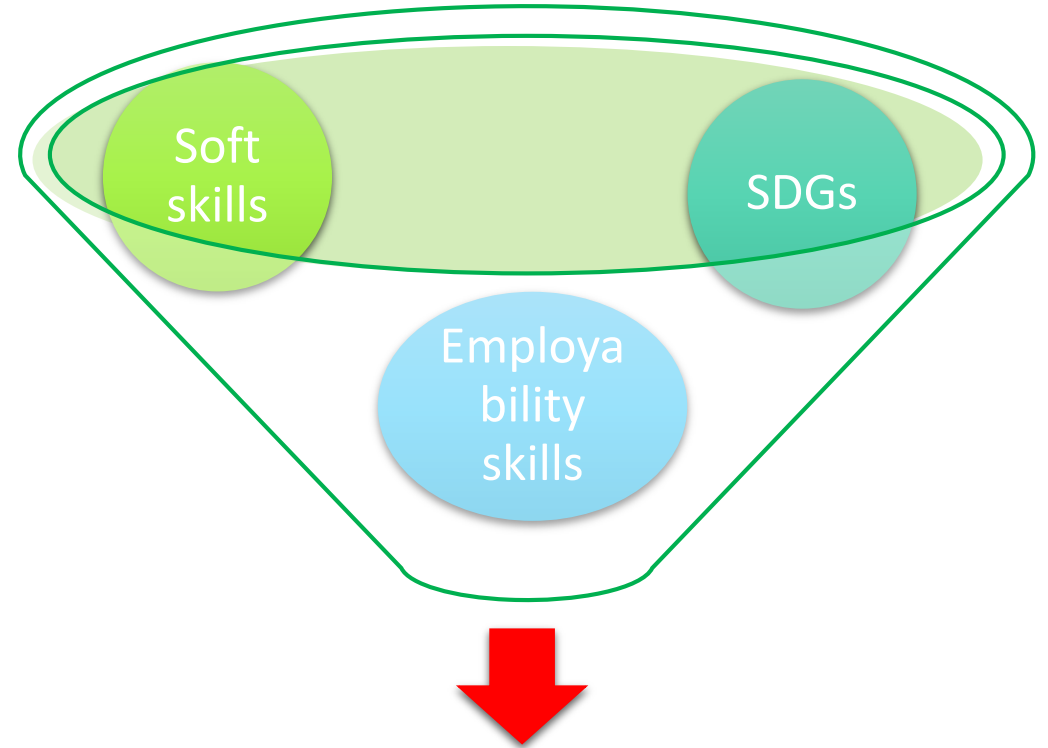


How BRAVER challenges students in radiation protection training

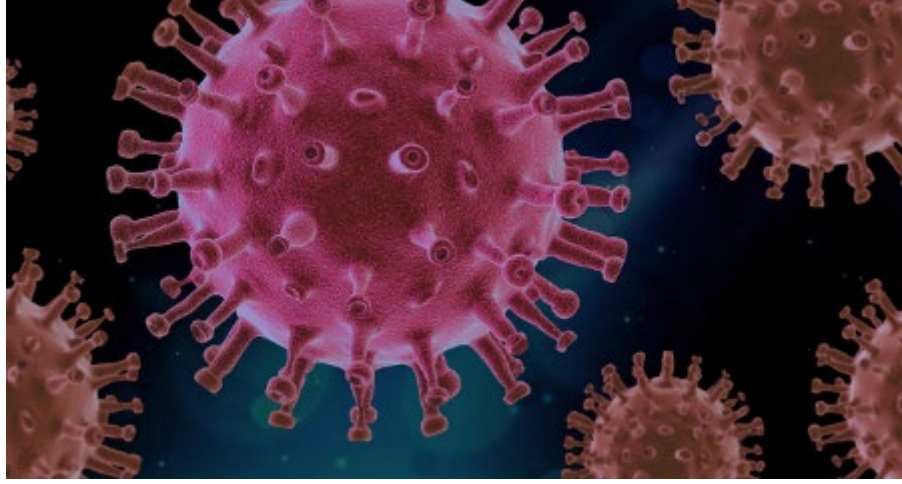
Sonja Schreurs, Wim Eerdeken, Isabelle Gerardy, Caroline Licour,
Sandra Soares, Ligia Lopes, Pavel Novotný, Ondřej Kořistka,
Domiziano Mostacci, Romolo Laurita, Ulrich Scherer, Maurice Klink,
Sofia Carlos, Sebastien Martorell

2019 : EUTERP Malta

- Integration of academic and soft skills
- Training skills
- Employability skills



**New Erasmus + Strategic Partnership
“Train the future trainers/trainees”
01-10-2018 until 30-09-2020**



**TRAVEL
RESTRICTIONS**



ETRAP 2021 : online

Challenges and opportunities on education and training of RP

Digitalisation of education

Demo's virtual tools, remote teaching,...

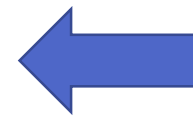
Teaching, practises, evaluations,...

Challenges for trainers, steep learning curve

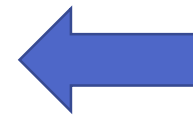
Anno 2023 : Lessons learned => move on to 'the New Normal'

Success depends on

- Quality of tools
- Diversity in tools to learn different skills
- Acceptance of teachers
- Stimulate interaction between students
- Motivation of the student to use it



Staff and teacher training



International student a central role

ERASMUS + STRATEGIC PARTNERSHIP

Partners (from the CHERNE network, flyer at demo)

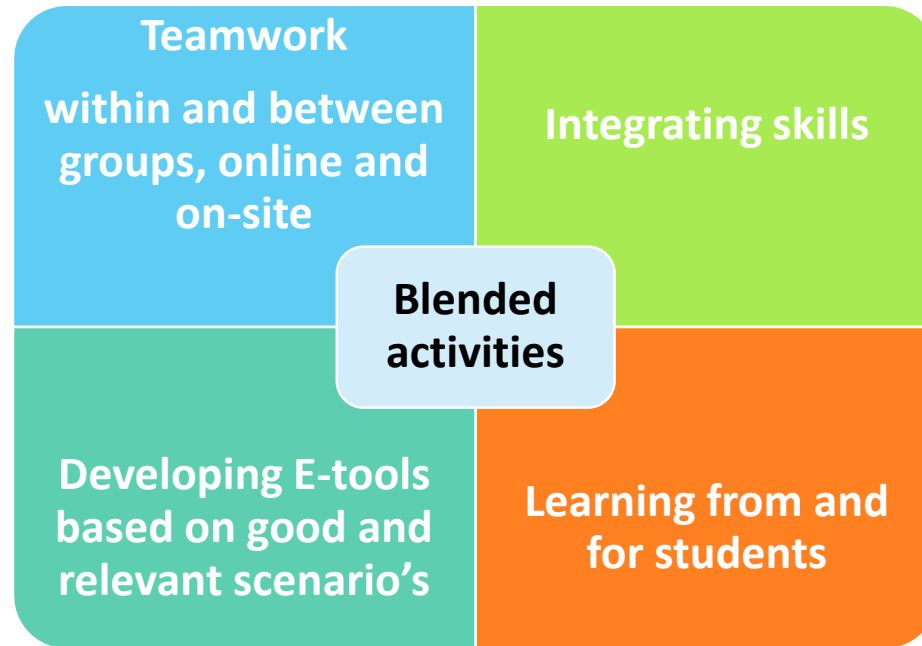
- ▶ HE2B-ISIB– **BELGIUM**
- ▶ UNIVERSITEIT HASSELT - **BELGIUM**
- ▶ HOCHSCHULE MANNHEIM - **GERMANY**
- ▶ UNIVERSITA DI BOLOGNA - **ITALY**
- ▶ UNIVERSIDADE DA BEIRA INTERIOR (Covilha)- **PORTUGAL**
- ▶ CZECH TECHNICAL UNIVERSITY IN PRAGUE – **CZECH REPUBLIC**
- ▶ STATNI USTAV RADIACNI OCHRANT v.v.i – **CZECH REPUBLIC**
- ▶ UNIVERSITAT POLITECNICA DE VALENCIA – **SPAIN**

Ad-hoc partners in the training activities

Target group for training schools : master students of each partner :
Different background in knowledge and practical skills

New Erasmus+ SP : 2022 - 2024

BRAVER : Blended and Remote teaching Activities supported by Virtual rEality for Radiation sciences



4 Challenges during 3 trainings (4ECTS) :

1 week on-site + pre and post trainingsactivities

Challenge 1 : ECUMIA

Build a virtual escaperoom (1.0)
on mapping environmental radioactivity at
historical U-mining area of Stráž pod Ralskem (Cz)
Incorporating experiences, data, ...
1 escaperoom per group (4)
using :



<https://genial.ly/>

Partner in Braver : access to the education pro plan not the free version (basic)



Virtual escaperoom: step by step



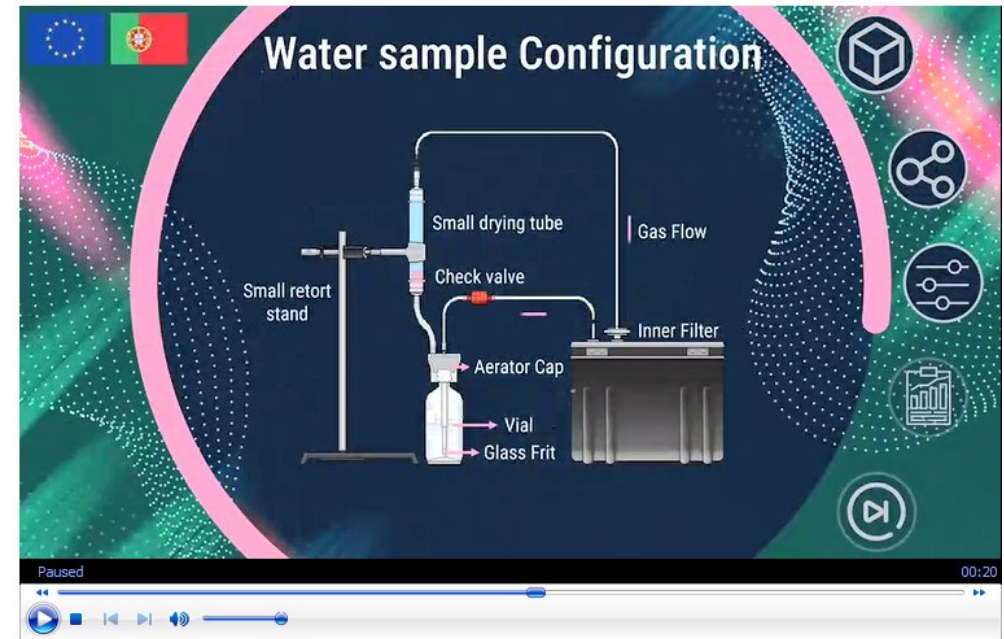
ECUMIA on-site (Cz)



Challenge 2 EATER

Online training :

- Investigate the versions 1.0 of the ECUMIA escaperooms
- Survey the target group of pupils (16-18y) and their teachers about their knowledge of nuclear sciences, environmental radioactivity,...
- Build a **short educational video** about a **device in your lab** to measure environmental radioactivity



EATER
on-site : Be



Challenge 3

Build a scenario for a **virtual escape room (2.0)** on **environmental radioactivity** at Demerbroeken(Be)

Incorporating experiences, data, ...

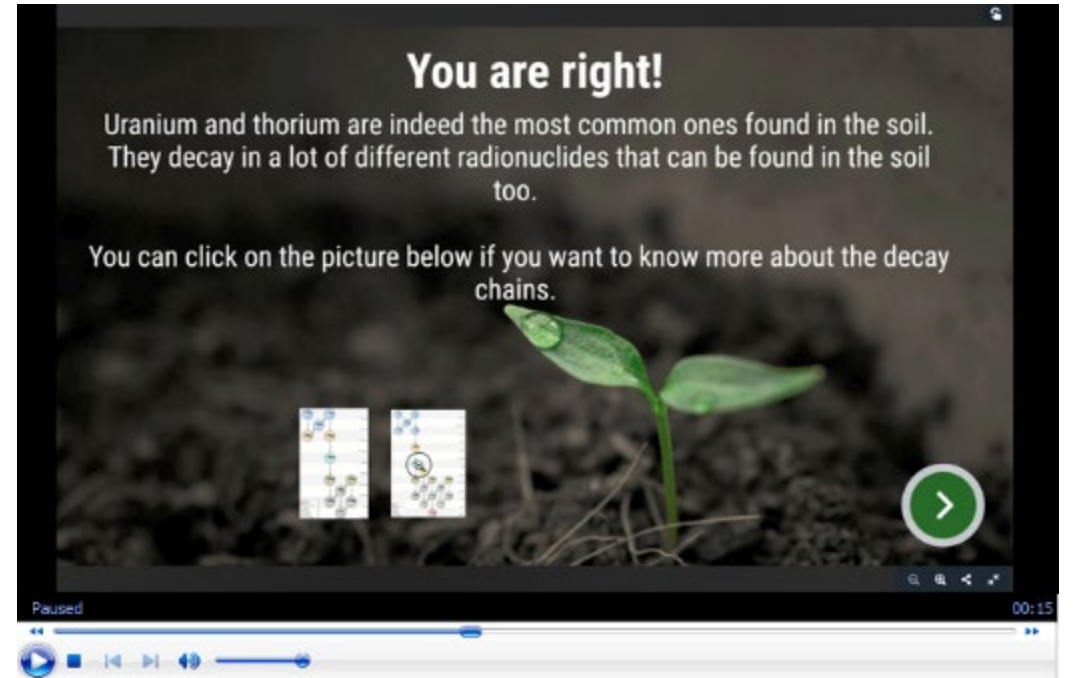
1 escape room (3 missions)

1 mission per group

Example made by students EATER



Finalisation : summer 2023 : UBI – He2B – CTU - UHasselt



Challenge 4

Build a **scenario for a VR tool** on **nuclear medicine** during Mantra on-site training (Bertinoro – Bologna, It)

Pre-training :

Online courses on nuclear medicine

Develop sketches of scenarios



Finalisation of VR : summer 2023



Management of the accident [3]

1. Nurse walks away from chair
2. Put on disposable coverall, shoes and mouth mask
3. Pick up the tape and circle around the contamination
4. Wipe with absorbent wipes from outside to inside
5. Dispose of the wipes into plastic bag



Fig. 14: Decontamination [13]



Interested to see more?

Preview VR tool



Visit us during the break
Demo by Eng. Wim Eerdeken

Final results? Come to our **Braver event**

UHasselt, BE

25-26/10/2023



Day 1 (9-16h)	Day 2 (9-17h)
Braver intro Invited speakers <i>Guido Mullier (Nuclear career)</i> <i>Flavia Groppi (Radon4pupils)</i> <i>Jakob Luyten (SCK academy and ENEN for pupils)</i>	Workshop 3 and 4 Workshop 1 and 2 <i>VR, 3D visualisation, MM, GIS</i> <i>Genialy, digital escape room,</i> <i>short educational video,</i> <i>science communication, SDG</i>
lunch	lunch
Workshop 1 and 2 Workshop 3 and 4	External visit (optional) <i>Tabloo (Mol)</i> <i>Aperam (Genk)</i>



Flyer with **registration link** at demo of VR



Thank you for your attention!

Acknowledgements :

All external experts during the technical visits/fieldtrips
All students and professors of the partnership
Financial support Erasmus+



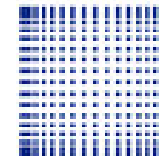
ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

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hochschule mannheim

