

# **VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR) IN THE HOSPITALITY INDUSTRY**



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- 2. Main directions of using Augmented Reality and Virtual Reality in the Hospitality Industry**
- 3. Key trends in the transformation of the Hospitality Industry in the Digital Age**

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# 1. Concept and definition of Virtual Reality (VR) and Augmented Reality (AR)



**Understanding Virtual Reality and Augmented Reality**

<https://www.youtube.com/watch?v=vz0UUVDt2ps>

1:56

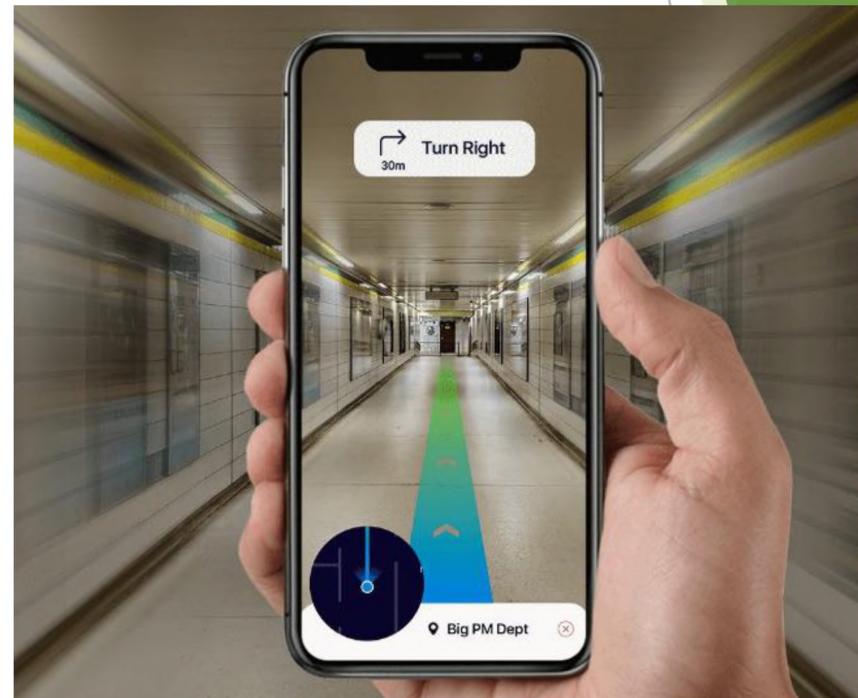
# 1. Concept and definition of Virtual Reality (VR) and Augmented Reality (AR)

**Virtual Reality (VR)** is a technically created simulation of a three-dimensional image or environment that a person can perceive through their senses. Virtual reality simulates both exposure and reactions to exposure. The experience simulated by virtual reality can be very similar to the real world, or it can be radically different from it (including at the level of physical laws). A person using virtual reality equipment can view the artificial world, move around in it virtually, and interact with virtual functions or objects.



# 1. Concept and definition of Virtual Reality (VR) and Augmented Reality (AR)

**Augmented Reality (AR)** is an interactive method of visualising digital information in the context of the physical environment. Augmented Reality technology allows using appropriate equipment to visualise non-existent objects; to view 3D objects on the screens of various devices; and to superimpose visualised 3D objects on physical space (combine physical and visualised 3D objects).



# 1. Concept and definition of Virtual Reality (VR) and Augmented Reality (AR)

*The difference between VR and AR.* Virtual reality constructs a new artificial world, while augmented reality only introduces some artificial elements into the perception of the real world.

**VIRTUAL REALITY**  
**VS**  
**AUGMENTED REALITY**



## **2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry**

The use of augmented and virtual reality technologies in the hotel and restaurant business is a very promising direction. Thanks to the digital environment, customers can get the fullest possible idea of the services they are going to order.

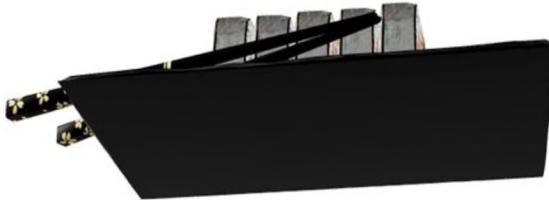


## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



*AR-menu* is an interactive menu containing three-dimensional 3D images of real dishes. Such images can be viewed using a phone, tablet or any other gadget. AR-menu allows you to view the virtual dish from all sides. It is possible to find out the composition, weight, calorie content of the dish, as well as the combined drinks. Sometimes restaurateurs can also provide the guest with the opportunity to virtually follow the process of cooking a dish.

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



Fragments of 3D-visualization of sushi (AEstAR studio, Kharkiv)

<https://aestar.com.ua/wp-content/plugins/webar/model-viewer.php?model=Pizza&lang=en>  
<https://aestar.com.ua/wp-content/plugins/webar/model-viewer.php?model=Sushi&lang=en>  
<https://aestar.com.ua/wp-content/plugins/webar/model-viewer.php?model=Cake&lang=en>

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry

Download Jarit App



<https://jarit.app/marker.pdf>



Fragment of an advertisement for the AR-menu application of Jarit Company (Armenia)

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry

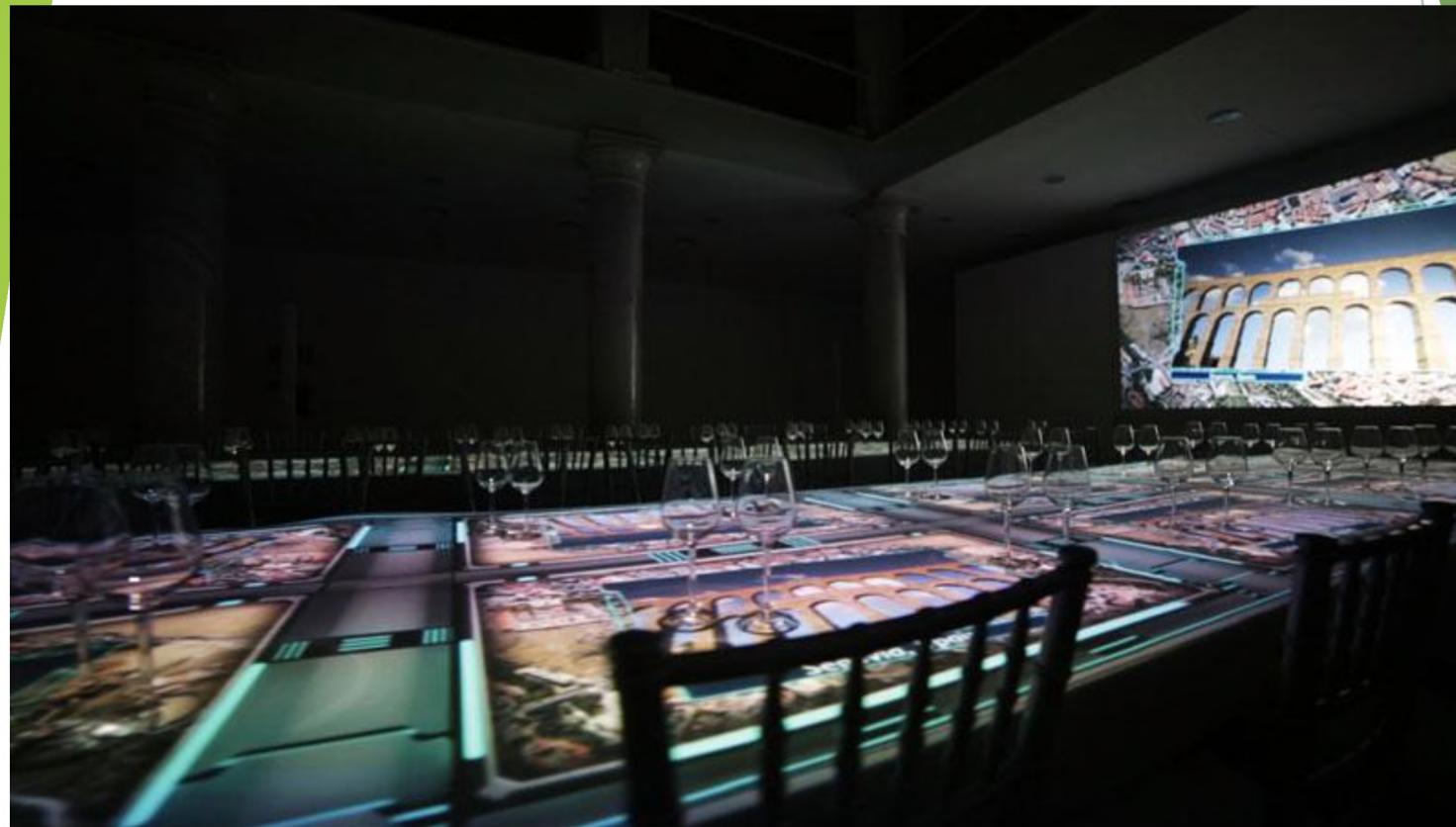


**Menu AR - menu of restaurants in augmented reality**

<https://www.youtube.com/watch?v=wrwpfhpuBM4>

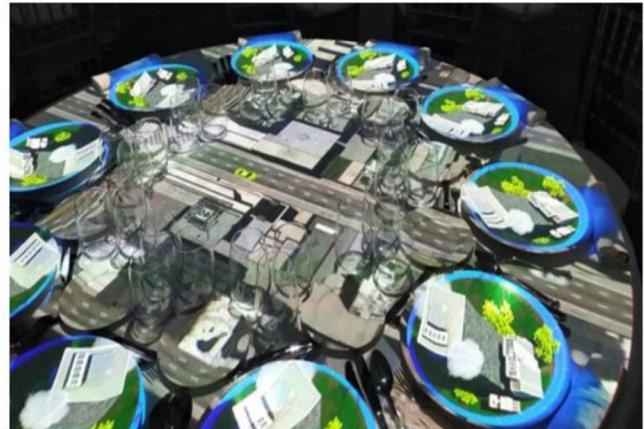
2:23

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



*Gastro-mapping* involves the projection of 3D images onto the table. Gastro-mapping is an example of application of augmented reality technology in catering services for MICE events.

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



Fragments of the gastro-mapping advertising proposal developed by Mice Catering

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



Amazing Use of Augmented Reality in Hospitality

<https://www.youtube.com/watch?v=Rbu0o9iLIwA>

3:03

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry

Virtual reality is also being used for employee training.



**How Hilton Uses Virtual Reality for Training | Oculus for Business**

<https://www.youtube.com/watch?v=6KuL3QMgM84>

1:45

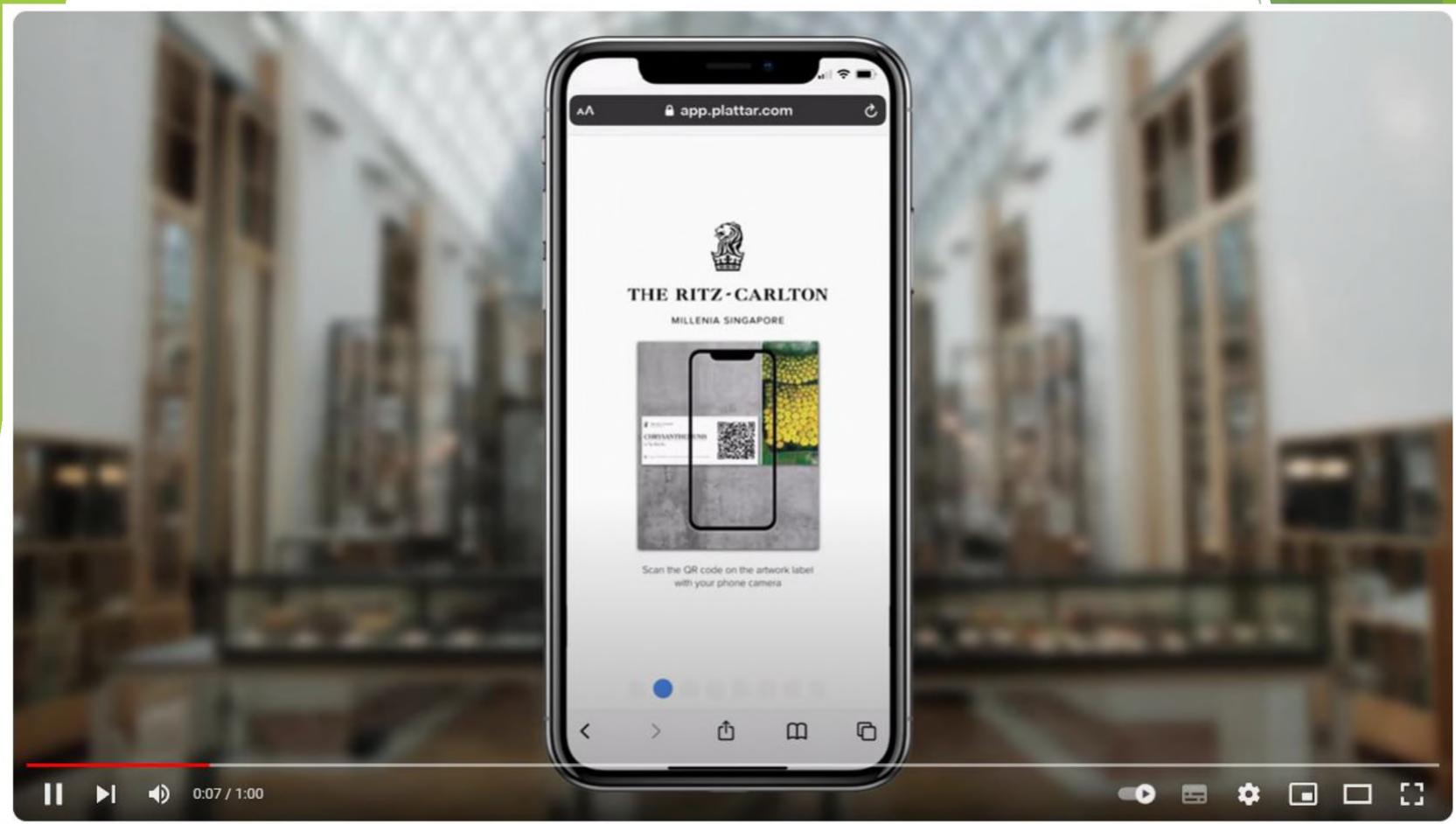
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Another use case for AR is indoor navigation.



Navigation with augmented reality technology

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**The Ritz-Carlton, Millenia Singapore Augmented Reality Hotel Art Tour**

<https://www.youtube.com/watch?v=wVPJ9Q3uKUE>

1:00

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



*Virtual Tour* is a tour in which the visualisation of the sightseeing sights is made with the help of technical means of simulation of a three-dimensional image or environment. In this case, the sightseeing objects are physically absent in the area where the excursionist is located at the time.



## **2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry**



Directions for the use of augmented reality technology in sightseeing services:

- AR applications for city tours. Such apps can help sightseers to create and follow their own individual route to locations of interest. In addition, the guest's fear of getting lost in a foreign city is eliminated;
- interactive maps of roads, routes and traffic jams can be converted into an interactive guide for the needs of sightseeing;
- in the case of museum tours, augmented reality applications can help with translating explanatory signage into the customer's language. In addition, relevant AR applications can show travellers' reviews of locations and other useful information.

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



*Google Maps* includes an option that allows you to generate walking routes with augmented reality.

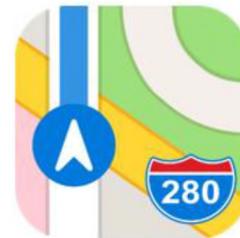
## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



GoogleMaps



ViewRanger



AppleMaps



Guideo



WallaMe



WikitudeWorldBrowser



CloudCrew



WorldAroundMe(WAM)



Virtlo

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



Example of HoloMaps application operation

**HoloMaps 3D Maps Virtual Reality Magic Leap App**

<https://www.youtube.com/watch?v=rkySS71IBrk&t=1s>

1:29

**HoloMaps 3D Virtual Reality Map Viewer**

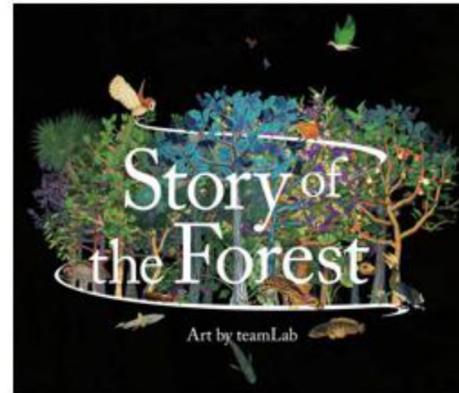
<https://www.youtube.com/watch?v=NsQOxwouCvU>

1:02

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



Now and Then – Paris



Story of the Forest

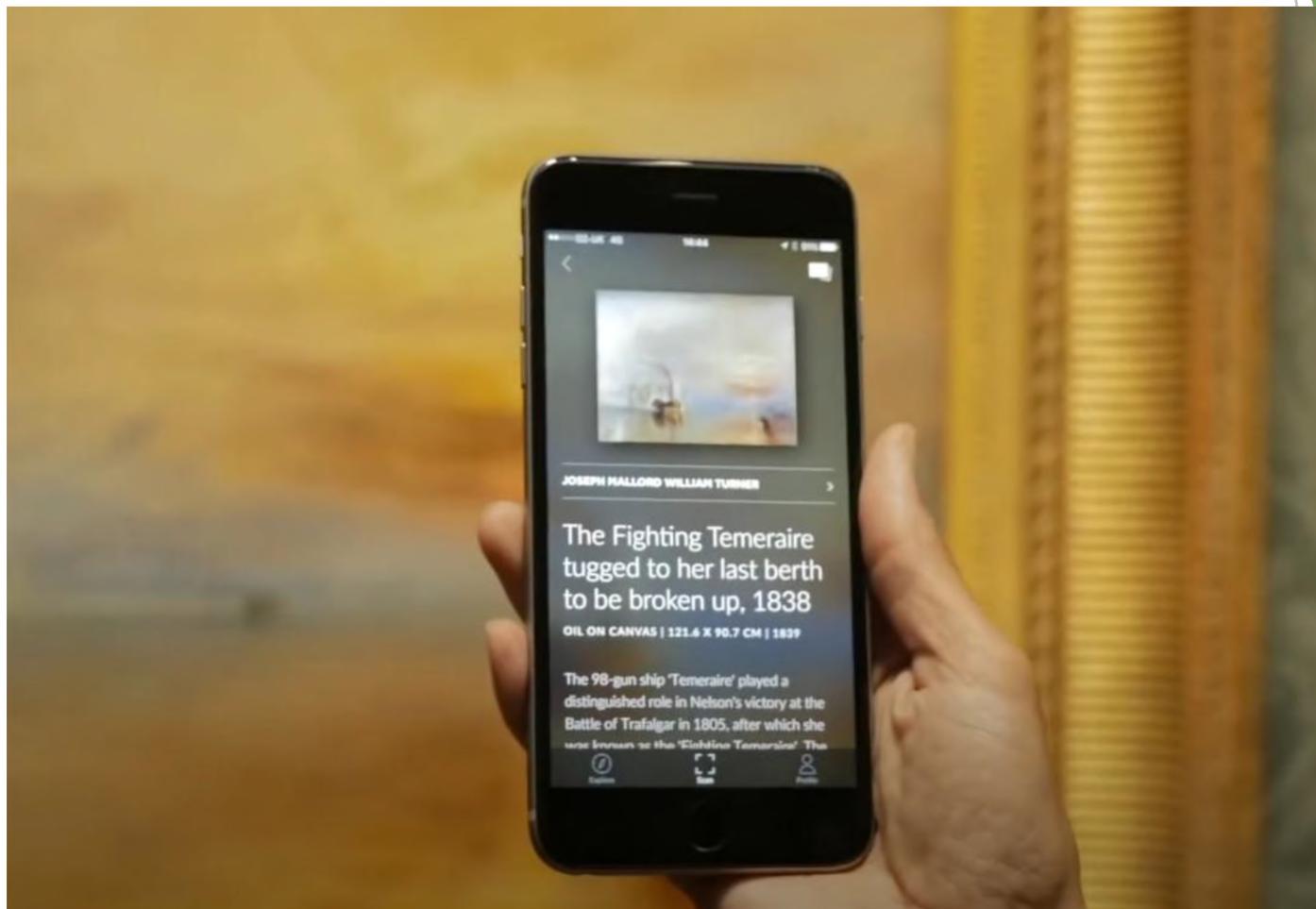


Waalkz



Senditurr

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



*Smartify* augmented reality application example

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



Google Translate



Star Chart

## 2. Main directions of using Augmented and Virtual Reality Technologies in Hospitality Industry



**How Will VR Change The Tourism Industry?**

<https://www.youtube.com/watch?v=fqK5AYr7EmI>

5:39

### **3. Key trends in the transformation of the Hospitality Industry in the Digital Age**

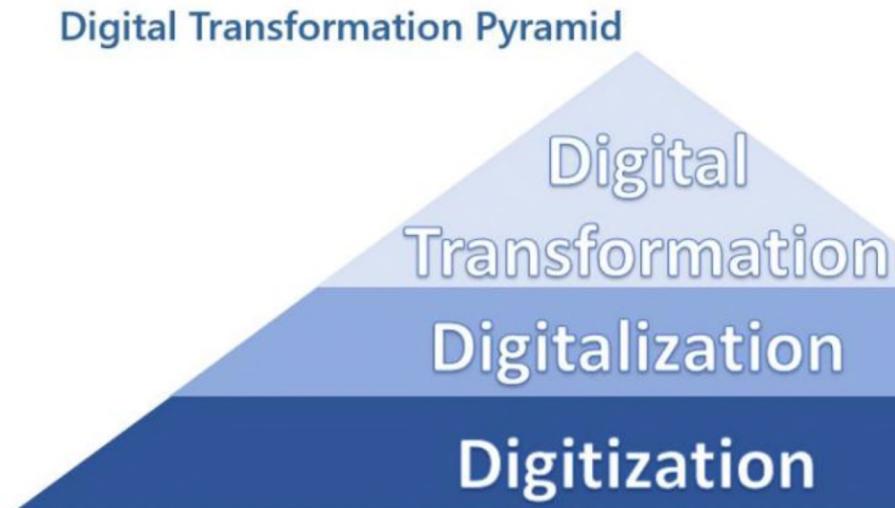


The key challenges of using digital technologies in the hospitality industry are:

- security;
- privacy;
- cost level;
- human factor.



### **3. Key trends in the transformation of the Hospitality Industry in the Digital Age**



Nowadays, the innovation that can deliver competitive advantage and economic prosperity is digital transformation. Digital transformation is more than just the digitisation of data, the application of digital technologies and digitalisation. The key characteristic of digital transformation is the emergence of new business models. This requires strategic business transformation, and the use of digital technologies should be systematic and comprehensive rather than ad hoc.

### 3. Key trends in the transformation of the Hospitality Industry in the Digital Age

Table 1 – Elements of the business model and digital technologies that can have a significant impact on the transformation of the relevant element of the business model of the hospitality enterprise

Elements of a business model	Digital technologies influencing the transformation of the element of the business model	Description (characterisation) of business model transformation
The firm's capabilities, unique resources and activities	<ul style="list-style-type: none"> <li>- Big Data (Big Data analysis);</li> <li>- management software.</li> </ul>	<ul style="list-style-type: none"> <li>- application of big data analytics for better segmentation and identification of customer preferences;</li> <li>- optimisation of production processes as a result of enterprise management automation.</li> </ul>
Relevant customers for business	<ul style="list-style-type: none"> <li>- digital communications.</li> </ul>	<ul style="list-style-type: none"> <li>- the widespread adoption of targeted communications changes the consumer preferences of a company's target audience.</li> </ul>
Value proposition	<ul style="list-style-type: none"> <li>- boosting servitization through digital technologies;</li> <li>- use of augmented reality (AR) and virtual reality (VR);</li> <li>- digital offerings.</li> </ul>	<ul style="list-style-type: none"> <li>- use of digital vouchers saves clients' budget and makes consumption of services more convenient and comfortable;</li> <li>-developing and launching new innovative products based on the use of augmented and virtual reality (example: gastro-meppings);</li> <li>- adaptation of service delivery forms to the digital format (example: online catering kits).</li> </ul>
Value demonstration	<ul style="list-style-type: none"> <li>- electronic marketing communication;</li> <li>- digital social networks and web-community</li> </ul>	<ul style="list-style-type: none"> <li>- focus on promoting information about the company through websites, groups in social networks, etc. in order to improve the process of familiarising consumers with the services provided.</li> </ul>

### **3. Key trends in the transformation of the Hospitality Industry in the Digital Age**

#### **The Future of Augmented Reality (2030)**

<https://www.youtube.com/watch?v=D8V2nxWHmI>

5:05

#### **The Future of Augmented Reality (2050)**

<https://www.youtube.com/watch?v=mM4r2o-9kN4>

13:20





**Thanks for your attention!**