



Smart Mitigation of flow-induced Acoustic Radiation and  
Transmission for reduced Aircraft, surface transport,  
Workplaces and wind energy noise



von KARMAN INSTITUTE  
FOR FLUID DYNAMICS

## SmartAnswer Project Overview

*C. Schram, J. Christophe and N. Van de Wyer*

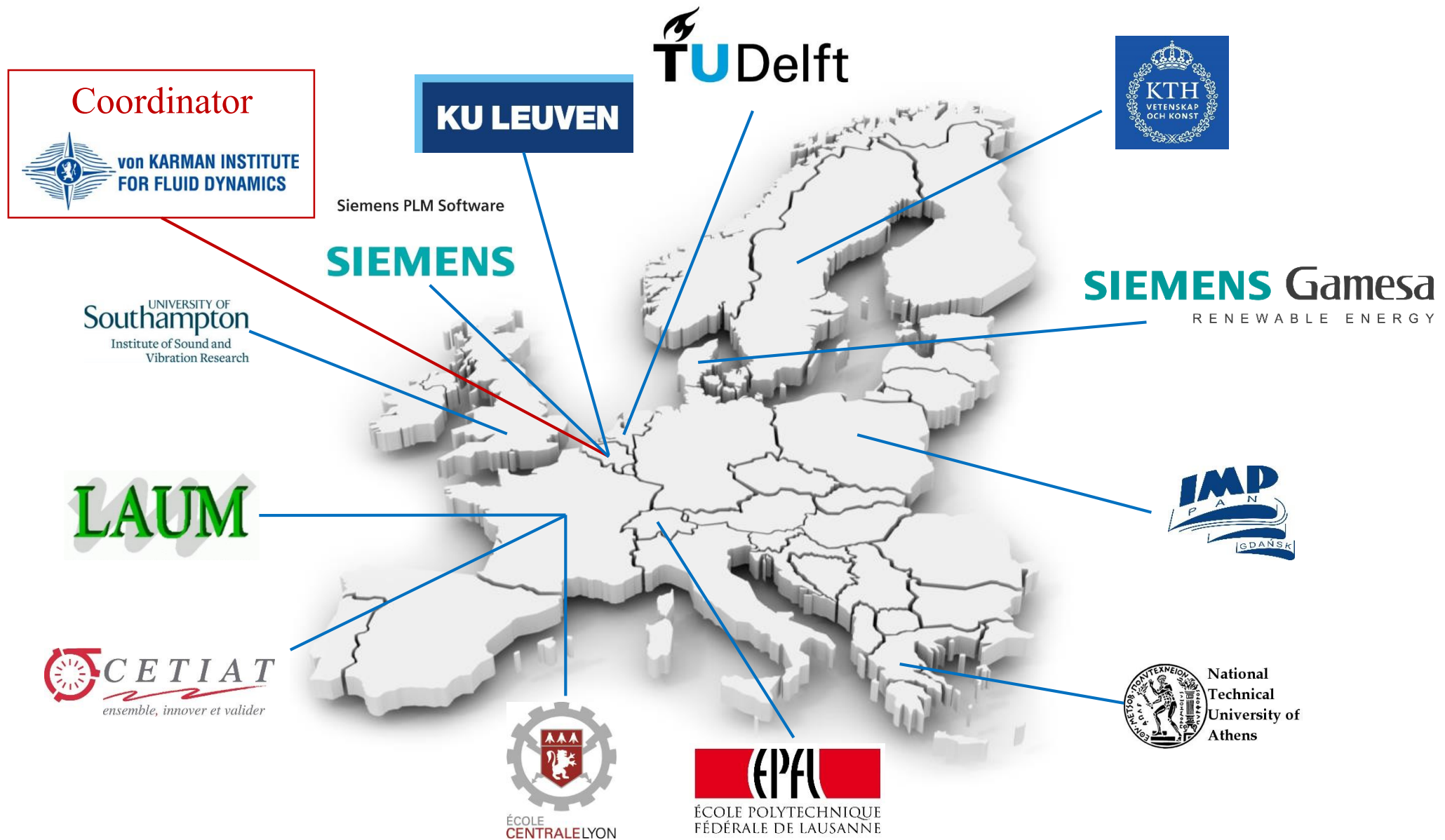
*SmartAnswer mid-term meeting, Leuven, 20th February 2019*



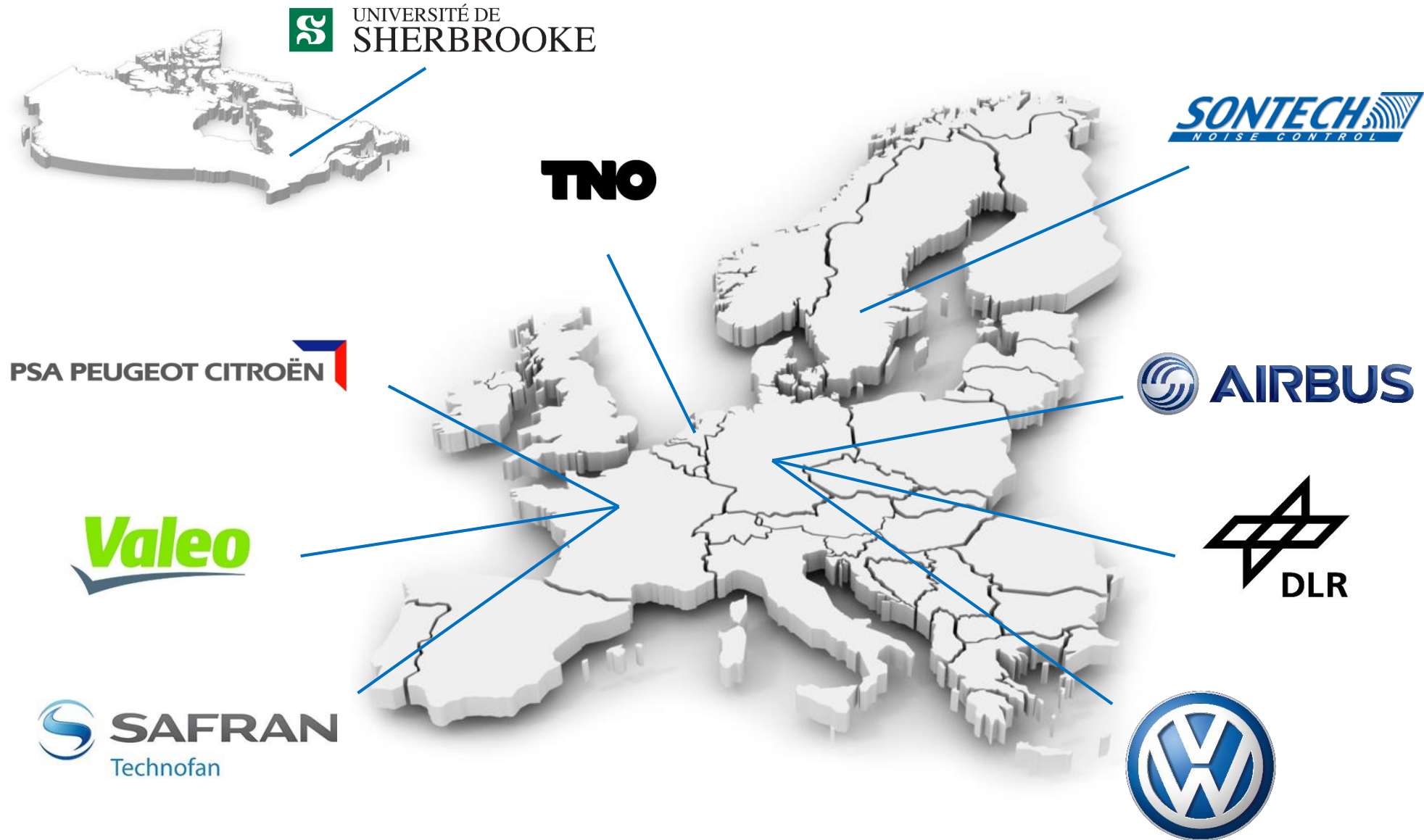
H2020 MARIE SKŁODOWSKA-CURIE ACTIONS

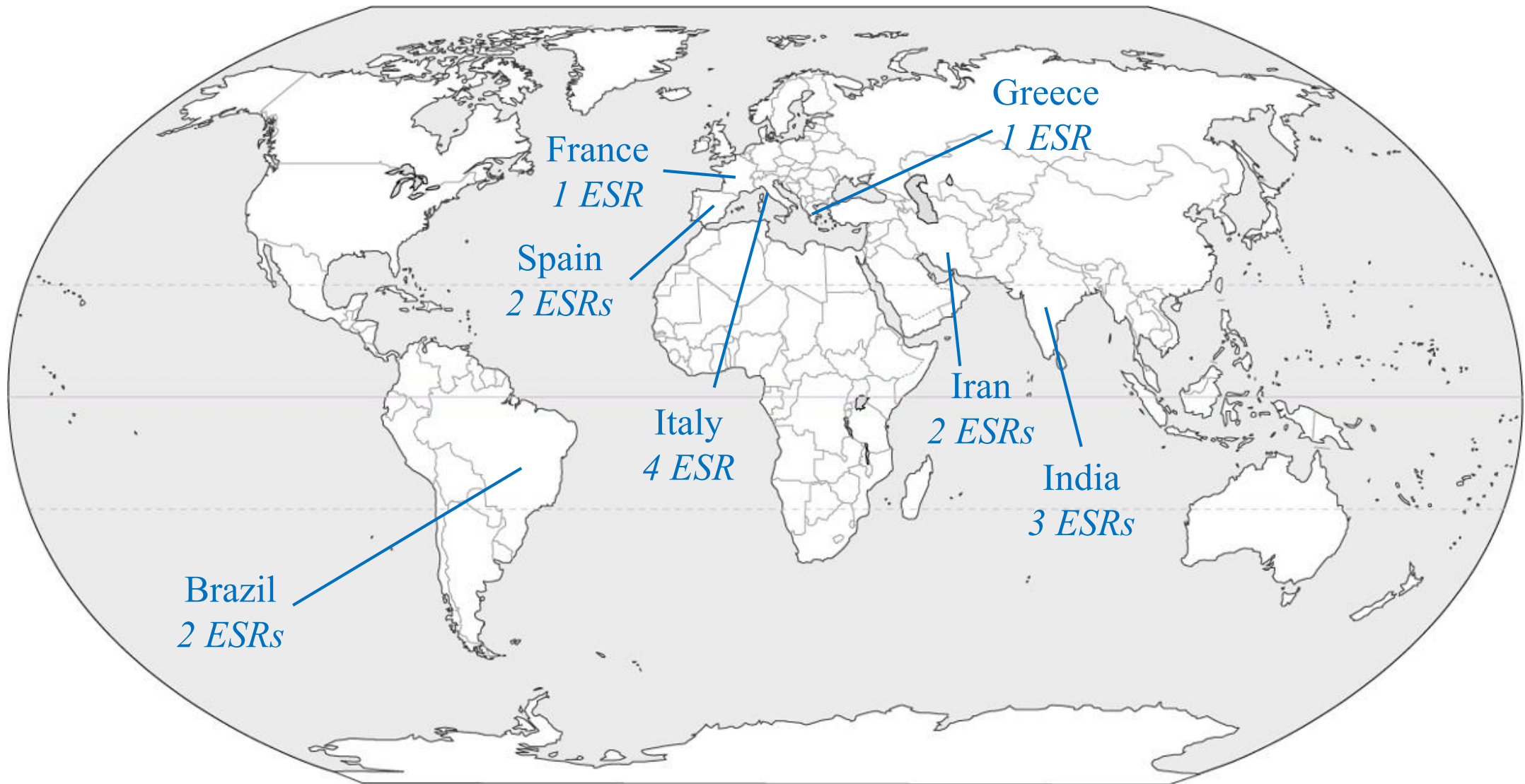


Smart Mitigation of flow-induced Acoustic Radiation and  
Transmission for reduced Aircraft, surface transport,  
Workplaces and wind energy noise









# The storyline in a nutshell

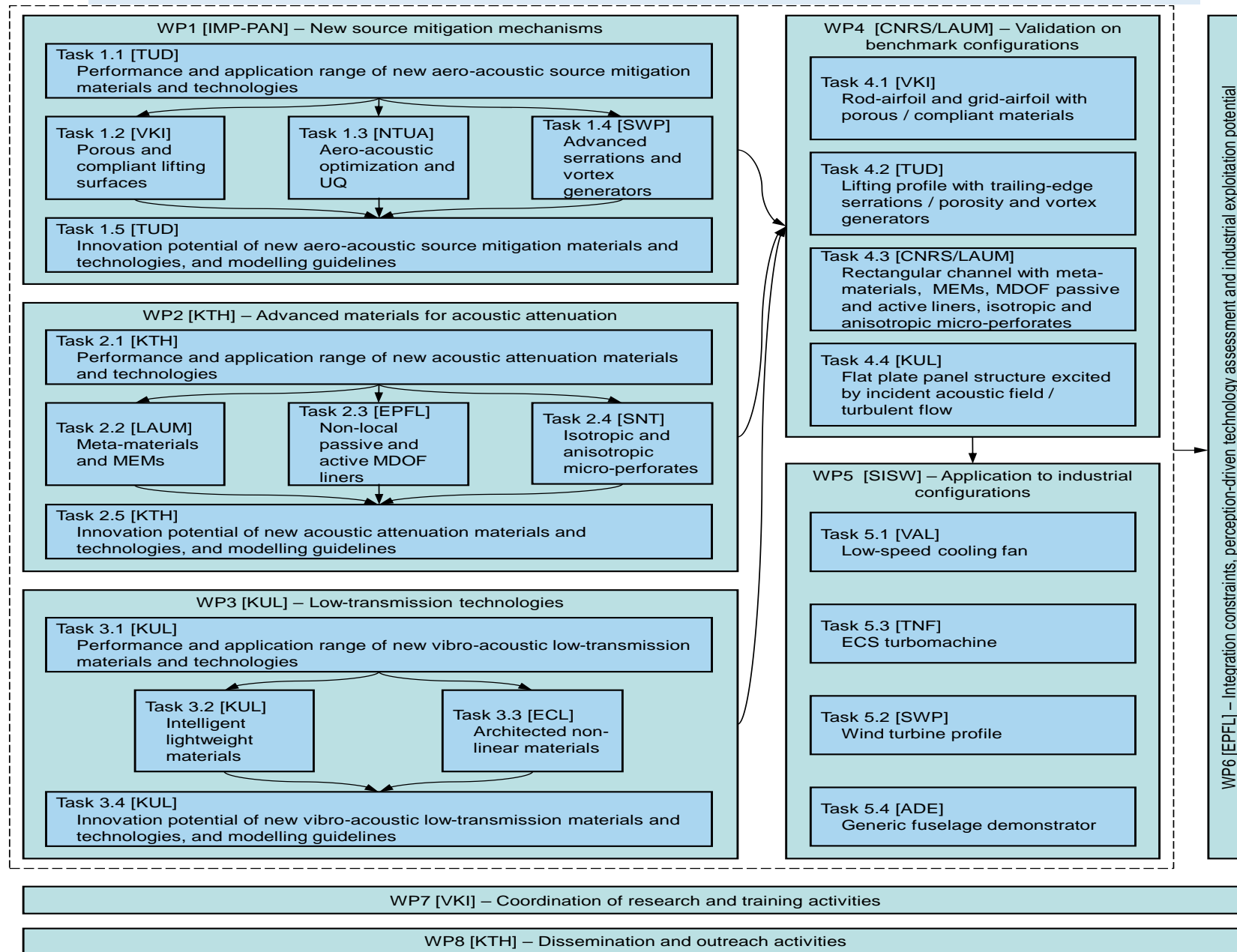
- Noise = serious issue in air / ground transportation, building ventilation systems and wind energy production
- New technologies now available: MEMs, meta-materials, porous materials, LE / TE serrations, ...  
often developed through trial-and-error campaigns
- But development hindered by:
  - lack of understanding of physical mechanisms
  - lack of integration of multi-disciplinary constraints
  - lack of knowledge about novel manufacturing technologies
- ... but no worry: here we are!

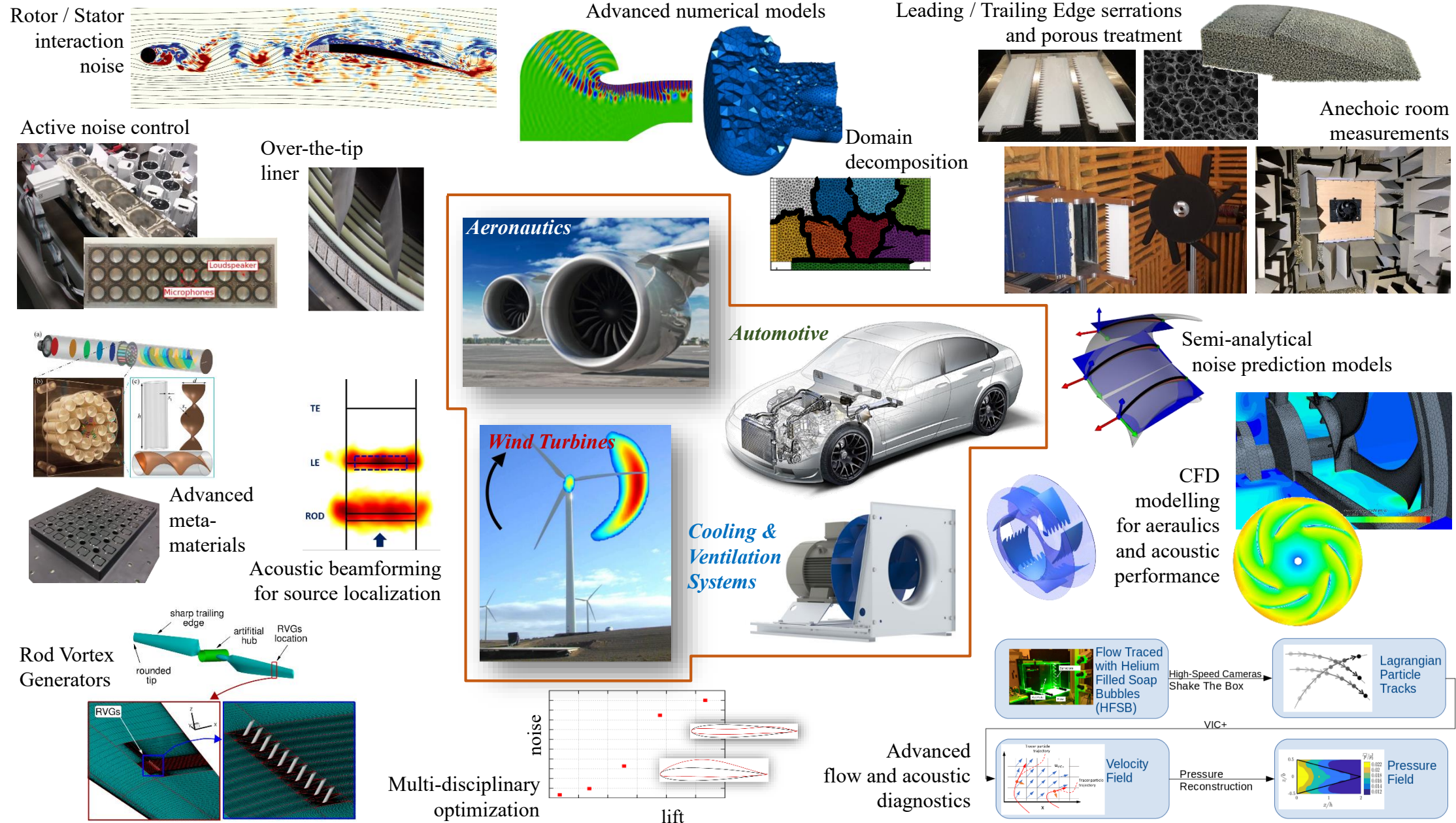
# What is SmartAnswer ?

- Research and training platform focused on innovative **flow / noise control and optimization** approaches
  - where ESRs will investigate **theoretically, experimentally and numerically** promising emerging technologies
  - gathering key industrial stakeholders selected from the **aeronautical, automotive, wind turbine and cooling/ventilation** sectors
  - where the ESRs will be confronted with intricacies of a **realistic innovation process**



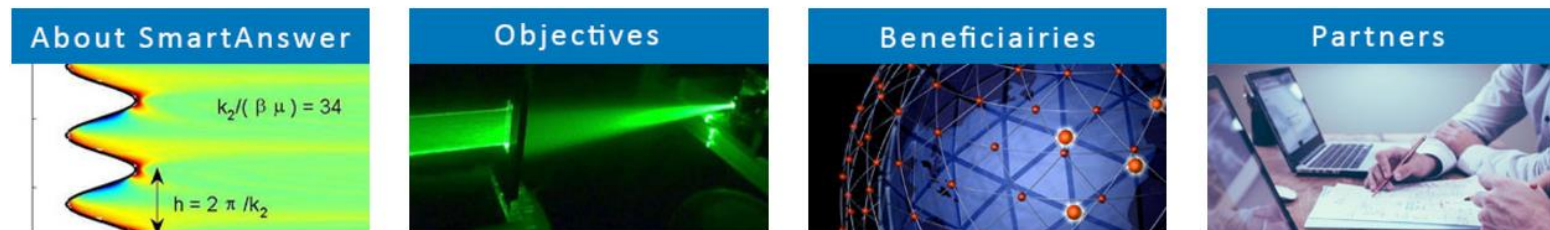
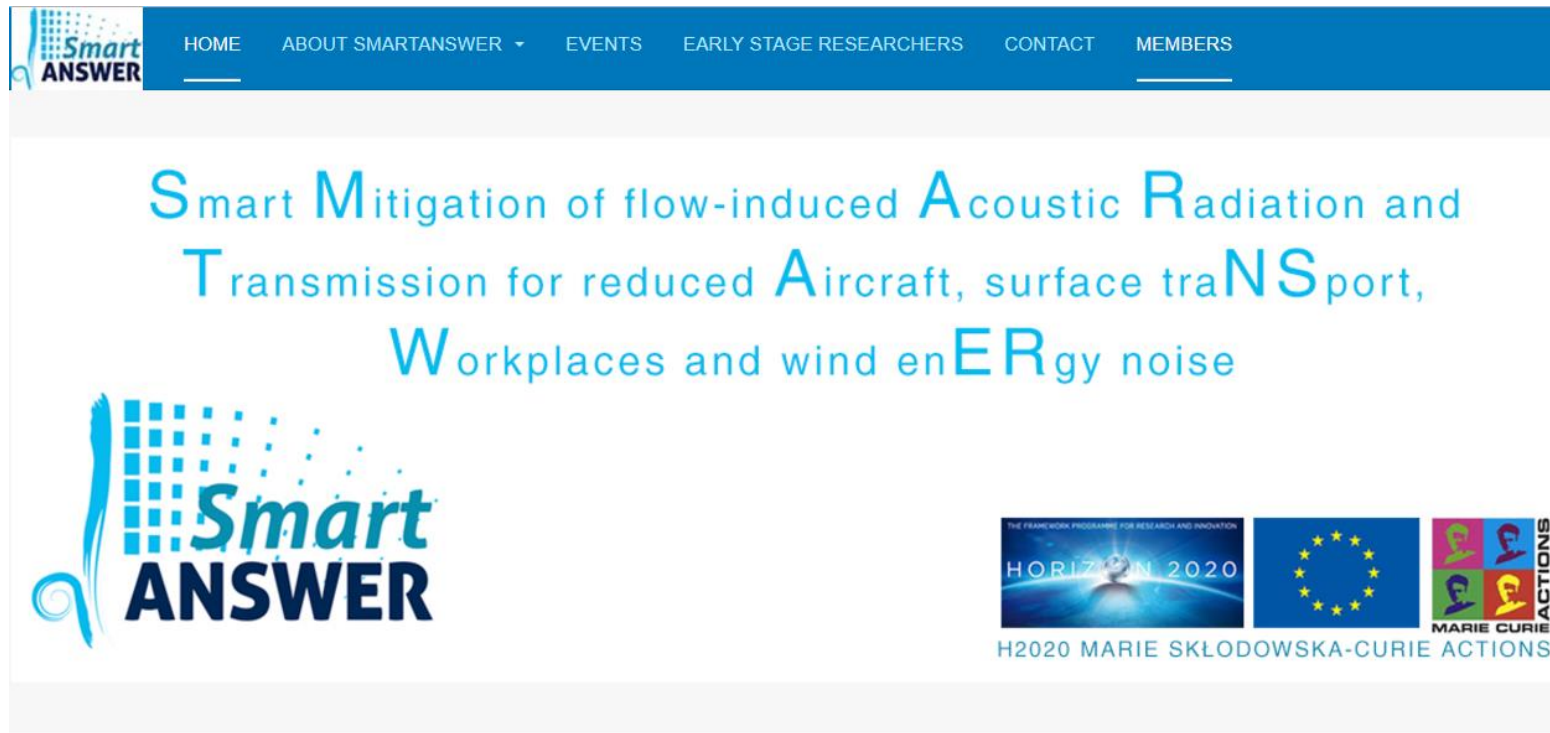
# How will it be achieved ?







<https://www.h2020-smartanswer.eu/>



Contact [julien.christophe@vki.ac.be](mailto:julien.christophe@vki.ac.be) for any modifications



**Enjoy the workshop!**

