

Acoucou Platform to Acquire Professional Skills and Knowledge in the Field of Acoustics.



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Abstract

Today, in the digital era, education must meet the needs and adapt to modern forms of knowledge transfer. While this is often implemented in higher education programs (distance learning, OpenCourseWare platforms), vocational education and training seems to be the most traditional branch of education, especially in the field of specialized courses for engineers. Our goal is to create space for new, innovative and multidisciplinary approaches for teaching and E-learning acoustics (e.g., based on gamification, VR, or web simulators). The Acoucou Platform <http://acoucou.org/> is a part of a strategy aimed at expanding and strengthening acoustic knowledge, supporting the development of innovative teaching methods based on attractive and effective delivery of content,

services, teaching methodologies and practices at national and international levels. The form of materials and courses published on the Acoustic Courseware Platform is suitable to be used for self learning as well as in blended learning, where an educator uses the materials from the platform to carry out training among employees/students. Technical, professional knowledge is usually presented as text including equations and technical drawings. Presenting it in a visually attractive form is more appealing and increases the motivation of the users. The visualization of phenomena simplifies the understanding of the problems and makes it easy to acquire knowledge in similar, practical situations of an engineer's work.

Keywords: #Education #Industrial Acoustics #Room Acoustics #Noise Awareness #Acoustical Engineering

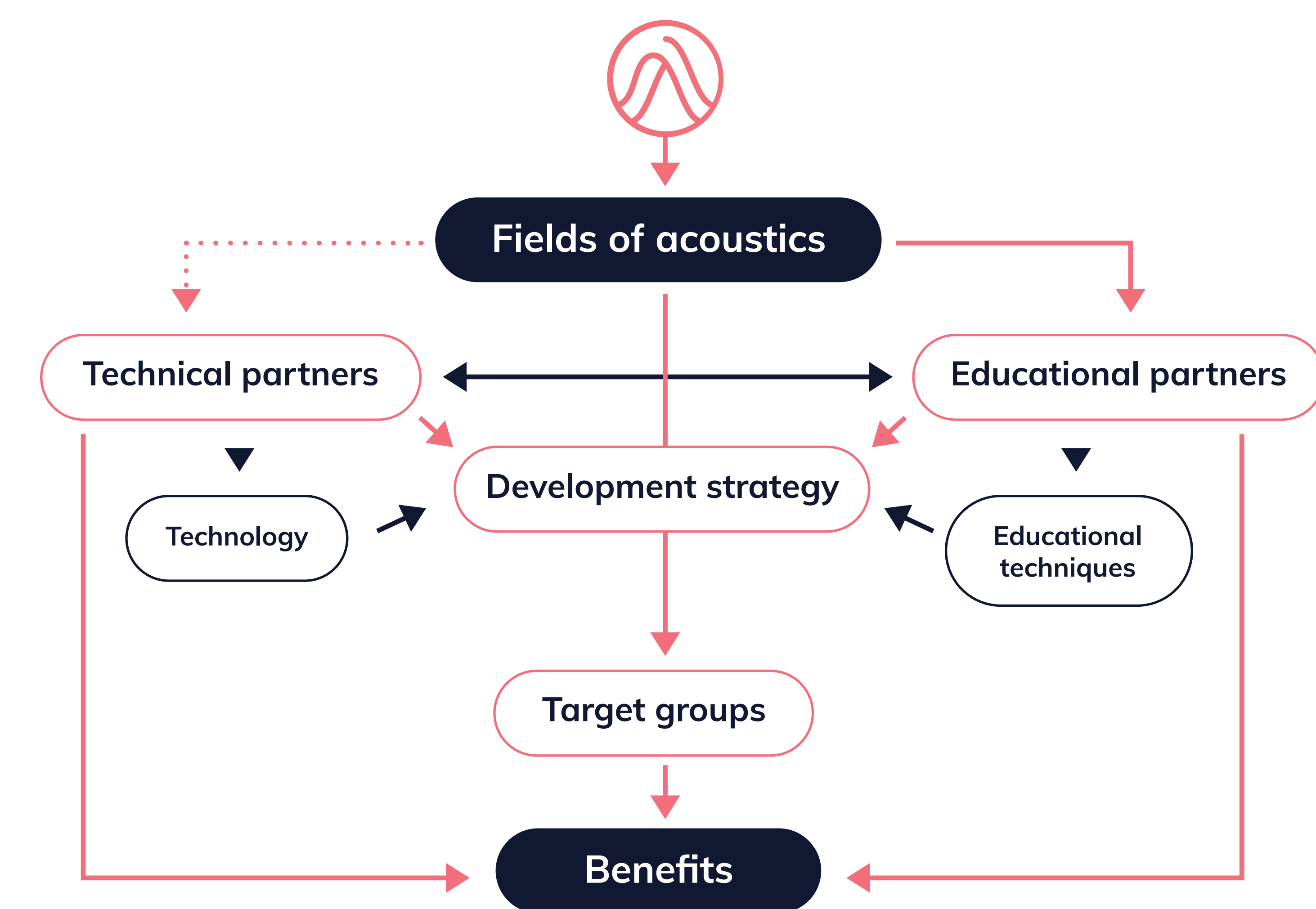
What is Acoucou?

Acoucou is an online platform where professionals, educators, students and other people interested in acoustics can find educational materials regarding various branches of acoustics. It is designed to serve as modern self-development tool for engineers as well as comprehensive solution for professional education in work environment. Acoucou has been developed by accomplished

practitioners and scientists. It has been created as a space for new, innovative and multidisciplinary approaches to teaching and E-learning in field of acoustics. The main concept of Acoucou is to describe and visualize acoustic phenomena and to present acoustic knowledge in a practical way.

Multidisciplinary networking

Acoucou also provides networking for a group of people with very diverse interests. Creative teamwork on educational materials involves scientists, edTech enthusiasts and new technologies producers. All these assets allow creating unique place for networking for universities and schools, business partners, educators and end users (flowchart below).



Acoucou Platform is created and aimed for an interdisciplinary team

Various fields of acoustics

Acoucou contains modules, which cover various fields of acoustics. Content is designated for different target groups:

QCE **Acoustic Course for Engineers** helps understanding the basic concepts of noise control in machinery and equipment.

QCI **Acoustic Course for Industry** is a visual introduction to industrial acoustics including noise in environment and industry, impact of noise on human health and noise management.

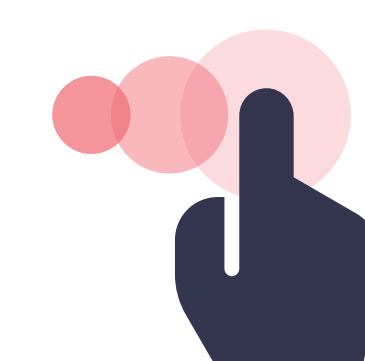
ArAc introduces room acoustics of in context of architecture and design

Educational methods

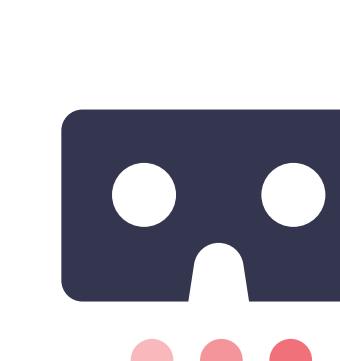
Education must meet the needs and adapt to modern forms of knowledge transfer. In Acoucou, the entire team works on how educational materials are presented and how the interaction between a user and course induces learning process results.



Visualisations



Hands-on Simulation



Modern Technologies

Final Remarks

As the constant evolution is one of the Acoucou strategies, future plans include further development by continuous networking, including more materials dedicated for diverse target groups, utilizing modern edTech tools and finding adequate form for each aim. At the same time, all of the recently available resources are going to be monitored and updated accordingly to the users' needs.

Acoucou receives positive feedback from universities, business partners, educators and self-educating professionals. In the future, Acoucou Team is hoping to continuously address upcoming challenges in education and the awareness in field of acoustics.

Acknowledgements



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