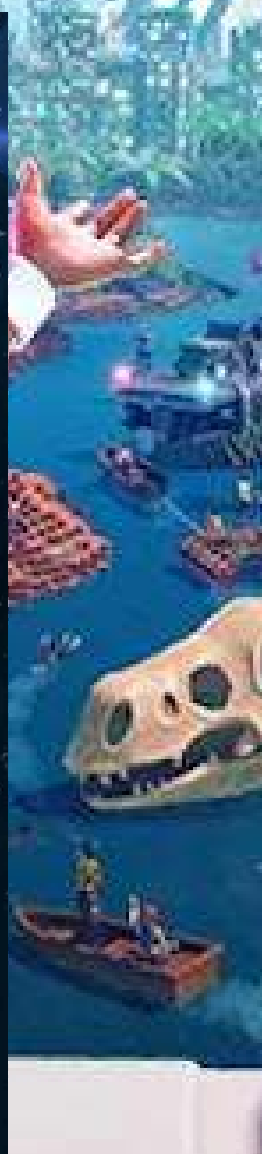


In the Metaverse exists a **digital twin** not only of each person (**Avatar**) but also of many **real-world objects**. Access points for the Metaverse include not only VR headsets but also smartphones and PCs

At present the Metaverse is still a hypothetical IT that is at least 10 years in the future. If realized, Facebook will probably dominate the Metaverse



Forecasts of the future of technology are usually **wrong**: last century futurists imagined that in 2020s technology'd evolve to **spaceships and flying machines**, instead of **smartphones and remote working**



The impact of the Metaverse on tourism sector **won't be very big** because VR will always be used mainly for **marketing**, and not to **replace travel**: VR worlds will always be just a **surrogate** of the real world



Imagine a distant future where humans are **directly connected** to the Metaverse: even this won't allow us to travel with the body, only with the mind: **true travels**'ll always be **beyond any computer simulation**





Metaverse might have a bigger impact on education: Facebook is testing the first Metaschools and Metaversities, virtual universities where the avatars of students and professors meet to have lessons in virtual spaces