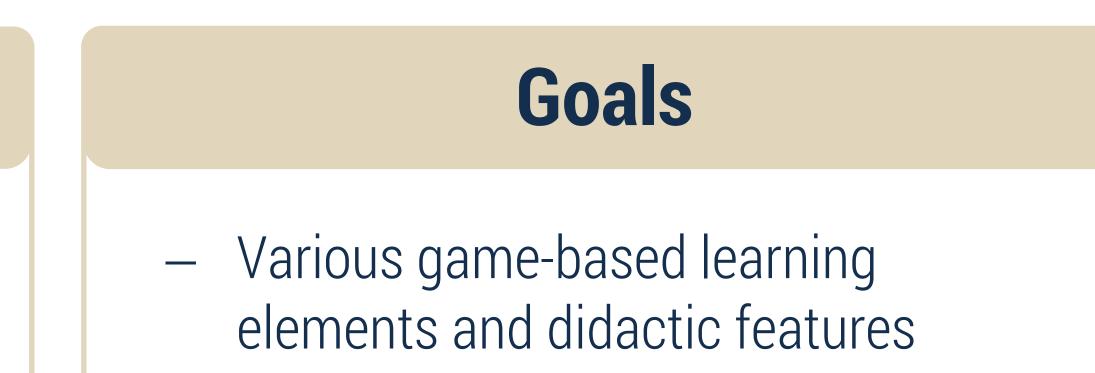
Marco Klopp¹, Antonia Dörringer¹, Tobias Eigler², Paula Bartel², Marvin Hochstetter¹, Andreas Weishaupt², Philipp Geirhos², Jörg Abke¹, Georg Hagel², Jens Elsebach¹, Raphael Rossmann¹ ¹ Faculty of Engineering, University of Applied Sciences Aschaffenburg, Germany ² Faculty of Informatics, University of Applied Sciences Kempten, Germany

Development of an Authoring Tool for the Creation of Individual 3D Game-Based Learning Environments

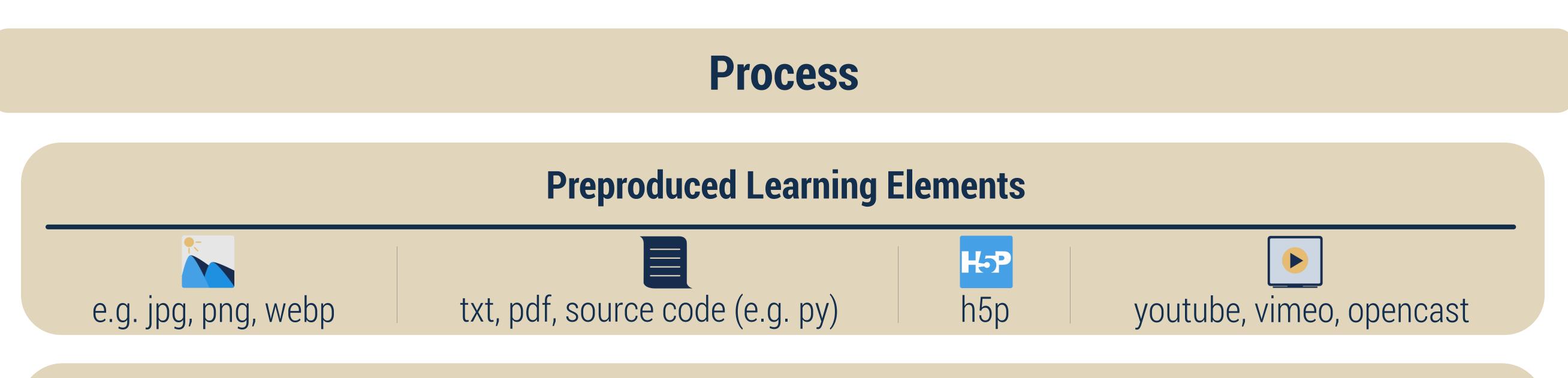


Topic

Serious games have a promising potential in higher education. To address this in higher education the AdLer authoring tool offers lecturers the possibility to design and generate virtual 3D learning environments in which students can interact with learning content according to the principles of game-based learning.

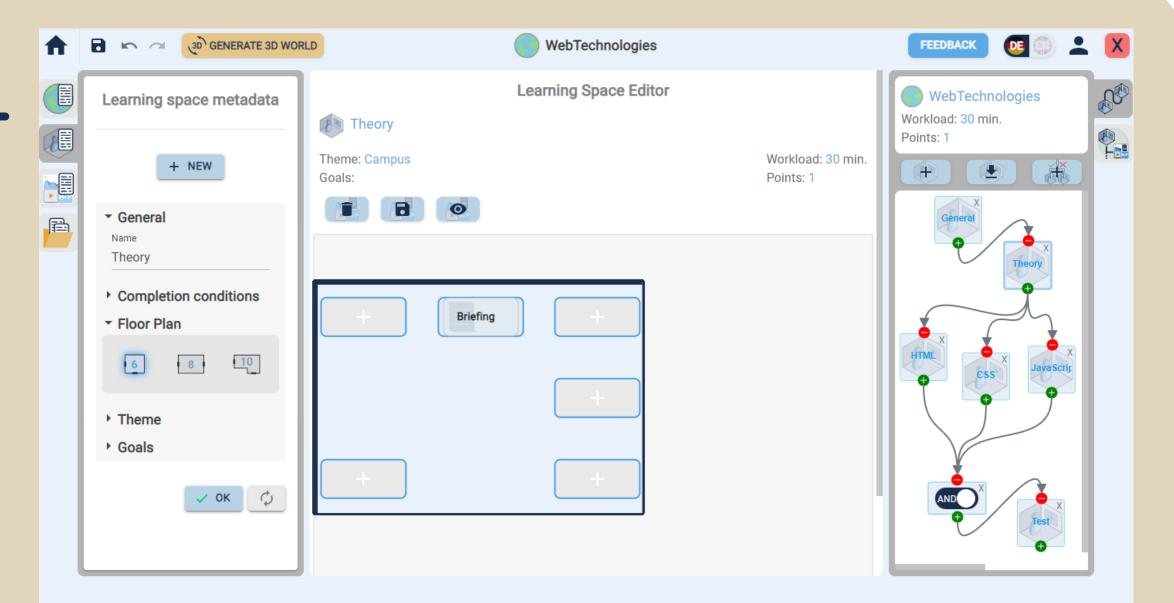


- Individual 3D learning environments
 Ease of use (standard web browser, cross platform, different devices)
- Free available tool



Authoring Tool

With the help of the AdLer authoring tool, a learning world and associated learning spaces can be created in several successive steps. Preproduced learning elements can be imported and annotated with the help of metadata. Furthermore, the learning spaces can be connected to guide students later on. A 3D learning environment and a Moodle course are then generated via the authoring tool.



3D Learning Environment

In the AdLer 3D learning environment, students can enter the learning world by an avatar, move



Moodle

The generated Moodle course also maps the content of the 3D learning environment with the possibilities of

Course Settings Participants Grades Reports More -	
> General	Collapse
✓ Theory	
FILE Briefing	Mark as done
Not available unless: The previous rooms have to be completed according to the rule: "Theory"	
FILE HTML	Mark as done
✓ CSS ≜	
A Not available unless: The previous rooms have to be completed according to the rule: "Theory"	
H5P CSS	Mark as done
✓ JavaScript	
A Not available unless: The previous rooms have to be completed according to the rule: "Theory"	
FILE JavaScript	Mark as done



the learning spaces, which are represented as architectural spaces and can interact with learning elements as 3D models.

Moodle	
functions.	

learning world = entire course | learning spaces = rooms within the learning world containing learning elements | learning elements = learning content (e.g. H5P)



THAschaffenburg university of applied sciences Hochschule Kempten University of Applied Sciences





Stiftung Innovation in der Hochschullehre Contact: Homepage: <u>www.projekt-adler.eu</u> E-Mail: <u>adler@th-ab.de</u>

