

# Fraunhofer Development Centre for X-ray Technology EZRT

## About this organisation

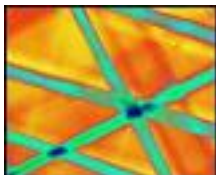
### Machine translation

This organisation has been machine-translated based on data provided in German.

The Development Centre for X-ray Technology EZRT is a division of the Fraunhofer Institute for Integrated Circuits IIS in Erlangen and works in close cooperation with the Fraunhofer Institute for Non-Destructive Testing IZFP in Saarbrücken.

The EZRT is a leading international research and development centre with core competencies in the field of non-destructive monitoring along the entire value chain of the product life cycle, from raw materials to production and recycling. It defines and expands the current state of the art in this field, in particular by means of imaging X-ray and magnetic resonance technologies as well as optical testing techniques. The topics of sensor technology and simulation for data acquisition, image processing for data improvement and evaluation (metadata acquisition), system development, measurement technology as well as applications and training are addressed. In accordance with the Fraunhofer mission, the EZRT positions itself between basic research in the field of non-destructive imaging and industrial utilisation with end customers and system integrators.

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90768 Fürth  
Bavaria  
Germany  
[www.iis.fraunhofer.de/ezrt](http://www.iis.fraunhofer.de/ezrt)



### Organisation type

Non-university research institution

### Sectors



### Employees

50 up to 249

### Turnover

€10m - €50m

### Funding

n/a

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## About this organisation

<b>Main areas covered</b>	Industrial X-ray technology, Optical measurement and testing technology, Magnetic resonance, Scientific application, Education
<b>Infrastructure</b>	Extensive plant park, World's largest CT system, X-ray microscopes, Mobile test systems
<b>Certifications</b>	ISO 9001
<b>Keywords</b>	Product life cycle, Non-destructive monitoring, Cross-industry, Research and development
<b>Memberships</b>	

## Overview of lightweighting expertise

### Machine translation

This organisation has been machine-translated based on data provided in German.

	Research	Development	Manufacturing & Supply
<b>Offer</b>			
<b>Products</b> Parts and components, Semi-finished parts, Machines and plants, Software & databases, Systems and end products, Materials, Tools and moulds	✓	✓	✓
<b>Services &amp; consulting</b> Training, Consulting, Testing and trials, Engineering, Standardisation, Prototyping, Validation, Simulation, Technology transfer	✓	✓	✓

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## Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
<b>Field of technology</b>			
<i>Design &amp; layout</i>			
<b>Functional integration</b> Sensor technology	✓	✓	
<b>Measuring and testing technology</b> Component and part analysis, Visual analysis (e.g. microscopy, metallography), System analysis, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	✓
<b>Modelling and simulation</b> Crash behaviour, Loads & stress, Life-cycle analysis, Multiphysics simulation, Optimisation, Processes, Materials, Reliability validation	✓	✓	✓
<b>Plant construction &amp; automation</b> Plant construction, Automation technology, Handling technology, Robotics	✓	✓	
<b>Recycling technologies</b> Material separation, Recycling	✓	✓	✓

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	Research	Development	Manufacturing & Supply
<b>Manufacturing process</b>			
<b>Additive manufacturing</b> 3D printing, Laminated object manufacturing (LOM), Fused deposition modeling	✓	✓	✓
<i>Coating (surface engineering)</i>			
<i>Fibre composite technology</i>			
<i>Forming</i>			
<i>Joining</i>			
<i>Material property alteration</i>			
<b>Primary forming</b> Extrusion, Casting, Pultrusion, Sintering, Injection moulding	✓	✓	
<i>Processing and separating</i>			
<i>Textile technology</i>			

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	Research	Development	Manufacturing & Supply
<b>Material</b>			
<b>Biogenic materials</b> Bioplastics, Biocomposites, Wood	✓	✓	
<b>Cellular materials (foam materials)</b> Closed-pore, Open-pore, Syntactic foams	✓	✓	
<b>Composites</b> Aramid fibre composites, Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Ceramic matrix composite (CMC), Carbon-fiber reinforced plastics (CFRP), Short fibre-reinforced concrete, Metal-fibre-polymer composite, Metal-ceramic composite, Metal matrix composite, Nanocomposites, Natural fibre reinforced plastics (NFRP), Laminates, Particulate composites, Textile-reinforced concrete	✓	✓	
<b>Fibres</b> Aramid fibres, Basalt fibres, Glass fibres, Ceramic fibres, Carbon fibres, Metal fibres, Natural fibres	✓	✓	
<b>Functional materials</b> Electrostrictive / magnetostrictive materials, Shape memory materials, Piezoelectric materials	✓	✓	
<b>Metals</b> Aluminium, Intermetallic alloys, Magnesium, Steel, Titanium	✓	✓	
<b>Plastics</b> Thermoset plastics, Elastomers, Thermoplastics	✓	✓	
<b>Structural ceramics</b> Monolithic ceramics, Non-oxidic ceramics, Oxidic ceramics, Ultra-high-temperature ceramics	✓	✓	
<b>(Technical) textiles</b> Yarns, rovings, Meshes, Laid webs, Crocheted fabrics, Woven fabrics, Knitted fabrics	✓	✓	

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## Contacts

### Machine translation

This organisation has been machine-translated based on data provided in German.

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