



## advanced and versatile PRInting platform for the next generation of active Microfluidic dEVICES

### WHAT IS PRIME ABOUT?

Microfluidic devices manipulate tiny amounts of fluid enabling cost-effective, fast, accurate and high throughput analytical assays. Progress in microfluidics has huge impact in environmental pollution monitoring, biohazard detection and biomedicine, contributing to the development of new tools for drug screening, biological studies, point-of-care diagnostics and personalised medicine. Despite this huge potential, microfluidics market growth is heavily constrained by the complexity and high prices of the required large-scale off-chip equipment and its operational cost.

PRIME will implement and integrate through additive manufacturing technologies smart valves and pumps in a microfluidic chip. Besides inkjet printing will be used to produce new ultra sensitive and selective sensors embedded in the chip and readable with light. The final device will be remotely addressed and read using simple photonic elements that can be integrated in compact, portable and cheap operation & read devices.

### WE ARE PRIME



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[www.bnn.at](http://www.bnn.at)



**Eindhoven University of  
Technology**  
[www.tue.nl](http://www.tue.nl)



**Max Planck Institute**  
[www.mpi-cbg.de](http://www.mpi-cbg.de)



**Universidad de Zaragoza**  
[www.unizar.es](http://www.unizar.es)

### PRIME IN NUMBERS

- Project start: May 2019
- Project duration: 48 months
- Total budget: € 2 820 991,25
- EU contribution: € 2 820 991,25
- Six partners from four European countries: Austria, Germany, The Netherlands and Spain

### WHAT ARE PRIME'S OBJECTIVES?

PRIME aims to go beyond the state-of-the-art generating a robust platform to create a new generation of active, tubeless and contactless microfluidic chips effectively changing the currently established paradigm.

PRIME will develop a radically new platform that:

- integrates all the required responsive materials and elements in the chip, effectively providing it with all the fluidic and sensing functions,
- uses compatible materials and manufacturing technologies making future industrial production viable and cost-effective,
- allows to implement with extensive freedom of design a plethora of new smart-integrated and easy-to-operate microfluidic chips.

### PRIME COORDINATION & MANAGEMENT

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