



Learning and teaching in the METaverse

Smartfeld Education seminar,
Innovation in education
March-29, 2023





Our window of opportunity

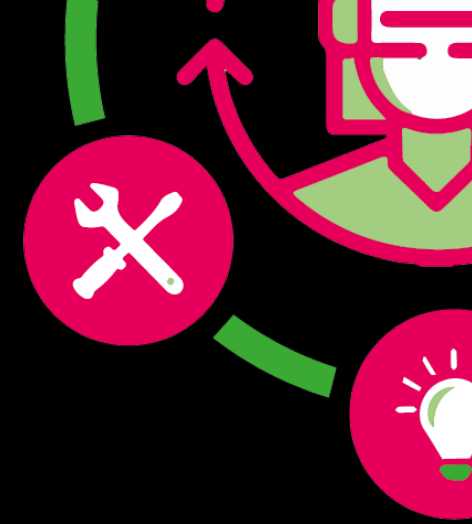
Lotte Seijsener

Maaïke Neesen

Paul Smyth

Daniel Kehl

The window of opportunity is wide open, and what do we see...

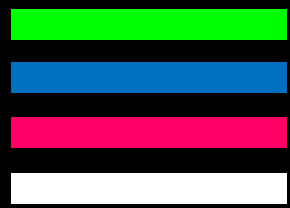




Innovation HUB ROC HORIZON & stakeholders



12.000 students,
1300 employees,
4 locations
130 vocational courses



Foundation Purmervalley

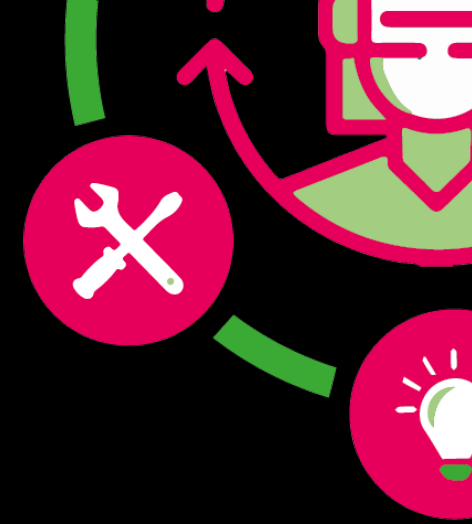


The mission of Purmervalley is to deliver high quality ICT education in the region Purmervalley. This is made possible by a subsidy «the RIF»

We work together with Branches, Education & municipality to reinforce ICT in the region and keep good employees in our region



Our goals



Modules for life long learning: we created a module data centre with Microsoft & Webdeveloper with the Bit Academy

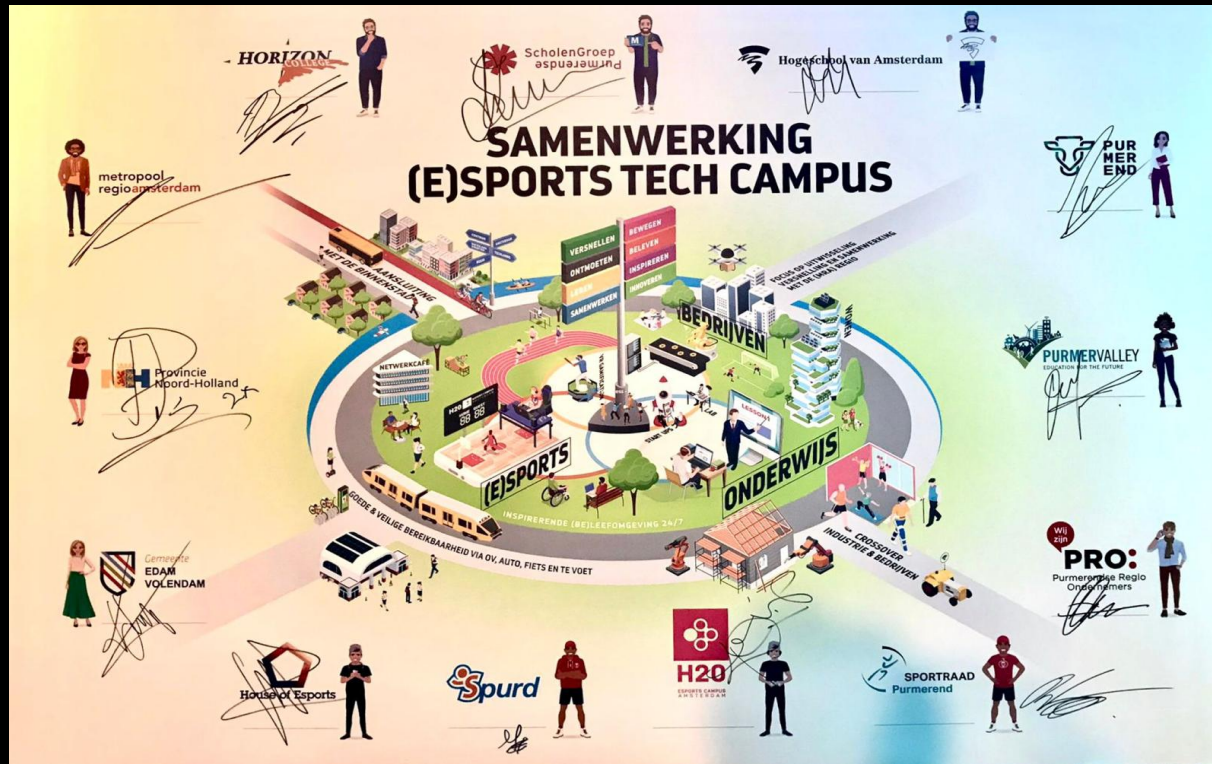
Continuous Learning curves: primary → secondary school → Vocational Education & Higher education

Collaboration with different companies

The first VET school in the Netherlands with an immersive room on one location

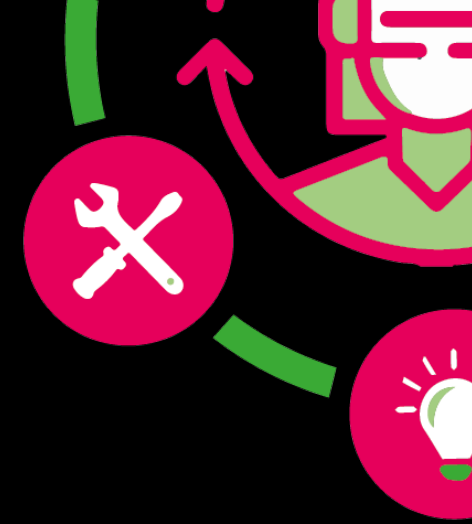


Opening (E)Sports Tech Campus





Purmervalley Innovation Lab



inspiration,
research,
creativity
and the
place to be
curious.....



Purmervalley Innovation Lab



- Preparing our students for the job in a 'safe' area
- Keeping up with the quick changing field of digitalisation & technology
- Making attractive education for our students with VR/AR & Gamification
- Showing how to use our Immersive room in the different vocational courses, develop & share content with other schools



Purmervalley Innovation Lab



- Showing how to embed the metaverse in our vocational courses & creating content
- Creating for our teachers a safe environment experimenting with tools and systems
- Elaborating the different ways of blended learning
- Creating a Classroom of the future together with Microsoft
- Doing Practical Research on various topics mentioned above & new questions out of the field



Educational Designer

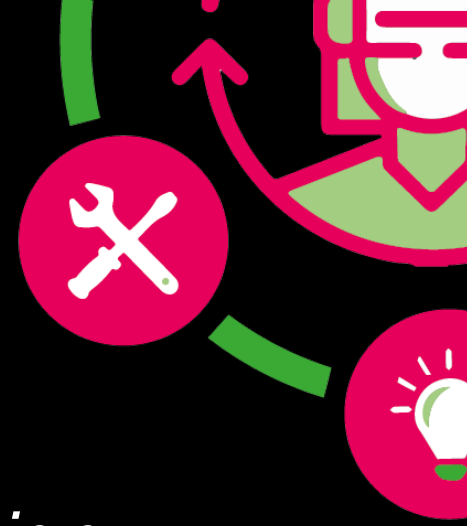


What's the job about: Qualification File / Course Programm / Exams / Diploma

- Government and branches make a Qualification File
- The schools are free to create a curriculum as they think is perfect:
 - what does the student need to know
 - what do companies need, how to put it in a curriculum
- How to make it work in a classroom and create consistency within the course

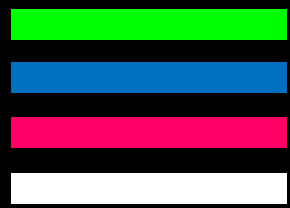


VET Task 2030, for all the VET schools in NL



Blended Learning: *School programm design and course design*

Innovationlab provides a proven digital supporting learning environment: *VR-Glasses, Immersive Room and Metaverse surroundings*



How to keep an earthquake shaking



Create a learning environment /
Fame & Shame / Embed the Fame in
curricula / Change the mindset of the
whole teaching team / Make the
students HAPPY!!

10.30 - 11.15h, FELD 1

visit us!

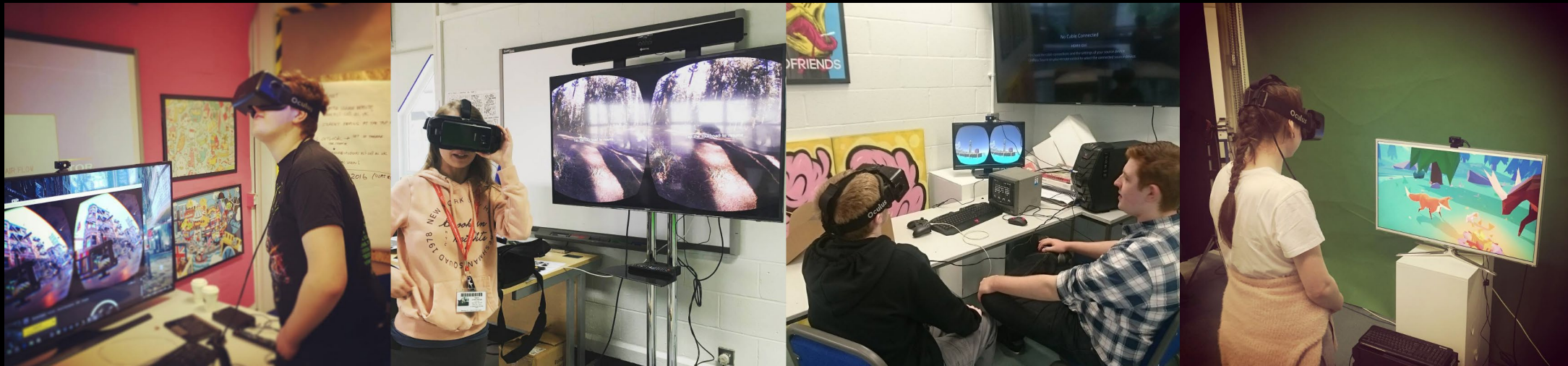




Skills layer NCG.

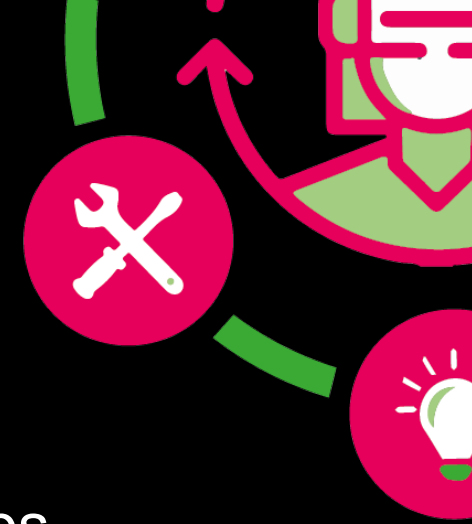


Working in an educational environment has given access to various levels of planning for innovation and new technology working with future facing companies to implement their service and products within the curriculum framework. We have been working with Virtual Reality (VR) and Augmented Reality (AR) since 2012, embedding content creation into the programmes.





Creational Skills.



The Metaverse will begin to see the creation of new jobs or existing jobs being utilized in a virtual space. In the Creative industries we will see -

GameDesigners/InteriorDesigners/3DArtists/Animators/VideoContent Creators/Architects/GraphicDesigners/EnvironmentDesigners/TextureArtists/Illustrators/CharacterDesigners/MotionDesigners/UXUI Designers.....

We will also see –

Coders/Webdevelopers/AISpecialists/ScriptDevelopers/AnalyticalManagers....



What is out there???

Already we use a few VR platforms that can support a virtual learning environment such as.

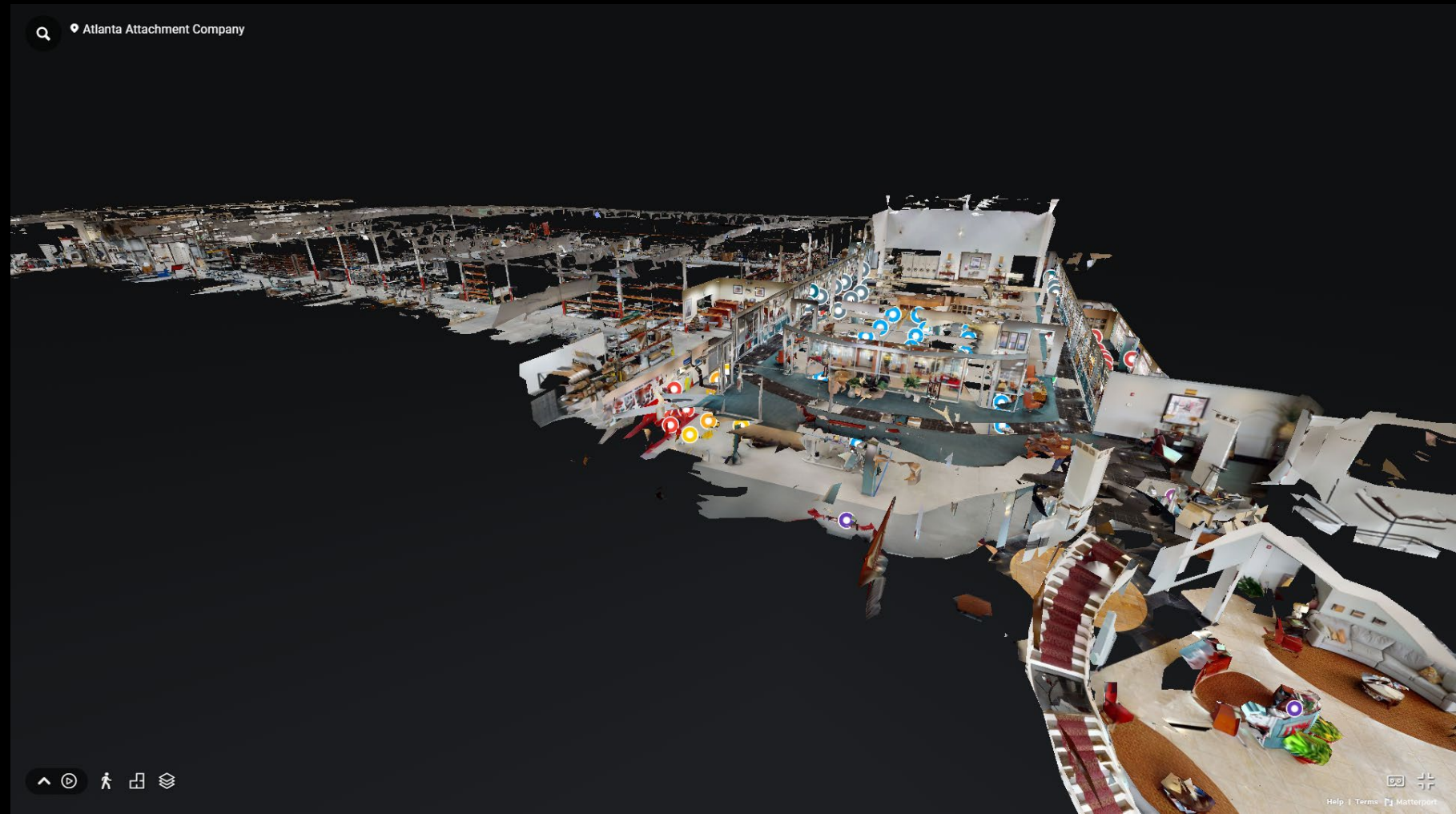
**ANIMVR, Quill, TRIBE DJ,
Adobe Medium, 360 Photo,**

We also use educational learning environments that can host students and facilitate a classroom environment.

Wonda VR, Spatial, VictoryXR

Virtual Worlds.

Taking 3D design further using Matterport. New technologies with Lidar scanning means we scan our schools and visit with virtual tours, showing facilities and Campus.



Virtual Assets.

Unreal 5.2 games engine with hi-res Quixel scans.



Quixel uses Matterport technology for modular asset creation.

Virtual Assets.

With mobile technology we can scan assets which can quickly be uploaded for teaching objects.



Polycam Lidar Scan – Iphone 14 Pro





Concept layer

Together with the project partners, we will found and create the first European VET-school in the metaverse and, in the course of the project, equip it with content and courses from common professional fields of our schools. With our learners we will test the work in the Metaverse and thus break new ground in the collaboration between the project partners.





Partners



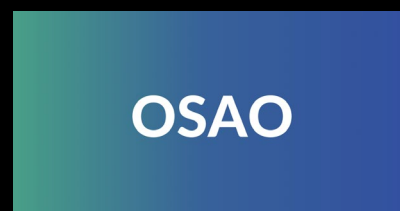
IES El Rincon, Las Palmas, Canary Islands, Spain

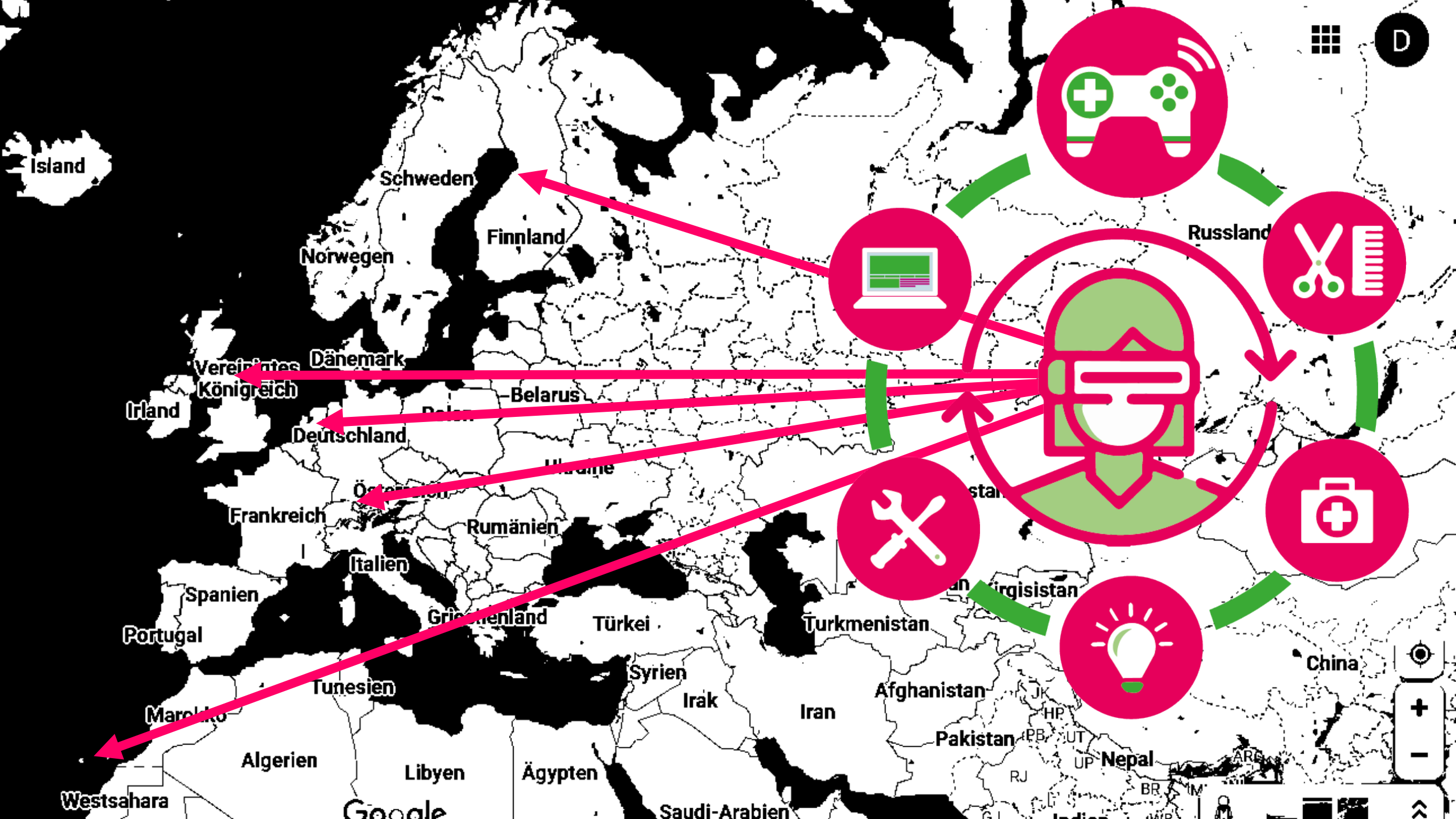
ROC Horizon, Alkmaar, Netherlands

Newcastle College, England

OSAO Koulutus kuntayhtymä, Oulu, Finland

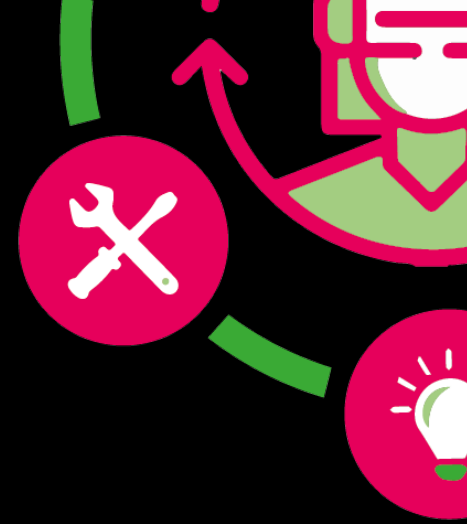
GBS St.Gallen, Switzerland







Paedagogical und cultural aspects



WHY shall we use the metaverse for educational purposes in VET? What kind of cultural, strategic and structural aspects do we have to be aware of?



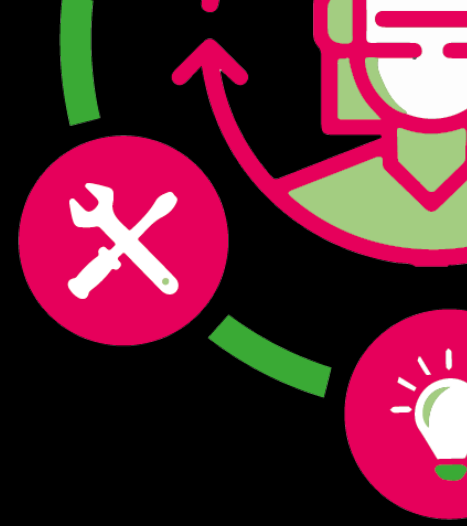
Methodological and educational aspects



HOW can we use the metaverse as an added value for VET by bringing together VET-providers of the same occupations but from different countries in a virtual environment?



Practical aspects

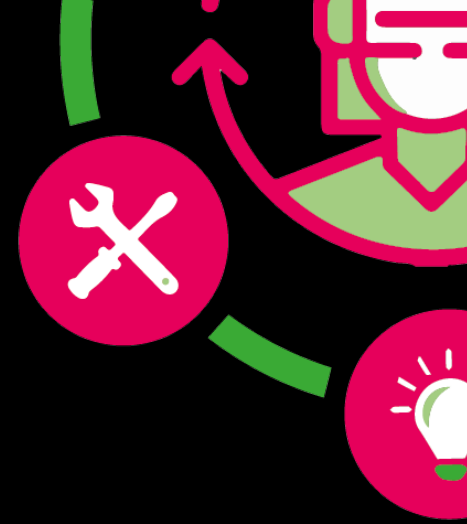


WHAT kind of “classroom” and technical settings do we need to cover our needs for teaching and training in a collaborative and virtual environment?



Technological aspects

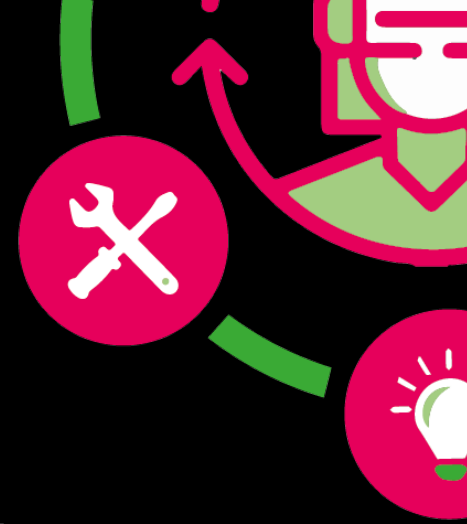
Technics, security and operational Aspects such as: server hosting, data protection, privacy protection, legislations of the different countries, ...





Use case

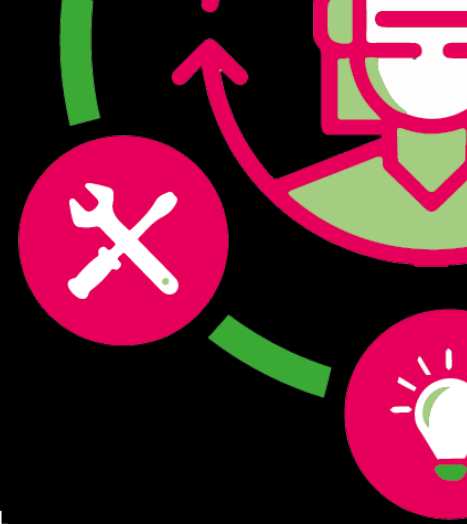
Creation of an international short course program in different fields of our occupations, including competitions, hackathons, makeathons, ... for international, collaborative learning in a virtual environment





Sustainable aspect

Using Matterport-Camera in our institutions to create the first international VET-school in the metaverse and establishing the possibility to scale it within our partner network for an ongoing process.





Scaling aspect

Developing a guide manual and a template for a presentation for the implementation of Metaverse in other schools





Some data

2 year project run

3 transnational meetings

5 VET- and Higher VET/University schools

5 Countries

25 staff and teachers involved

57 online-meetings

2850 staff and teachers affected

3088 working hours planned

43000 students affected

395920 Swissfrancs budget

