

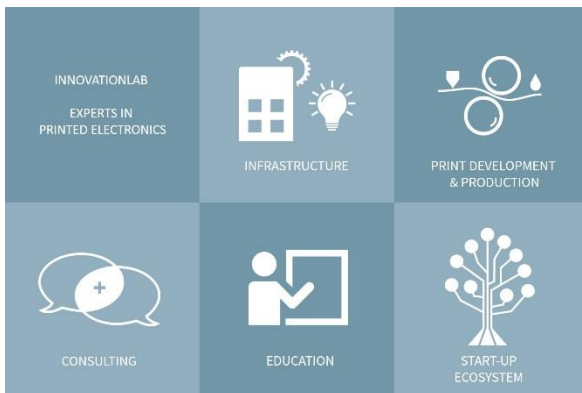
## Printing the Future

### the one-hand solution for printed electronics

InnovationLab GmbH (iL) is a joint, application-oriented platform for the commercialization of innovative technologies, research and knowledge transfer in Germany's Rhine-Neckar metropolitan region. Emphasis is put on future technologies in the field of printed organic electronics.

Key to iL's mission are cooperative research, training the next generation of researchers and finally transforming inventions into marketable products. iL operates with the support from Heidelberg University, Karlsruhe Institute of Technology (KIT), BASF SE, Heidelberger Druckmaschinen AG, and SAP SE. The combination of the own and specific expertise of different partners enables InnovationLab to accompany the entire process of a product "from Lab to Fab". iL is a unique partner for the development and commercialization of processes and systems for printed electronic structures, circuits and devices, taking customers from small volume lab scale printing to pilot line volumes and beyond. iL's expertise relies on a solid understanding of materials, processes and printing technologies being essential for the development of flexible and hybrid electronic systems. To address the fundamental technological questions of printed organic electronics, five competence centers Analytics, Device Physics, Printing, Simulation, and Synthesis interact closely, inspired one another with their research finding.

## Services



- We provide R&D infrastructure you need**  
iL provides technical infrastructure for your R&D activities in printed and organic electronics.
- We develop and produce products you want**  
iL develops your functional print products from the initial product design to bulk production.
- We give advice you require**  
iL serves as consultant in all of your questions about functional printing.
- We train staff you hired**  
iL educates your personnel in printed and organic electronics.
- We support visions of young scientists**  
iL provides state-of-the-art infrastructure as much as the expertise of numerous research and industrial partners.

# Product & Process Development Services

The interdisciplinary field of organic and printed electronics requires profound knowledge across multiple domains. InnovationLab assists clients through various stages of product and process development such as planning, design, printing, coating, preprocessing, postprocessing, and integration.



## Technology Showcases



Functional Glass

The novel BASF proprietary interlayer technology printed by InnovationLab enables switchable luminescent displays on glass - in „off state“ the glass appears transparent, in „on state“ it turns into a display.



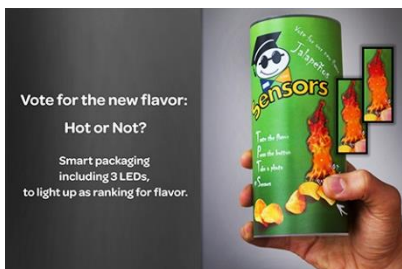
Dental Care

OccluSense® by Bausch with integrated flexible printed pressure sensors by InnovationLab combines the traditional and digital occlusion control to represent the pressure distribution on occlusal surfaces.



Automotive & Aviation

InnovationLab integrated their pressure sensors in a car seat to provide information as basis for various driver assistance systems. In aviation sector occupancy identification could support safety features for landing and take-off.



Smart Packaging

This system by BASF New Business and InnovationLab can be applied to any package to add additional features – in this case a viral marketing via social media. You push as hard as necessary to let the LEDs light up at the flavor you prefer. Take a picture and post it via Instagram to influence the next flavor to come.



Active Matrix (AM)

BASF New Business and InnovationLab developed an active matrix pressure sensor which allows to detect pressure at high read out rates without crosstalk. The active matrix uses the principles of TFT display backplanes to overcome the issues of “ghost” or false touches associated with many (passive) matrix sensors.



Smart City/Logistics/IoT

InnovationLab's printed sensors are manufactured using a high throughput printing process. Such an additive manufacturing approach enables cost effective fabrication of large area sensor arrays. They can be processed on ultra-thin flexible substrates allowing customers to integrate them into densely packed system applications.