

RASimAs = Regional Anaesthesia Simulator and Assistant

- Started in November 2013
- 3 years
- 3.3 Mio Euro fund by the European Union under the Seventh Framework Programme

RASimAs



Leading partner & contact

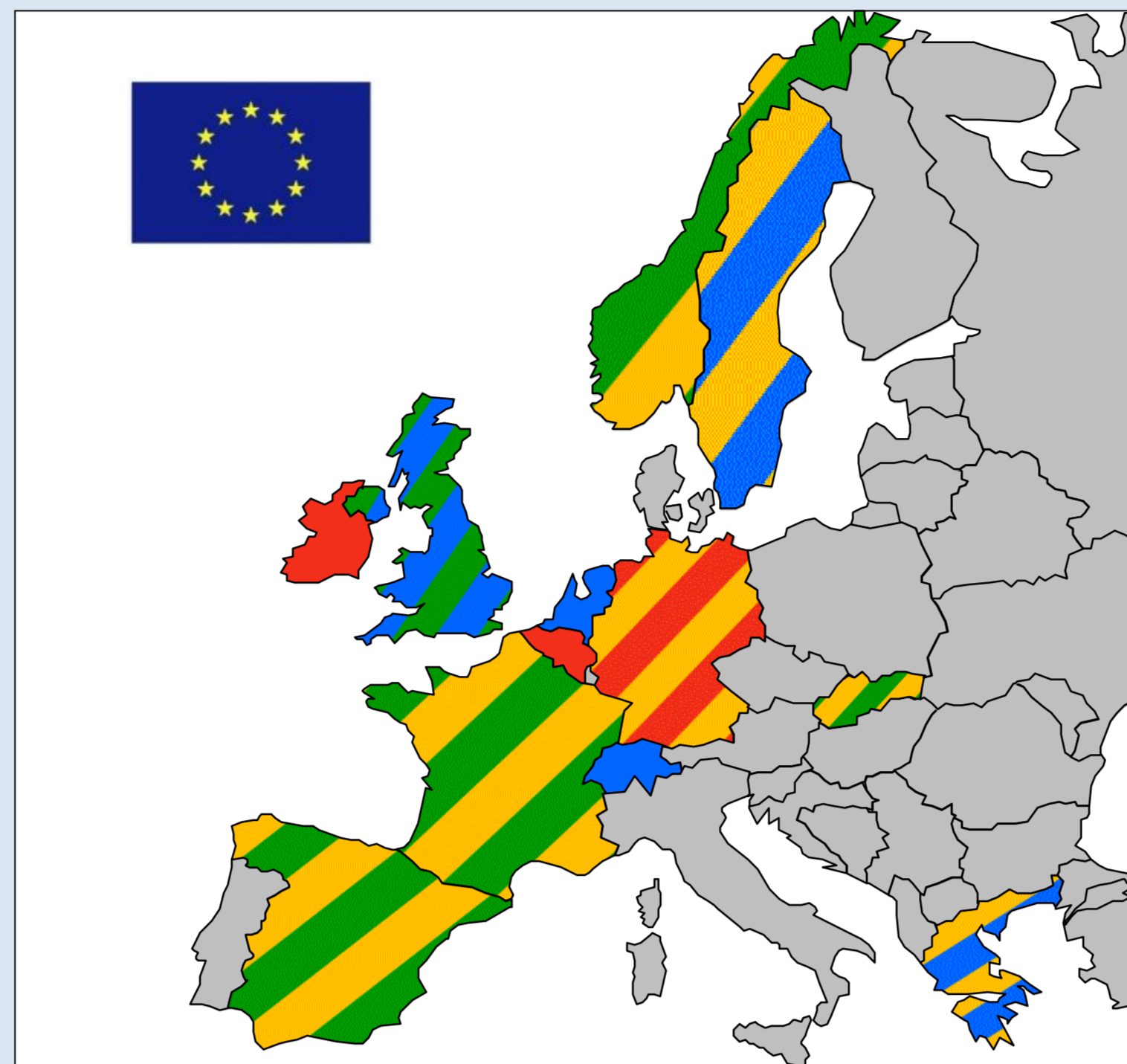
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Team

- 10 nations
- 14 partners
- Scientists
- Industrials
- Healthcare Professionals

Advisory board

- 5 nations
- 6 members
- Scientists
- Industrials
- Healthcare Professionals



On the web



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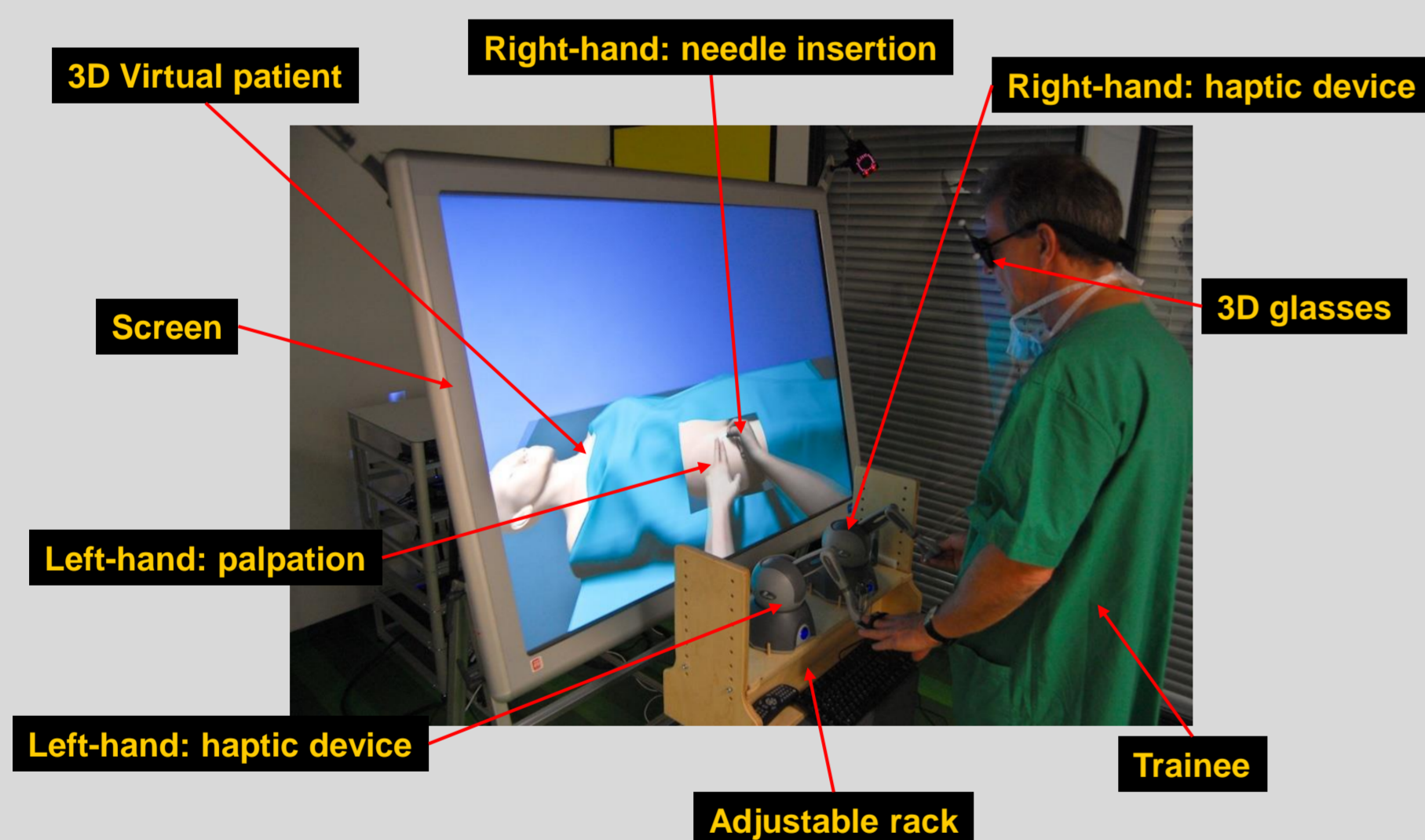
Regional anaesthesia

- Lower costs for the hospital
- Lower impact and faster recovery for the patient
- Requires to locate a specific nerve with a needle inside the patient
- Requires advanced medical skills, calling for substantial training and assistance
- Still underused in medical routine in comparison to general anaesthesia
- Currently lack of training facilities for physicians



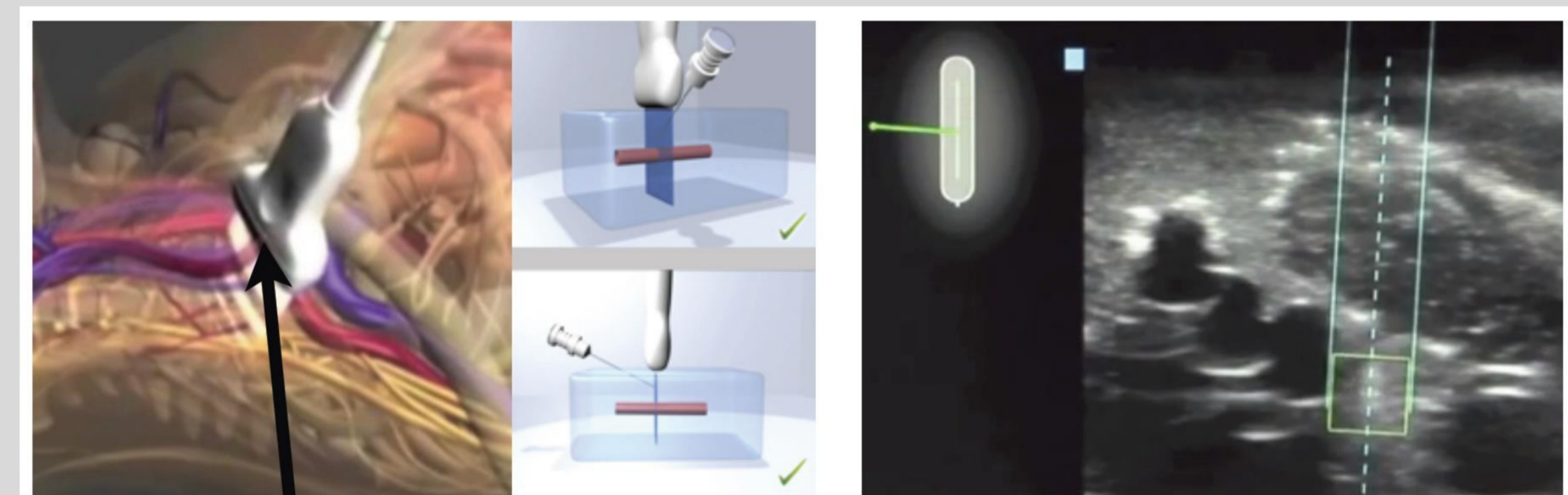
=> Need for extensive training and assistance

Objective 1: A virtual reality **simulator** to train physicians in performing regional anaesthesia



- Virtual reality environment
- Large library of virtual patients
- Haptic feedback
- UltraSound simulation
- Nerve stimulation simulation

Objective 2: A virtual reality **assistant** to help anaesthesiologists during the procedure



- 3D view of the patient
- Patient specific anatomy
- Augmented UltraSound image with interpretation of tools/structures
- Probe/needle tracking

A multidisciplinary project

- Medical operation characterisation
- Medical image management
- Image processing
- Anatomical modelling
- Virtual Physiological Human (VPH)
- Biomechanical modelling
- Physiological modelling
- Tool/tissue interaction
- Virtual reality platforms
- Real time processing
- Haptic feedback modelling
- UltraSound simulation
- Automatic UltraSound interpretation
- Tool tracking
- Software engineering
- Medical assistance
- Etc.