

# Awarded top grades for effort in chemistry class:

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The Evonik Cyber Classroom.

SCWS 2017 – Tokyo | Markus König



# 3D / Virtual Reality Learning

- Available online worldwide via standard browsers
- Users can develop and improve content via the Internet/online platform

## The idea:

It is time for new teaching and learning methods.

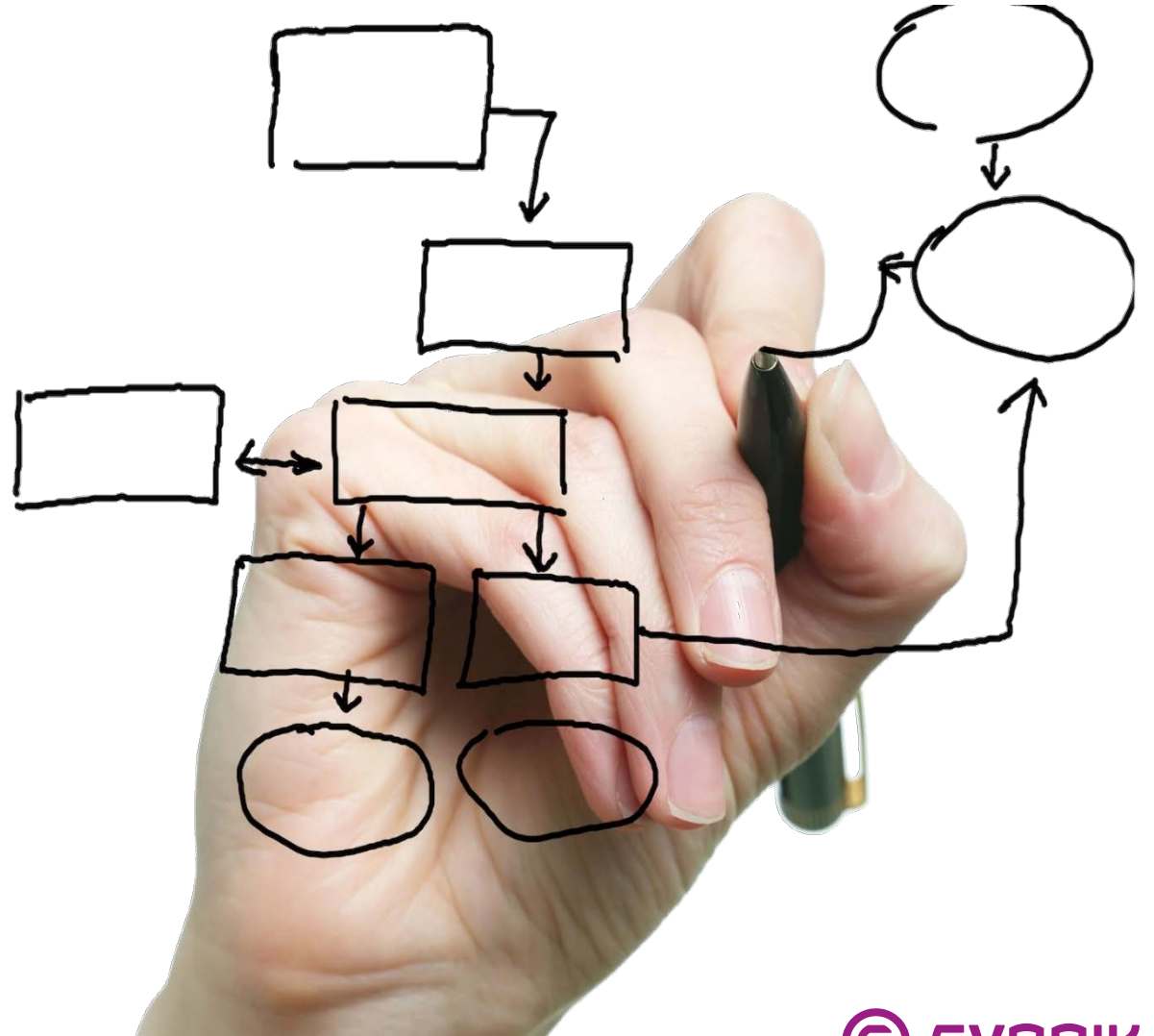
Evonik is bringing virtual reality (VR) to the classroom:

Digital and the ideal addition to lessons.

- Chemistry subjects in **multiple languages** (incl. German and English)
- Content **available worldwide** via Internet browsers (Firefox, Chrome, ...)
- Can be controlled using **standard interactive devices** (e.g. “Wii”, “Xbox”, ...)
- Chemistry topics developed and improved by Evonik in conjunction with teachers **especially for schools**
- **VR multimedia teaching materials** (compatible with standard devices such as TVs and 3D glasses)

## The journey so far ...

- 4-year pilot phase
- Development of topics in a variety of middle schools in the German education system
- Usage in the classroom so far only possible with the help of technically demanding software in stand-alone technology
- Extensive project phases to develop new content/topics = cost intensive and lengthy



## The achievements so far ...



The virtual reality technology steps in to support school students' power of imagination at the point where they lose interest in complex teaching subjects.

- **Risk-free** chemistry lessons
- Combines **fun, education, and creativity**
- Open system structure allows for networked and cross-curricular learning and teaching
- Can be used via an Internet browser by **groups, individuals**, or for student-centered learning – also on home laptops/PCs
- **VR glasses and whiteboard bring content to life**
- **NEW in 2017**  
previous content now available with **no need for additional technology**  
= now accessible via Internet browsers in interactive 2D/3D format

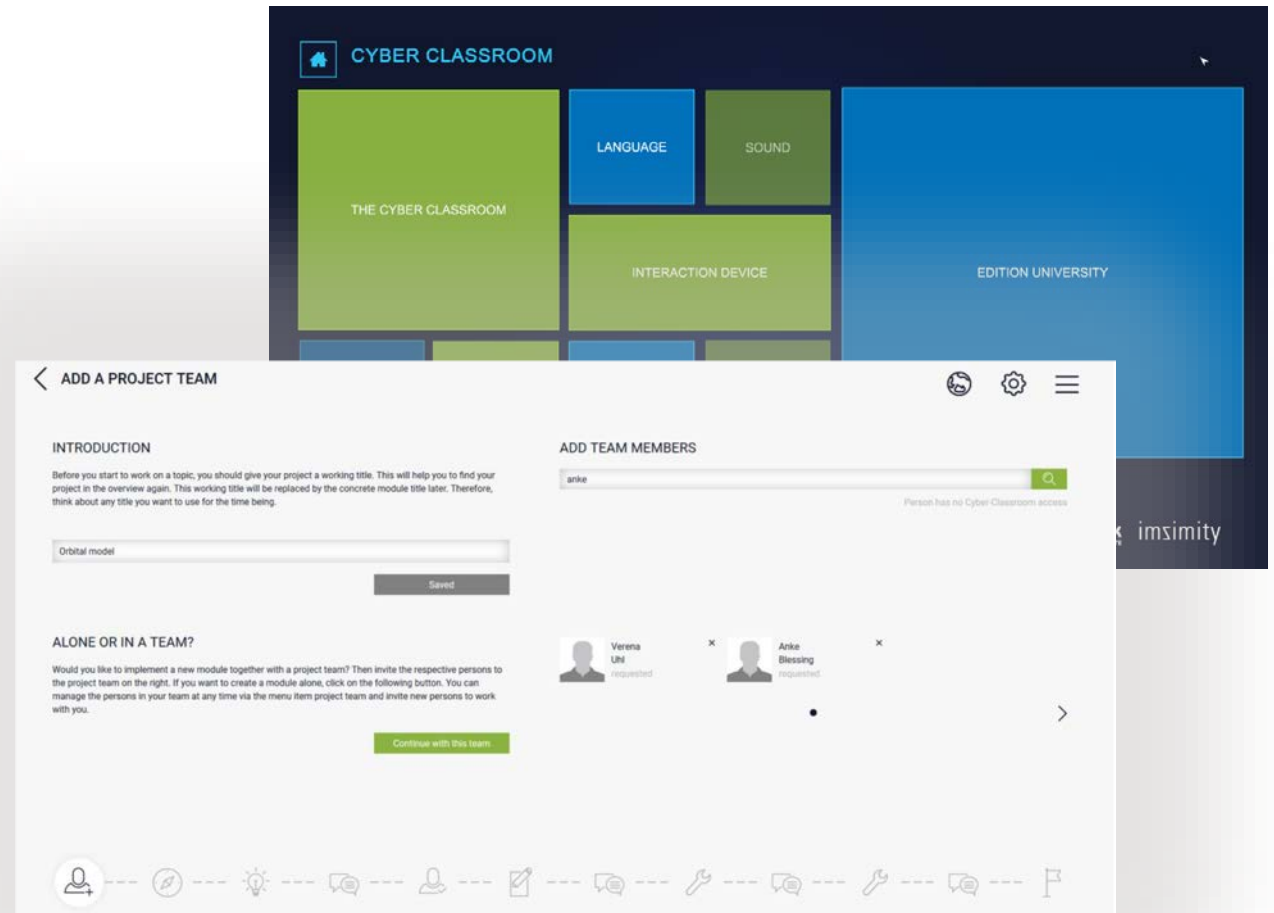
# The next step

- **Internet development platform**

Virtual idea generation, improvements to subjects, and online execution of projects for new 3D content

- **Collaborative virtual working on the Web**

positive side effect: development of media skills for future use in further training and the workplace



The vision:

School students have fun discovering new worlds of learning and simultaneously develop media skills, making them better equipped in the world of digital transformation.



# Financing going forward

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- a. through topic sponsors  
(such as the sponsorship of chemistry topics by Evonik Industries)
- b. Sponsored user licenses for schools
- c. Pay-by-use model  
through license fees for ready-to-use  
topic packages via the Internet  
(Provider: Imsimity GmbH / Germany)







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