

PRoF Award abstract – Call 2016

EVapp: ‘Emergency Volunteer Application’

1. Research Outline

Acronym	EVapp
Project name in English	Emergency Volunteer Application
Pitch (1 sentence)	“Is there a doctor in the room?” Goes mobile.
Executive summary (max. 10 lines)	<p>EVapp or 'Emergency Volunteer Application' is a smartphone application that, in case of an emergency, mobilizes trained medical volunteers (doctors, nurses, Red Cross volunteers, etc.) to overlap the time between the occurrence of emergencies (e.g. heart attack) and arrival of the emergency services.</p> <p>The sole goal of this application is to improve the survival rate as much as possible. Other functionalities of the application are: AED & hospital locations, emergency numbers (police, fire department, poison control center,..), BLS instructions, etc.</p>

2. Cause and context of the research

A mobile “Is there a doctor in the room?” can save lives.

According to the Belgian Cardiology League, every year 10 000 people in Belgium are the victim of a sudden cardiac arrest outside of the hospital (on the street, at work or at home). The time between the BLS (basic life support) and defibrillation (for example an AED) or until ALS (advanced life support) by the emergency services occurs is of crucial importance to the survival rates. Belgium has a well-developed health service that is on scene at average between 8 to 12 minutes. Prior to their arrival however, chances of survival from a cardiac arrest substantially decrease every minute by 7 to 10%. If no CPR (chest compression and ventilation) is applied, the average survival rate is only 15%.

If a bystander applies BLS before the emergency services arrive, the survival rate decreases by only 4% per minute. Applying qualitative BLS (by trained personnel) will increase the survival chances even more, compared to less qualitative BLS.

When BLS can be applied quickly and an AED can be used, followed by ALS by emergency services, the survival rates rise to more than 50%.

If the specialized emergency services would need to be on scene faster than the current situation, this would have a big budgetary impact. On the other hand, there is a lot of health personnel spread throughout Belgium such as doctors, nurses and paramedics, but also other people with sufficient knowledge of first aid (medical students, midwives, Red Cross volunteers,...). EVapp aims to inform, on a voluntary basis, through a smartphone application, when there is an emergency in the neighborhood so we can save more lives by working together. Basically, it is a mobile version of, "Is there a doctor?".

3. Innovation results achieved

EVapp is currently negotiating the final steps to implement the software with government approval in a test project in Antwerp province. The results of this test project will be used and assessed to allow an implementation in the entire country of Belgium. All of the needed software is ready for implementation.

4. Link to the PRoF values

Mission

In a world with new technologic possibilities, we strive as a nonprofit association to use this digital technology to save lives in emergency situations. Using this we want to strengthen, in a cost-efficient and innovating way, the emergency services.

Vision

For the community: EVapp NGO: EVapp primarily wants to bridge the time between emergencies and the arrival of the emergency services.

Key concepts:

- Free service for citizens and medical volunteers to lower the barrier for using the app.
- Integration with existing emergency services in Belgium, resulting in a coordinated and efficient emergency call.

Values

- Privacy & security: we highly value the privacy of our volunteers, as well as that of the victims in an emergency situation. Complex data encryption is used to protect the location of victims and highly protected network connection are being used to link with emergency services.

- Public interest: as medical and entrepreneur students, we don't want to provide healthcare in just a doctors office, but also improve society and contribute to a better, more cost-efficient health care system.
- Our vision is scientifically based. Scientific research is very important to us. As the project evolves, there will also be extra research to monitor the effects of implementation in Belgium.
- We strive for equality. With EVapp we want to provide the best care for everyone without discrimination and without distinction based on social or economic status, religion, gender or race.

5. Applicable IPR rules

The founders of the EVapp-project have full IPR over the software used in the project.

6. Information on the partners

Primary partners:

- *The Belgian government:* we work together with the Belgian government locally as well as on the federal level, to create a government approved model to implement EVapp.
- *University of Ghent:* as most of the founders of EVapp attend this university they were eager to support our project through their program for student entrepreneurs.
- *BASE:* our communication partner. It is our primary partner to set up highly protected networks with the government and the emergency services.

Institutional partners:

- *Belgian Cardiological League (BCL):* The BCL was the first partner to show his interest in the EVapp-project.
- *Belgium Resuscitation Council (BRC):* In February 2015 the board of BRC approved cooperation with EVapp and to support all actions taken to implement the project.
- *Belgian Medical Students' Association (BeMSA):* This is the structure that represents Belgium in the international organisation of medical students (IFMSA). Cooperation between BeMSA and EVapp has been crucial to recruit trained medical volunteers.
- *Belgian Professional Association of Ambulance Services (BBA):* Initial contact with the BBA resulted in a positive advice from the organization on the EVapp-project and supported an active role for the BBA in the process of implementation.
- *Flemish Cross:* Similar to the Red Cross, the Flemish cross has a wide range of volunteers that can be included into the project. The Flemish Cross showed their interest to become part of the EVapp-project in Belgium.

Advisory partners:

- *Microsoft Innovation Center Flanders (MIC):* MIC Flanders is a facilitator that collects the efforts of several Flemish universities, the Flemish government and Microsoft. In Flanders they focus on healthcare. MIC Flanders is assisting by providing free software and expertise, PR-campaigns and by facilitating contact with the healthcare sector and the government.
- *European Emergency Number Association (EENA):* EENA, the European Emergency Number Association, is a Brussels-based NGO set up in 1999 dedicated to promoting high-quality emergency services reached by the number 112 throughout Europe. We presented EVapp at the EENA congress in Bucharest in April 2015 and have a seat in their advisory board.
- *University of Antwerp:* the university has helped us to establish research regarding the concept of EVapp in terms of implementation and efficiency.

Financial partners:

- *iMinds:* iMinds, the digital research center of Flanders, has always focused on close collaboration between its academic researchers and the industry. On February 19, 2015 EVapp was selected as one of 3 projects to receive €25.000 and the chance to work in an incubator setting for start-ups.
- *UZ Gent:* EVapp has a strong partnership with the university hospital of Ghent and his scientific personnel. The hospital also supported us to cover the first investments.

Addendum: Contact information

Steven Vercammen | President

EVapp | Emergency Volunteer Application

Direct: +32 471 19 35 14

Mail: steven.vercammen@evapp.org

Skype: vercammen.steven

Web: EVapp.org | [Facebook](#)

