

# Serena

**Project life span** January 2015 until May 2017

**Project aim** How to attract girls for technical professions in the field of renewable energies by playing a serious game

**Funded by** Federal Ministry of Education and Research (BMBF)



The abbreviation Serena stands for `Serious Game about renewable energy technologies for girls`. A serious game is a computer game which entertains the player as well as it informs about certain topics. In our project, we would like to inform about technical skills in the renewable energy sector because job opportunities in this field are rarely known by girls. Our target group are girls at the age of 12 to 16.

Girls prefer professions as nurses, teachers or office management assistants. Boys instead choose careers as electricians, car mechanics or crane operators. Gender stereotypical career choices are still very common. Qualified female staff for solar energy plants or wind power stations is almost exotic. Therefore, one of the research questions of the Serena project is how to make a difference in typical career choices of girls by playing a serious game.

Recent studies show that the desire to make a social contribution is more important to girls than it is to boys. Thus, girls are highly represented in jobs like nurses or elementary school teachers. However, technical jobs with a contribution to sustainability, like climate change or environmental protection, can as well offer an opportunity to make a social contribution. The serious game in the Serena project tries to pick up realistic scenarios to let girls experience the meaning of technical skills for the energy transmission. One scenario could be an island with a broken power supply, a problem to which the girls have to find a solution. Interactive feedback will be implemented to support the girls during the challenges they face. Girls can strengthen their self-esteem by solving technical problems. Planned are dialogs with technically qualified workers as well as quizzes or puzzles. Most of the characters will be female to serve as role models.

After all, the serious game wants to sensitize girls for technical professions and promote technical career choices. An analysis of the German job market and the content of curriculums will be realized to identify relevant professions

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and themes in the renewable energy sector. Additionally, workshops with experts as well as schools take place. Girls will be involved in the game development to figure out which preferences, interests and competences are relevant. Beyond these aspects, a gamer community will be established. At certain points, the effects of the game will be evaluated.

In recent years, digital media made their way into schools and became part of teaching arrangements. The serious game will also be usable in school lessons. It will be available online and can be played via smartphone or tablet. Additionally, online tutorials for teachers will support and ease the usage in school lessons.

Specific career orientation programs in the fields of renewable energies are rare. Thus, the project of the Science Shop Bonn, Technische Universität Dresden and the game studio The Good Evil is of pioneering nature.

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