

# Results

## ROCKET 2016-2020

### Regional Collaboration on Key Enabling Technologies

ROCKET is an INTERREG Va-project, focused on stimulating cross-border innovation in Key Enabling Technologies (KETs) with Dutch and German SMEs.



#### 5 awards

- WATIFY ((European Committee)
- Kiss Me (INTERREG)
- Best Dutch-German project of 2019 by the Dutch-German Chamber of Industry & Commerce (partial project SuperSurf)
- Eurada awards
- NOW-innovation festival 'TEKNOLOGY 2019' (Partial project AdemForsa)

#### Investments and ROI

**€ 2.002K**

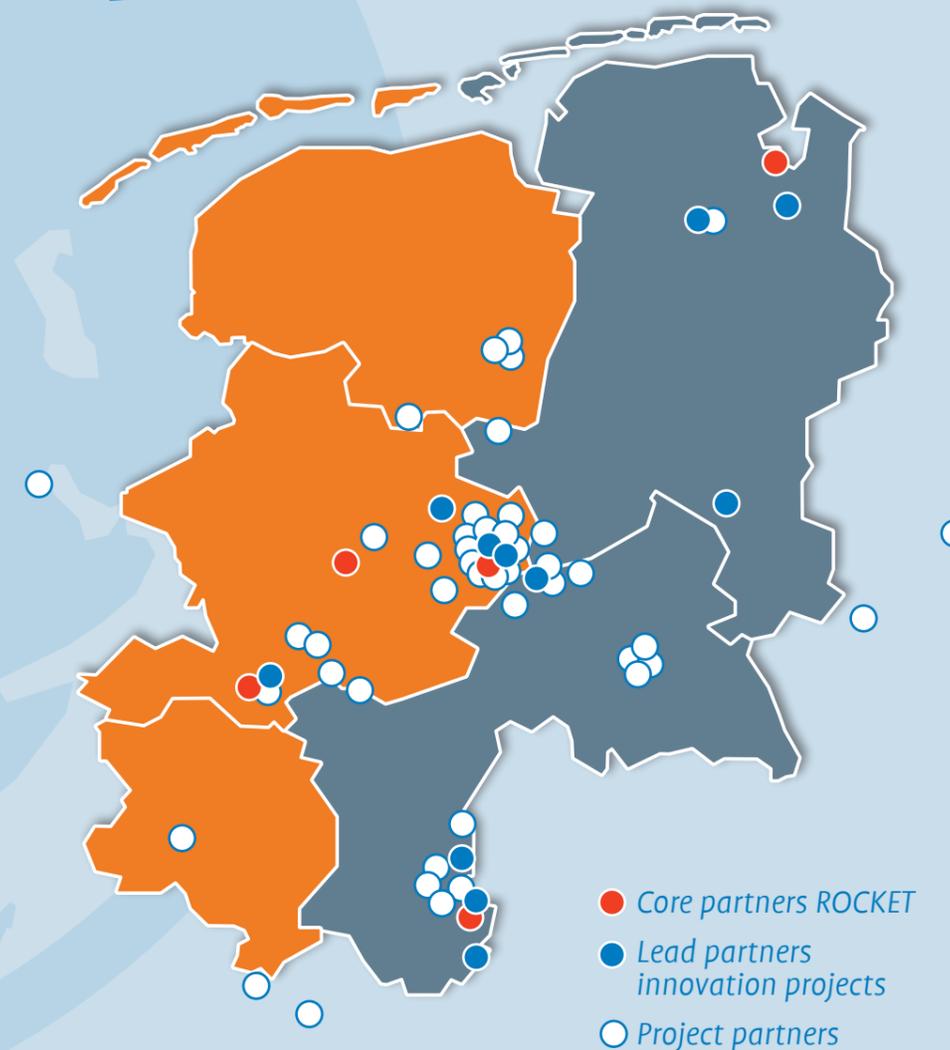
Public investment by the Ministry of Economic Affairs and Climate, the provinces of Overijssel and Gelderland and the federal states North Rhine-Westphalia and Lower Saxony

**€ 8.947K**

Triggered investments concerning innovation in the border area

**ROI: 446.9%**

#### Working area distribution



Would you like to know more about the European programs in East NL? Look at [www.eu-opportunities.eu](http://www.eu-opportunities.eu).



## Ademforsa

This project's prototype, made of ceramic membranes, is designed to replace the traditional cotton swabs that are used at crime scenes. Since the DNA is absorbed and extracted better, the effectiveness of the forensic investigation is improved. The development of a biosensor for doing DNA-tests on the spot should further assist the police services in their investigations.

Lead partner:  
Pervatech BV



## Antibacterial Materials

Meticilline-resistant *Staphylococcus aureus* (MRSA) is responsible for 30% of the infections in hospitals. The death toll in Germany alone amounts to approximately 40,000 per annum. The project partners fabricated catalytic active ceramics that convert heat vibration into electroshocks that destroy the bacteria. Based on this, coatings were developed to protect plastic and metal, and they kill bacteria within five minutes! Among others, the developments are commercialised by two spin-off companies which were founded following this project.

Lead partner:  
Smart Material Printing BV



## Elasto-Tweezers

The mechanic-elastic properties of heart cells are essential to the human heart and a crucial indicator of heart disease. In this project, a non-contact optical manipulator prototype was developed, with a microfluidic platform that can select, analyse and evaluate living cells. The designed 'optical tweezer' can be used for a number of applications in both basic and medical research.

Lead partner:  
Ionovation GmbH



## FAST-PHARMA

A fast micro Gas Chromatograph (GC) with heated head space inlet was developed in this project. This prototype is suited to analyse and monitor fluid medicine during production, and meets the requirements of pharmaceutical applications. The project partners are going to commercialise this application: Aemics will supply the electronics to Qmicro, and Qmicro will deliver the (OEM) instrument to QCI. It is expected to grow, in production and sales, to a thousand instruments per annum and to approximately 50 new jobs.

Lead partner:  
Qmicro B.V.



## HoDSimVAL

Weight reduction of transport reduces CO2 emissions. At the moment, most parts of a car's bodywork and exterior are made from steel, due to safety requirements. High strength aluminium alloy is an efficient substitute for this, but current deforming techniques are not suitable for mass production. The Hot Die Forming method developed in this project makes it possible. Also, a digital platform was created that can be used to calculate the manufacturability of products with this HDF-technology, thus reducing the development period.

Lead partner:  
HoDforming GmbH



## iCoat

An increase in the efficacy of solar panels can be accomplished by an extremely precise coating technology that has as little as possible defects. To make this possible, a two-chamber return-suction slot-die, and a switch slot-die were developed in this project. The applications are integrated in the pilot production line of Solliance and demonstrated for Perovskiet solar cell modules.

Lead partner:  
Coatema Coating Machinery GmbH



## SAIL PRO

The project focuses on the advantages occurring in the application of a liquid layer on a material surface during laser machining. Nanoparticles that normally escape in this process and thereby cause pollution, are now carried away by the liquid. This makes the laser machining more precise which is advantageous in a number of processes, among which the automotive industry. The nanoparticles themselves are used also for the fabrication of new products.

Lead partner:  
microTEC Gesellschaft für Mikrotechnologie mbH



## SuperSurf

To scale-up hydrogen fuel cells production, accurate quality checks are necessary. SuperSurf has developed a combined 2D and 3D measuring system for the visual check of components in bipolar plates. With these, one can look for deviations and distortions on nanoscale. One of the added benefits of the project is a Dutch-German joint venture by the project partners that will focus on hydrogen busses.

Lead partner:  
ADREM Consulting GmbH



## TraHySens

Nowadays, hydrogen powered vehicles are equipped with leak sensors. However, these are complex and insufficiently reliable or robust. This project focused on the development of a transfer moulded Schottky-Diode hydrogen sensor with nanostructured titanium oxide/metal-interfaces. This new sensor technology should, for the first time, have a high measuring quality, and fulfil the general conditions of the automotive industry. It will contribute to hydrogen being the eco-friendly energy carrier in mobility.

Lead partner:  
Sencio B.V.



## TriboSurf

In this project, work was done on coating materials and surface-modifications to increase the durability and longevity of products. Unfortunately, one of the partners went bankrupt during the course of the project. The acquired knowledge and expertise is being developed further by the remaining partner, the German company Kurre.

Lead partner:  
Kurre Spezialmaschinenbau GmbH



## VALIDIS

In this project, an infusion set was developed that can be used in artificial pancreas systems to give persons with diabetes a better control over their blood glucose level. The set is based on the silicon microneedle technology. Expectations are that this system will lead to a faster absorption of insulin, resulting in more control over blood glucose levels and less insulin use in the end. The first important steps to prepare for clinical testing have been taken in this project.

Lead partner:  
U-Needle BV



## ROCKET

In this project, a significant positive impact was generated in the border area, by the execution of six viability studies, eleven innovation projects, 127 supporting companies and 31 innovative cross-border collaborations that were all involved with developments surrounding the Key Enabling Technologies. Many new and continued connections have been created from the North to the South. The project's core partners cooperated closely and will continue to do so to make sure that more companies will find the way to international collaboration. More information on the results can be found on [www.rocket-innovations.eu](http://www.rocket-innovations.eu). We thank all organisations – that supported this project both financially and substantively – for their trust.

## Social challenges



Sustainable energy and CO2-reduction



Healthy, sustainably produced food



Effective, affordable health care



Water management and adjustment to climate change



Circular economy, maximalisation circular use of raw material



Clean, safe, efficient traffic and transport



The safe society



Inclusive, innovative society