



MREŽA ZNANJA

Ljubljana, 11. – 13. oktober 2022

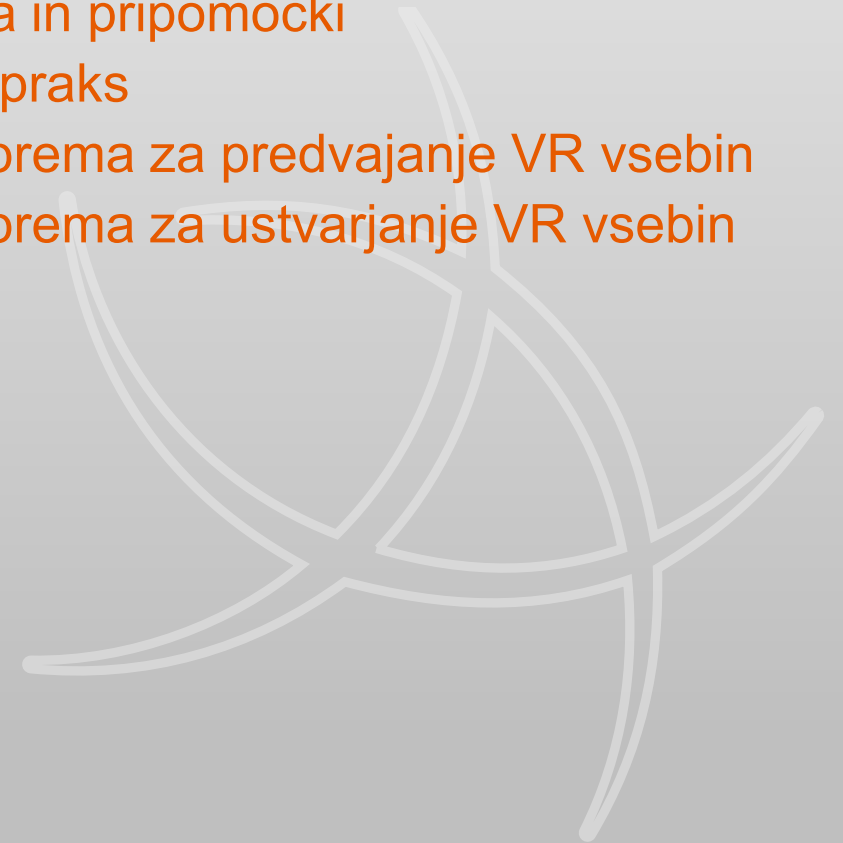
Uporaba tehnologije VR pri pouku

Dominik Trstenjak, prof. računalništva in tehnike
Osnovna šola Pod goro Slovenske Konjice



Program:

- Zakaj VR pri pouku?
- Začetki uporabe VR pri pouku
- Strojna oprema in pripomočki
- Primeri dobrih praks
- Programska oprema za predvajanje VR vsebin
- Programska oprema za ustvarjanje VR vsebin
- Stroški
- Zaključek



10 razlogov zakaj uporabljati VR pri pouku



1. Potovanje in raziskovanje krajev po vsem svetu iz šolskih klopeh.
2. Razvijanje empatij do različnih skupnosti.
3. Izkustveno učenje različnih poklicev.
4. Raziskovanje oceanov in vesolja.
5. Časovno potovanje do ključnih dogodkov in krajev v preteklosti.
6. Raziskovanje človeškega telesa.
7. Z ustvarjanjem lastne vsebine VR deliti svoj svet z drugimi.
8. Odkrivanje uporabe VR v drugih panogah kot so medicina, inženiring, zabava, nepremičnine,...
9. Možnost raziskovanja načinov, kako vključiti VR v učni proces.
10. Spodbujanje radovednosti in ustvarjalnosti.

Začetki

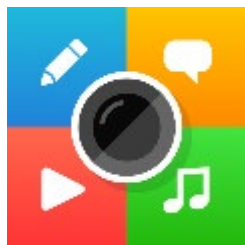


Google Expeditions

https://lh3.googleusercontent.com/ci/AC_FhM8QOJt-8SdY9_ezCJgCO1fRhBaFsG4zvHmKLq2BctSA_z0WmX4DpsMdNIUvXdyoG11QqSzN8tQ=s1200



https://www.youtube.com/img/desktop/yt_1200.png

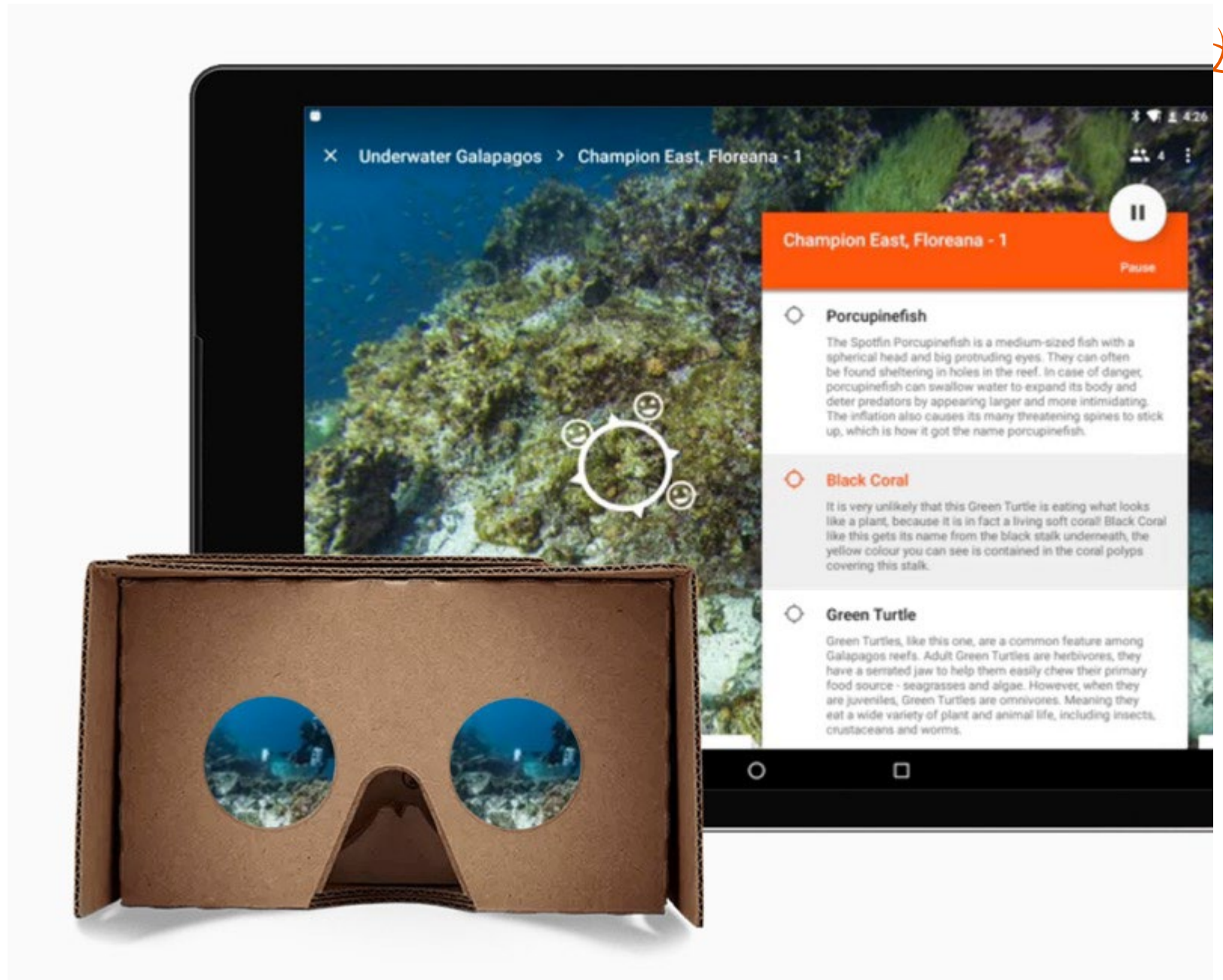


thinglink..

https://play-lh.googleusercontent.com/CFP5mR4W5aZz8OHOyBRv3cAaXr9Wb8nrCZ6ElikGRR9Rkjj6u-p0_dSB4QVvK0zMi6qQ



Google Expedition





Alternativa Google Expeditions



School **Robots**
By RobotLAB

VIRTUAL REALITY FOR CLASSROOMS STANDARD PACK

— VR for Education

What is included in the Virtual Reality for Classrooms Standard Pack?

- 10, 20, or 30 Student Mobile VR Devices preloaded with **RobotLAB Expeditions V2.0** application.
- Content by **Britannica**
- Multiport Device Chargers
- 1 Teacher Tablet
- 15Ghz WiFi Router
- 1 Transport case
- Onboarding and Orientation session
- RobotLAB White Glove Service
- Available as an option: **360° camera** (not included)
- 1-year Warranty and RobotLAB Support
- **No setup fees, No recurring fees, No hidden fees.**

Price: \$5,990

Starting October 31st*



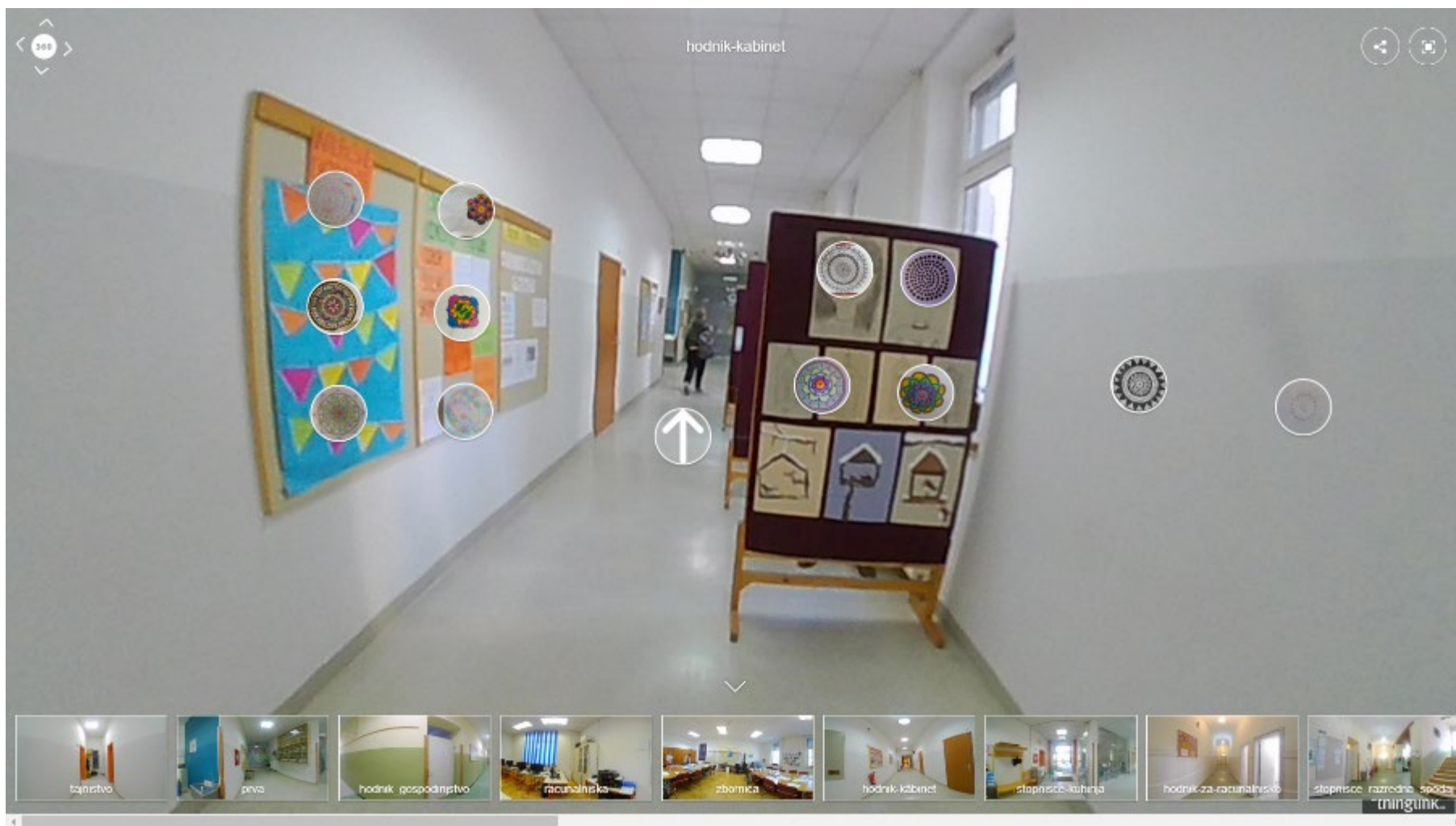


YouTube 360



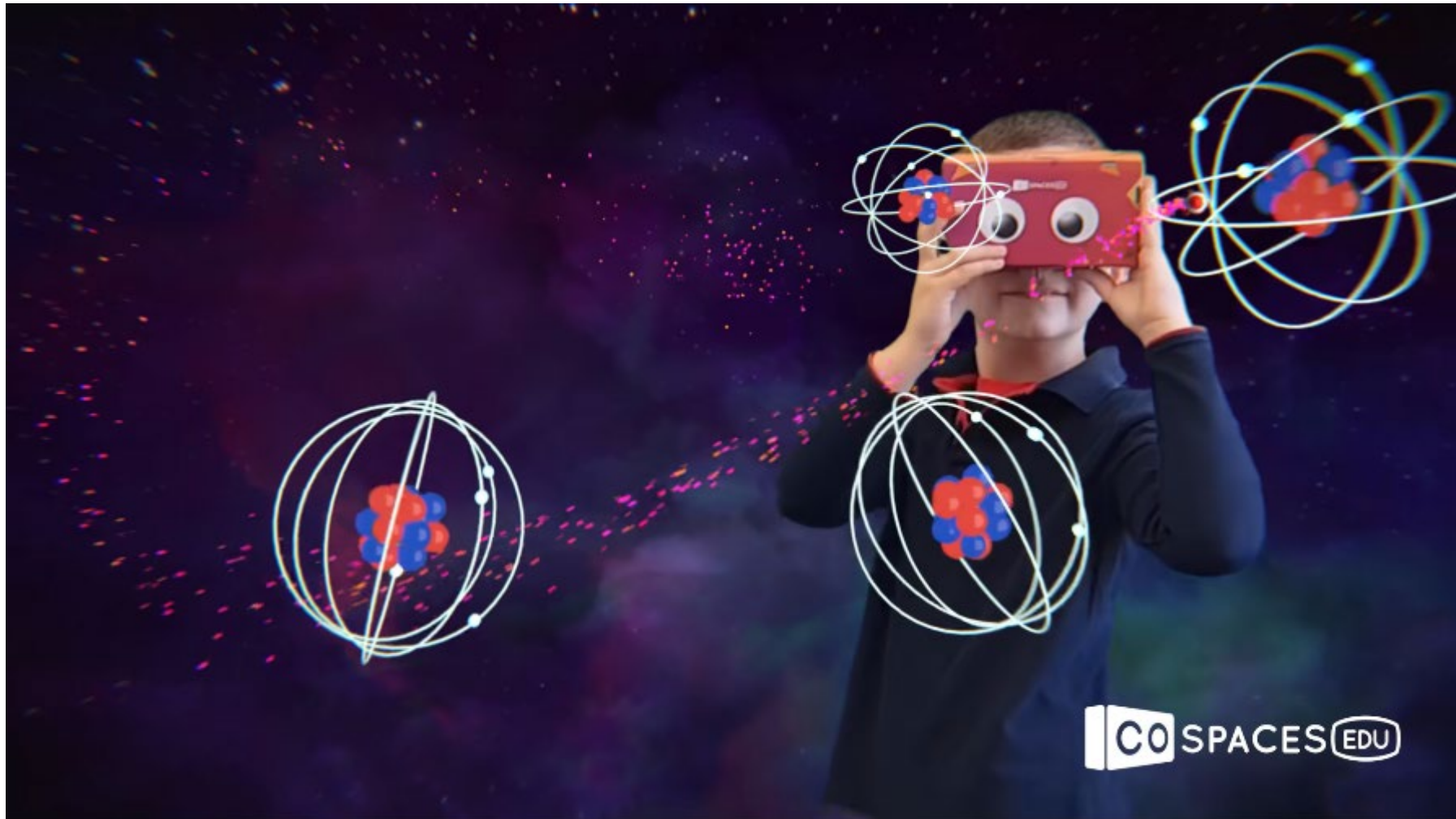
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Thinglink





CoSpaces EDU



<https://www.youtube.com/watch?v=zUR9i60zLo8>



Strojna oprema in pripomočki



VR oprema

Pametni telefon

Gyro senzor / magnetni senzor



https://www.gizmochina.com/wp-content/uploads/2018/01/910201511527AM_635_apple_iphone_6s.jpeg-600x476.jpg

VR oprema

VR očala

Carboard / VR Box



https://m.media-amazon.com/images/I/81BKTmewQWL._AC_SX679_.jpg



<https://www.mimovrste.com/i/31700464>

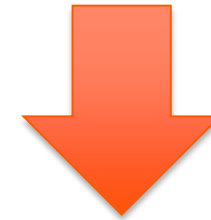
VR oprema

360° kamera

Ricoh Theta V



<https://www.pricepony.com.my/blog/wp-content/uploads/2016/09/Elephone-Elecam-360-e1475123147955.jpg>



https://us.ricoh-imaging.com/wp-content/uploads/2019/01/Theta-V_hero.png


















Programska oprema





Thinglink

 Blank canvas	 Image	 360° image or virtual tour	 Showroom, gallery	 Map or aerial view
 Infographic	 Floor plan	 Learning experience	 Presentation	 Product demo
 Shoppable media	 Video or 360° video	 VR experience	 Introduction or CV	 Timeline

<https://www.thinglink.com/user/875270708811268097?ownerId=875270708811268097&modal=create>

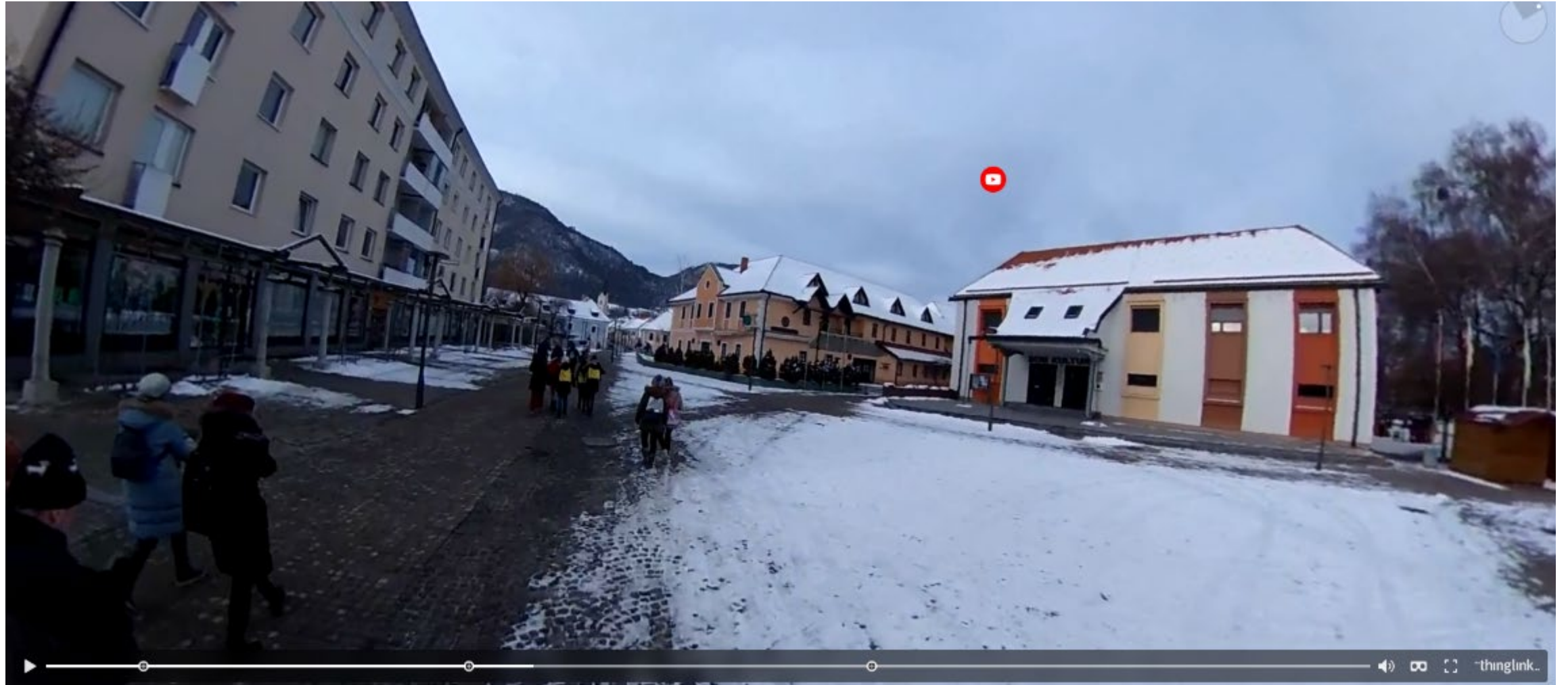


Primer uporabe Thinglink 360 Pictures





Primer uporabe Thinglink 360 Video



Primer uporabe Thinglink



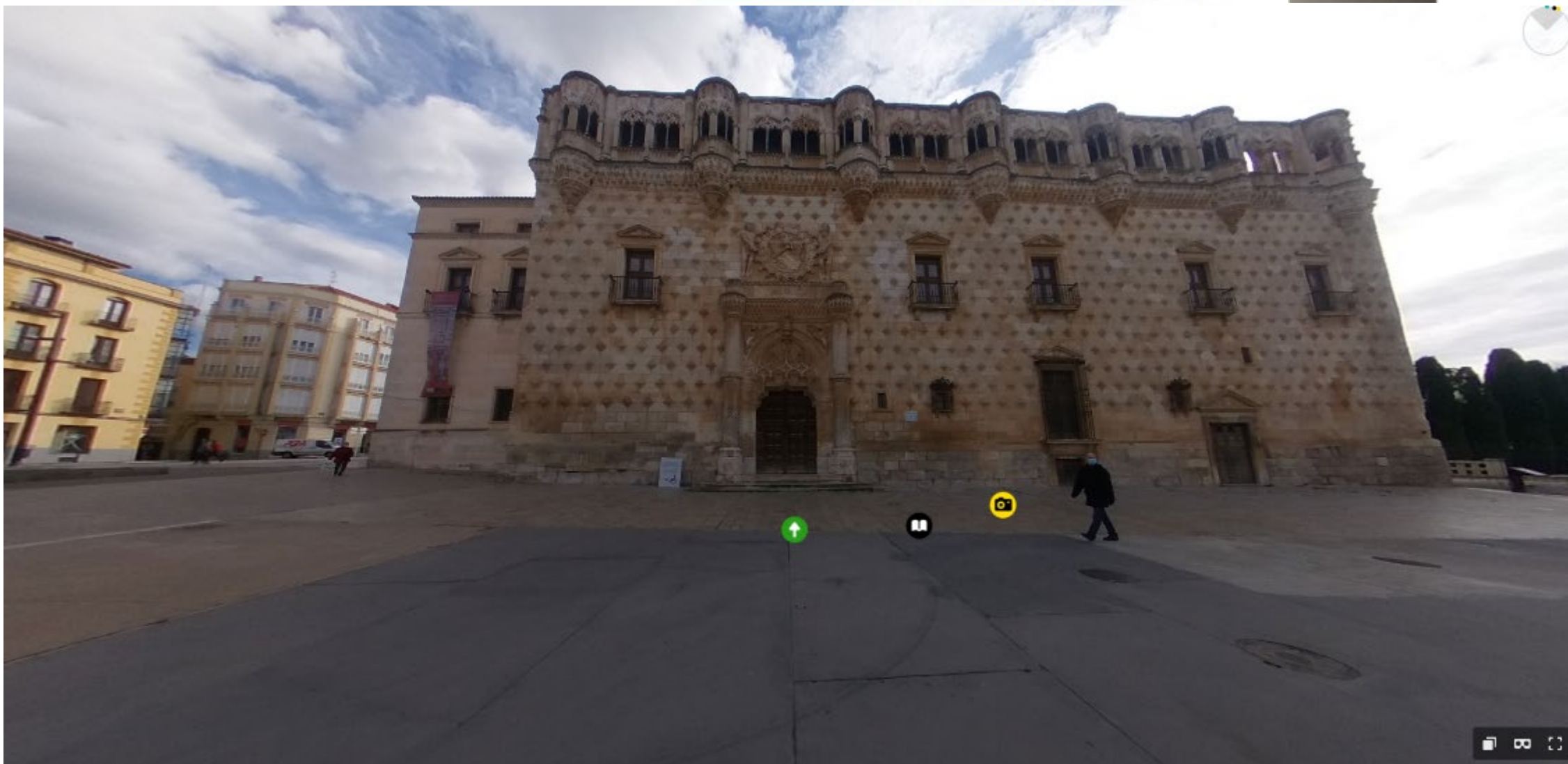
Erasmus+



Primer uporabe Thinglink

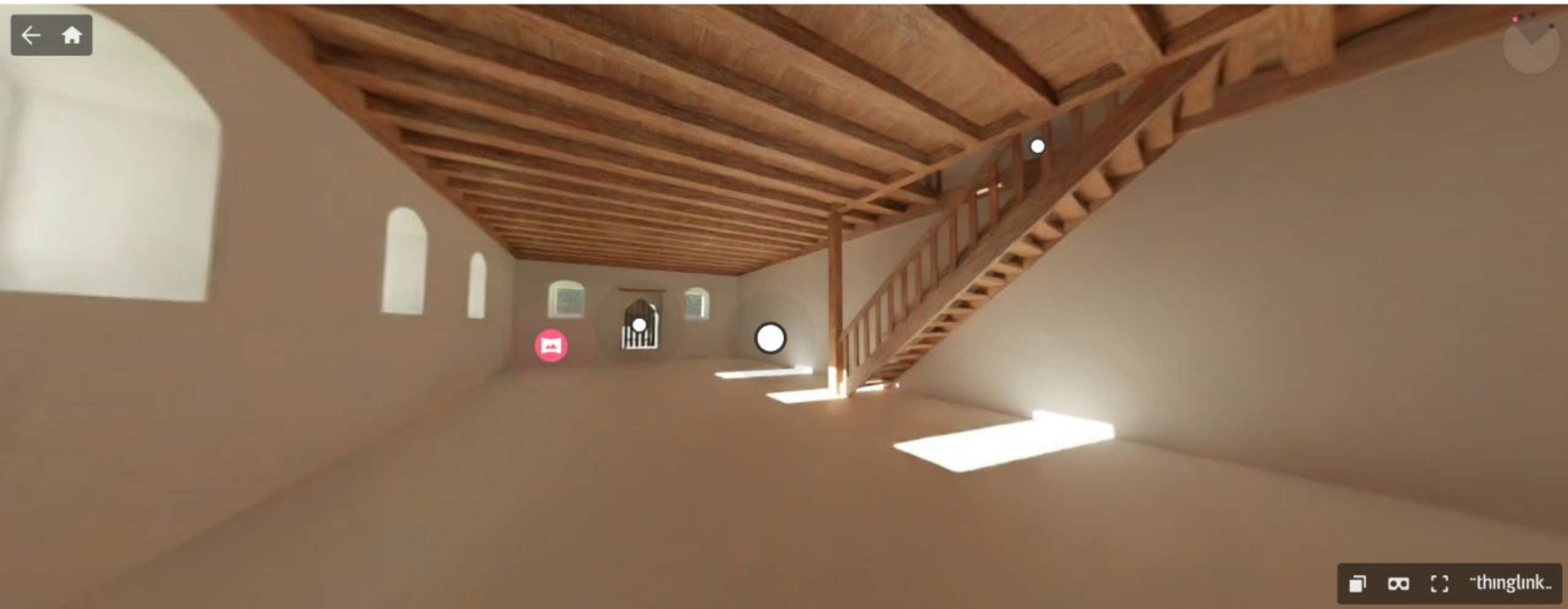


Erasmus+



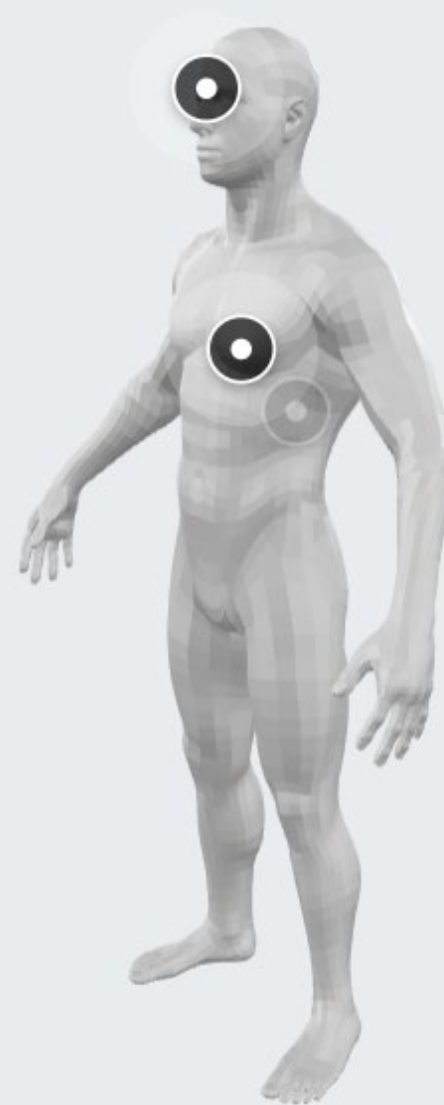


Primer uporabe Thinglink + 3D modeliranje





Primer uporabe Thinglink + 3D objekti





Primer uporabe CoSpaces

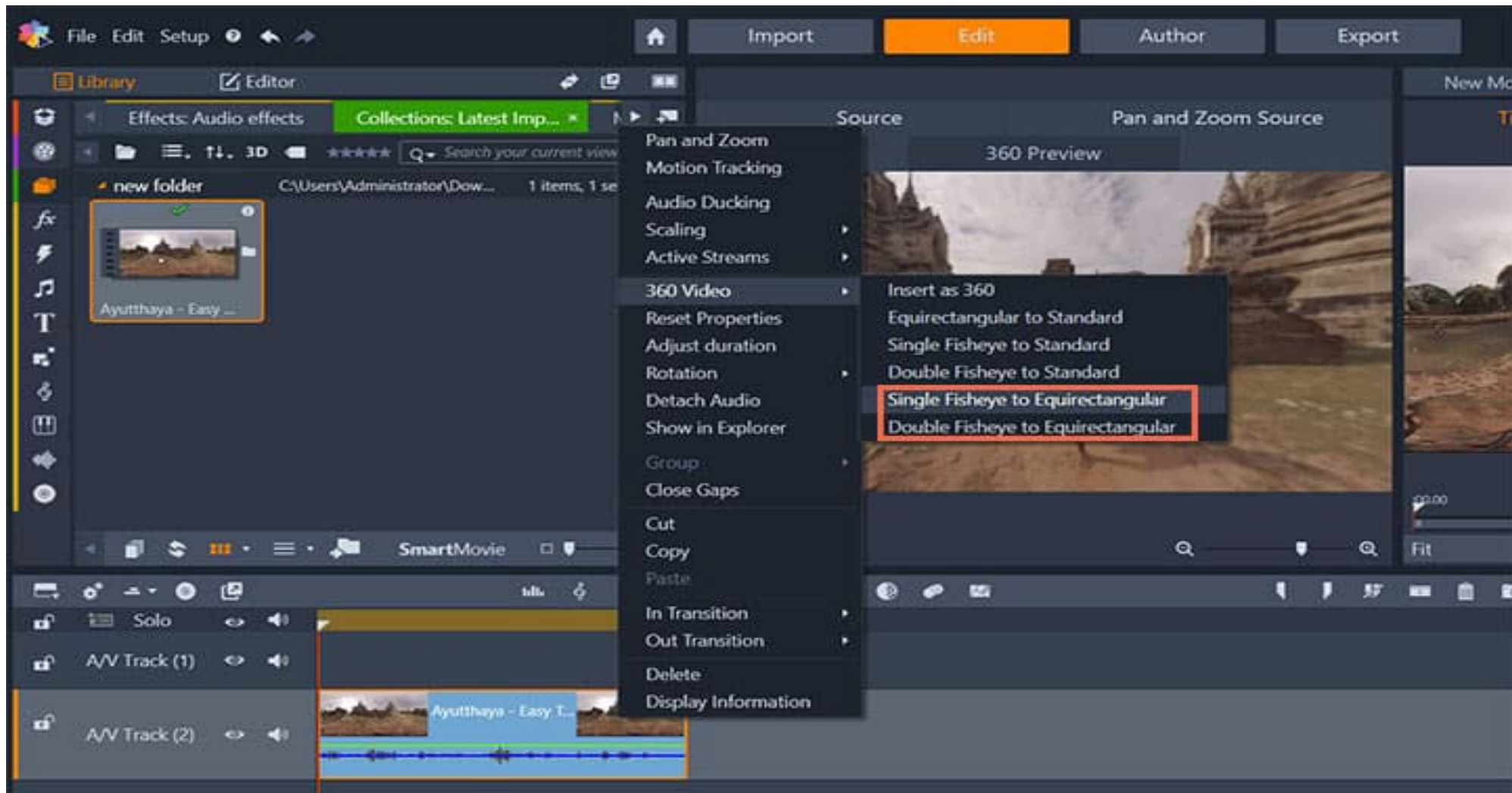
The screenshot displays the CoSpaces software interface, divided into a 3D scene view on the left and a programming editor on the right.

3D Scene View: The scene is titled "CoSpace - Scene 1" and features a winter-themed environment with a white grid floor, snow-covered evergreen trees, and a blue sky. A character named "Regular boy" is standing next to a blue baby stroller. The top navigation bar includes icons for Home, Undo, Redo, Snapping, Help, Share, Code, and Play. The bottom left corner has buttons for Library, Upload, and Environment.

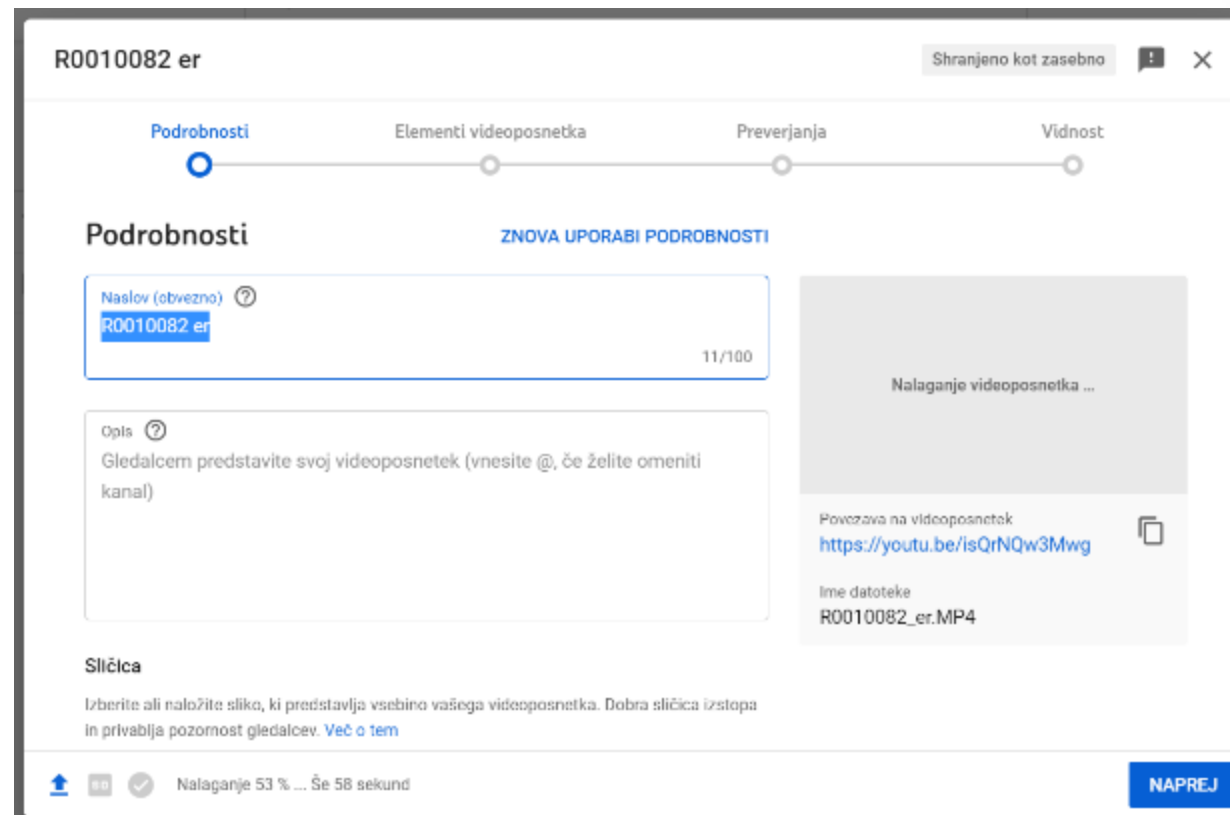
Programming Editor: The editor is titled "CoBlocks" and contains a sequence of blocks. The first block is a yellow "When Play clicked" event block. The second block is a blue "turn" action block, configured with "Regular boy" as the object, "clockwise" as the direction, "180°" as the angle, and "1 sec." as the duration. Below this, there are several other action blocks, including "move", "stop transition of", "say", "think", "set color of", "set opacity of", and "show info panel with title".



Pinnacle Studio - 360 video



Nalaganje 360 videa na YouTube



R0010082 er Shranjeno kot zasebno

Podrobnosti Elementi videoposnetka Preverjanja Vidnost

Podrobnosti

[ZNOVA UPORABI PODROBNOSTI](#)

Naslov (obvezno) ?
R0010082 er 11/100

Opis ?
Gledalcem predstavite svoj videoposnetek (vnesite @, če želite omeniti kanal)

Povezava na videoposnetek
<https://youtu.be/isQrNQw3Mwg>

Ime datoteke
R0010082_er.MP4

Sličica

Izberite ali naložite sliko, ki predstavlja vsebino vašega videoposnetka. Dobra sličica izstopa in privablja pozornost gledalcev. [Več o tem](#)

↑ 📺 ✓ Nalaganje 53 % ... Še 58 sekund NAPREJ

Predvajanje VR vsebine

QR koda

Spletna stran

YouTube



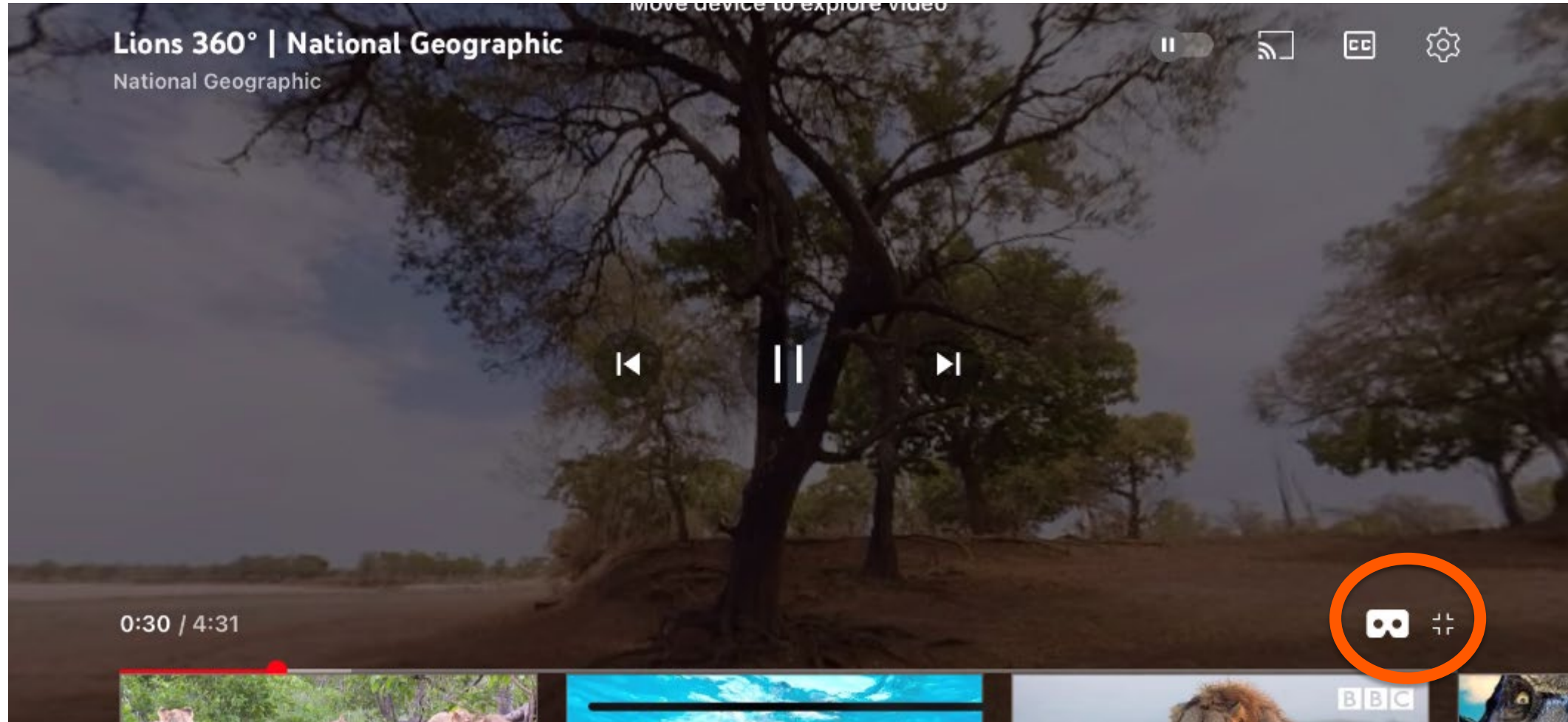


Predvajanje VR vsebine



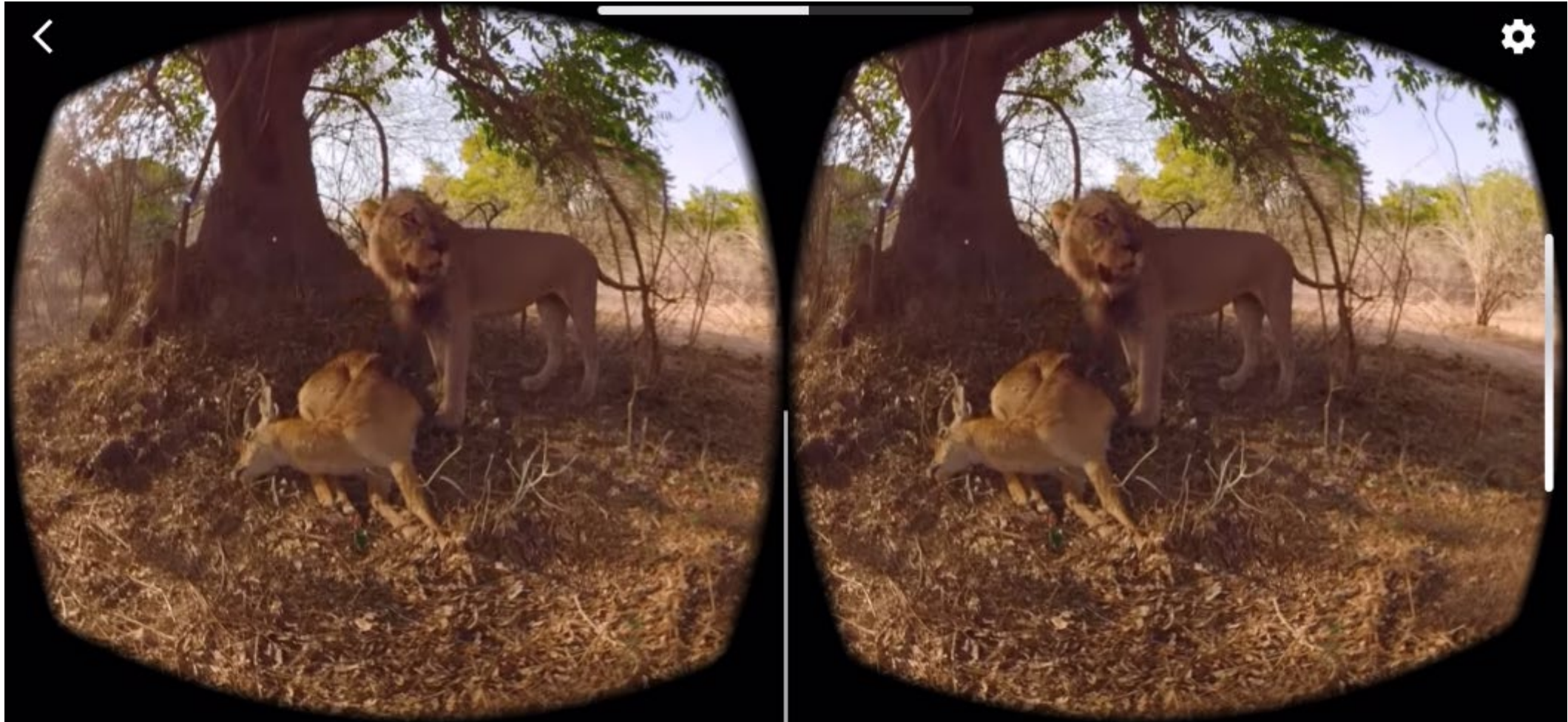


Predvajanje VR vsebine





Predvajanje VR vsebine





Predvajanje VR vsebine



Uporaba v razredu





Stroški



360° kamera
Cca 400€



VR Cardboard očala
1kom 5-10€



Pametni telefon
0€

Zaključek

- Uporaba obstoječih vsebin
- Ustvarjanje novih
- Programska oprema
- Licence
- VR oprema





Vprašanja





Hvala za pozornost!

