



# Fraunhofer

## ADAPTRONIK

### FRAUNHOFER ADAPTRONICS ALLIANCE



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1 Functionalization of headlamp frame  
 2 With LEDs and conductor tracks functionalized aluminum-component

## INDIVIDUAL FUNCTIONALIZATION BY DIGITAL MANUFACTURING PROCESSES

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### Challenge

Future production processes must serve the current trends of functional integration and the increasing variety of product variants. In order to counter these trends, highly flexible and cost-efficient production technologies are required, which at the same time make it possible to increase the functional density in components.

### Innovation

By integrating template free digital manufacturing processes into existing process chains, functions such as conductive tracks, operating elements and sensors can be printed directly onto 3D components.

### Example of use

- Printing of cable and wiring harnesses on components
- Application of sensors to multiple curved components

### Advantages

Digital functionalization enables:

- a quantity-independent productivity
- an increase in the functional density without increasing the number of components
- the saving of cable fabrication and assembly steps
- simplified logistics
- weight reduction
- free placement of sensors

### Our service offer

- Feasibility studies
- Prototype construction
- Adaptation of process technology to customer-specific application



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