

Creating VR-Tours «for museums»

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UNIS Vienna tourguide Henri Abued Manzano speaks from his apartment. Photo courtesy Kevin Kühn

STORIES FROM THE FIELD

UN Vienna guided tours go virtual

Who are we?



- IMC University of Applied Sciences, Krems Austria
- Project Partner in MoNa
- Research Center for AR/VR/MR
- Applications of AR/VR Technologies in Teaching, Applied Research
- Development and Consulting

<https://evrylab.fh-krems.ac.at/>





krems.
So viel mehr.



Krems von oben ▶

Krems und Umgebung ▶

<https://360grad.krems.info/>



Virtual Tours

- Simulation of an existing location which is composed of a sequence of images.



Image from <https://arvrjourney.com/>

- Shows a realistic depiction of your “business”
- **No** geographical **barriers** with the implementation of virtual tour
- Cost effective and **easy** to create
- Users have **control** over what they wish to focus on
- Attract attention on websites and increase rate of customer conversion

From Panorama to 360°

- Panorama photos are created by stitching (assembling) of multiple normal photos together side-by-side
- This is done automatically by modern cameras and associated software



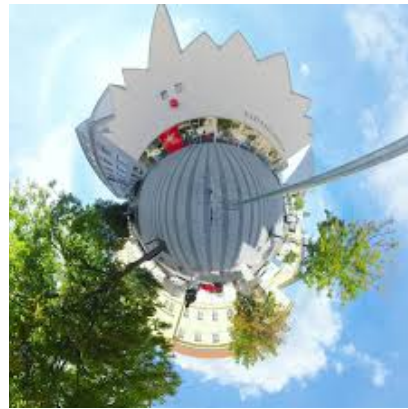
Example <https://www.ptgui.com/>



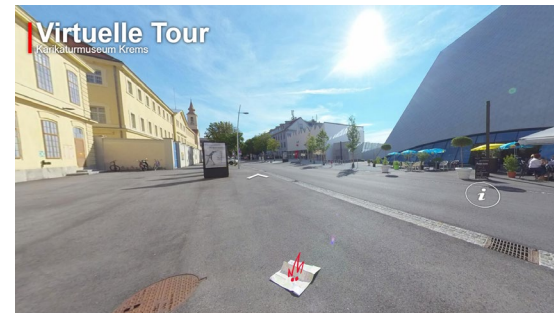
Image source : <https://medium.com/>

From 360° to Virtual Immersion

● **Non-immersive**
Passive viewing, environment does not interact with users



● **Semi-immersive**
Navigation, interaction, information on demand etc.



● **Fully-immersive**
With special equipment, the user is completely in the virtual world.



So, What is a Virtual Tour

- A **virtual tour** is a simulation of an existing location
- The user can move around the provided space
- May use other multimedia elements such as sound effects, music, narration, and text.
- Users can access the tour via a Website
- Optional use of VR equipment such as glasses for added benefits



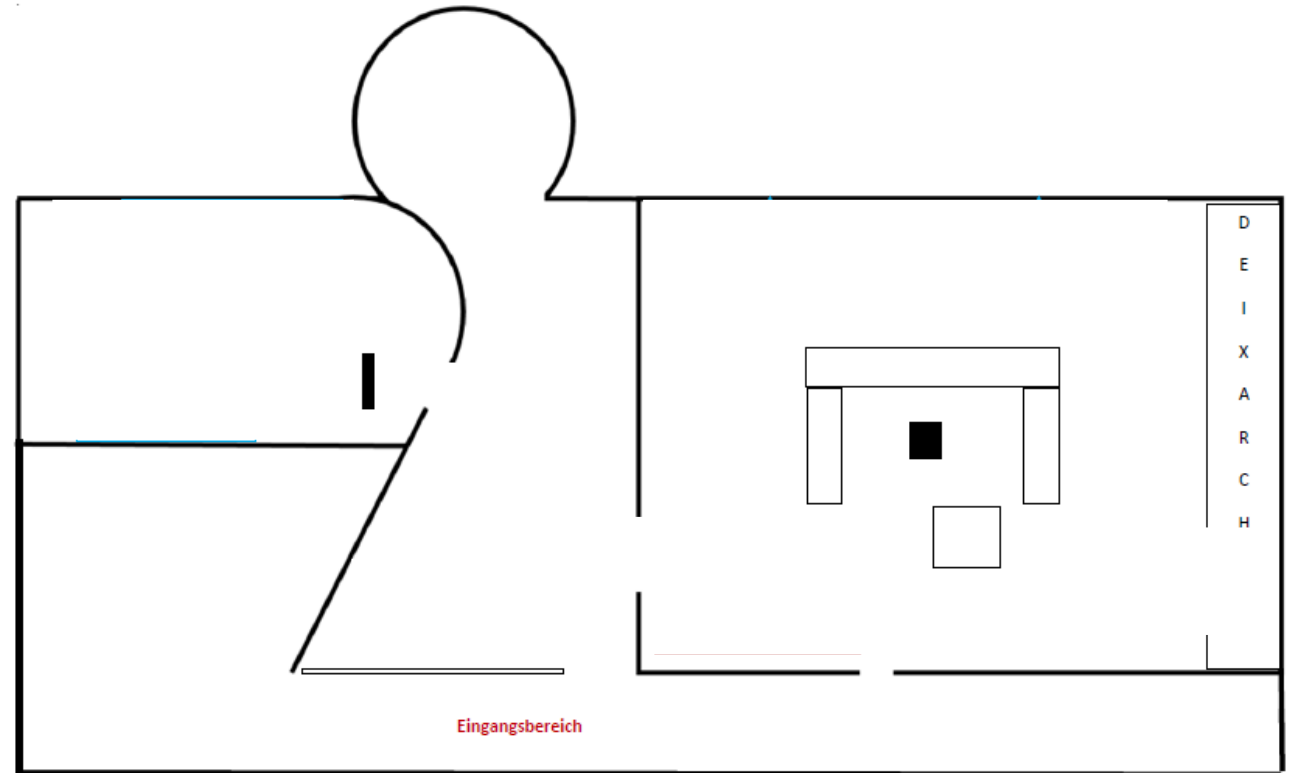
Getting Started with VR Tours

- You need a **plan**
- Define your **target** audience
- Imagine being the **visitor** to your museum
- Create a **storyline** of your tour
- Which areas of the buildings should be made virtually accessible



Creating the Storyline

- Define hotspots and info points
- User Interaction possibilities
- Plan your media and text contents
 - Image, Audio, Video,
 - Quiz, Info-box, Urls
 - 360° Photos, 360° Videos
- Define navigation sequences
- **Optional**
 - 3D Map of your Museum
 - Special VR Device Integration
 - 3D Models
 - Live guided tour



Getting Started with VR Tours

- Select your equipment based on your needs
- 360 degree camera or SLR Camera
- Sticking Software
- Software for creating virtual tours



SLR Camera



170 Euros

Samsung Gear 360



6000 Euros

Insta 360 PRO

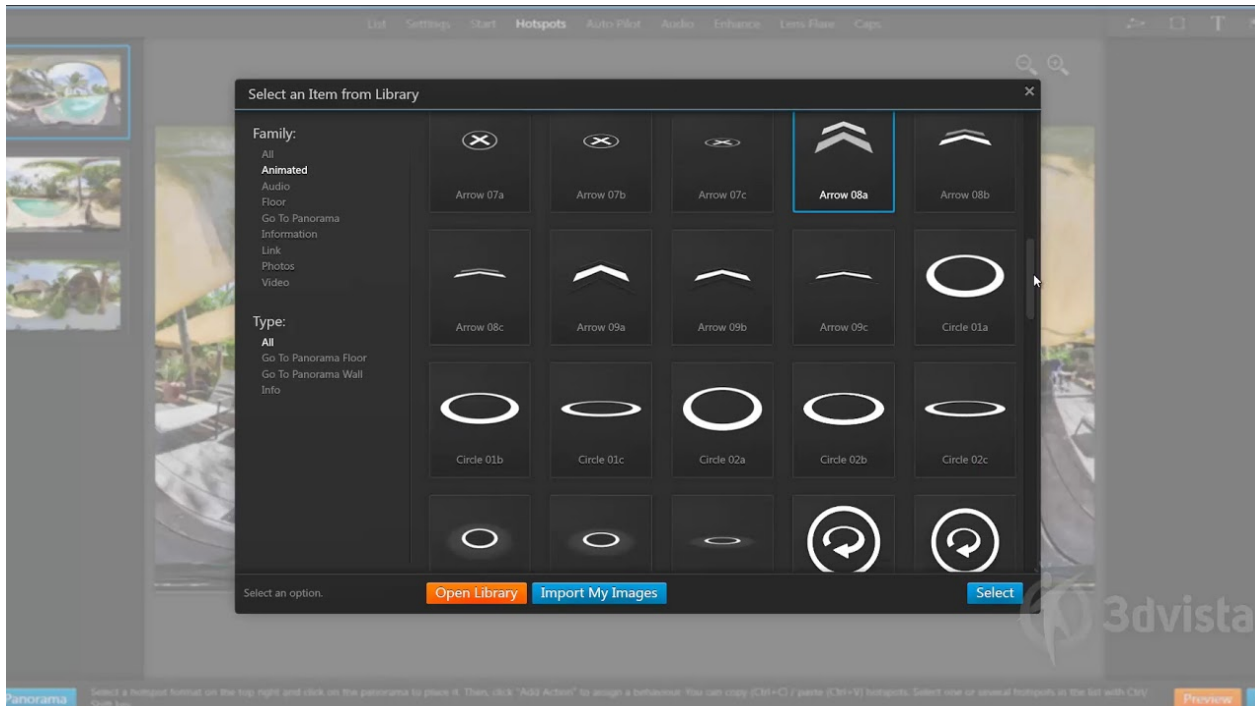
Capturing the Tour

- Capture the areas that should be in the tour
- As few people as possible on the recordings
- Take as many shots as necessary, but as few as possible
- Choose a nice day
- No records in dark rooms
- Take all exterior shots at once
- Camera should be upright and be calibrated (light)
- Consider info points

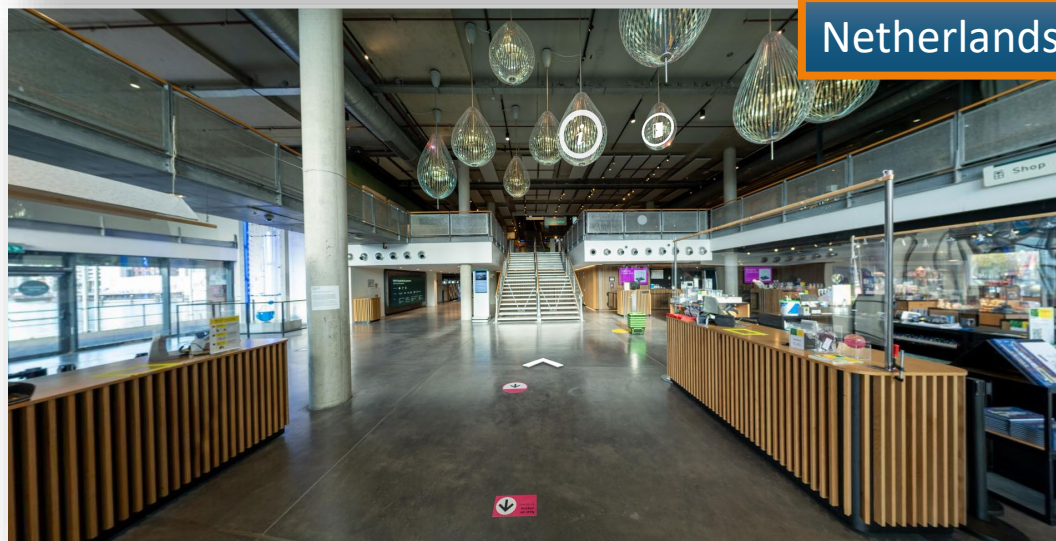
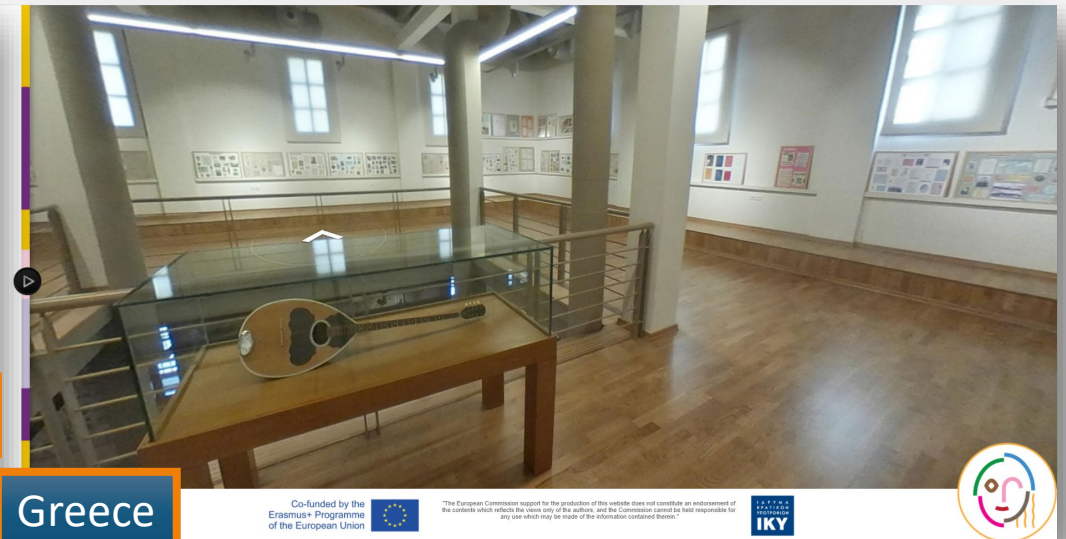
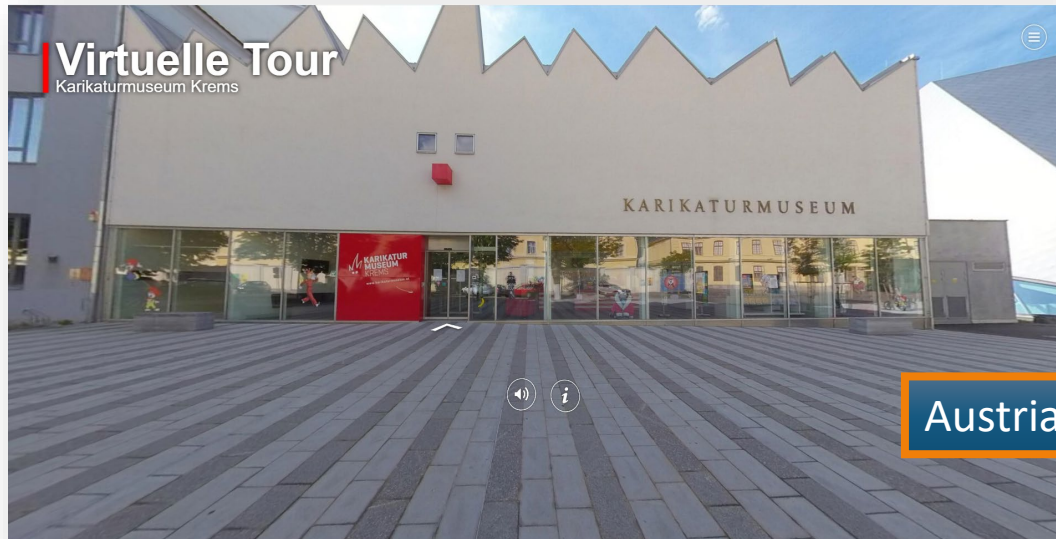


Post-processing

- Linking images according to the story line
- Insert hotspots into the panoramas
- Info points such as audio, music, text, etc.
- Enhance for virtual reality (optional)



Example Tours from MonA Project



Tips and Tricks

- A virtual tour is a digital twin of your museum!
- Make sure to show the bright side
- Make it interesting for visitors
- Make an exact plan before the recordings
- Ensure high quality of the images
- Pay special attention to data protection
- Too many animations can be distracting
- Virtual Tours are a means to attract more visitors
NOT replacing the visit entirely!



almost
50%
of your brain is
involved in
**visual
processing**



70%
of all your
**sensory
receptors**
are in your eyes



we can get
the sense of a
**visual
scene**
in less than
1/10 of a second

Seeing is Believing

Creating Virtual Tours is not as complicated as it sounds!

Questions, Feedback, Comments

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