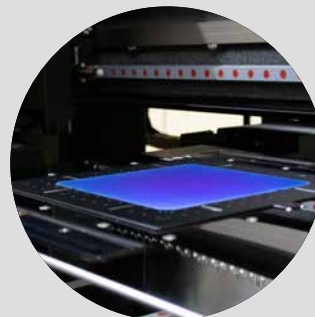
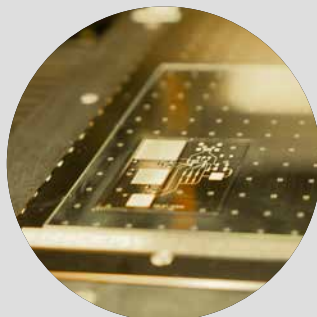
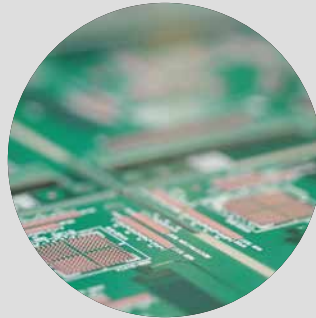
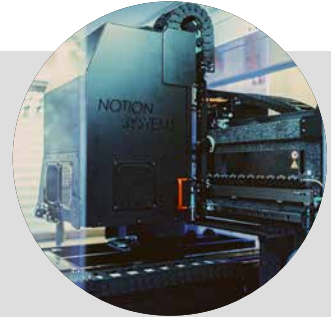
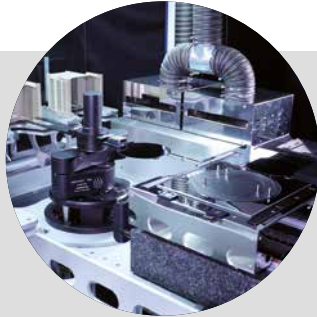


# NOTION

S Y S T E M S



---

THE FUTURE OF ADDITIVE MANUFACTURING

# NOTION SYSTEMS AT A GLANCE

**NOTION SYSTEMS** is a leading supplier of industrial inkjet printing systems for functional materials. Our n.jet inkjet platform is used to produce electronic displays, printed circuit boards, semiconductor components, as well as high precision optical 3D parts, covering the full range of solutions from lab to fab. We rely on decades of expertise, bringing precise inkjet systems to clients and scaling up digital printing processes from laboratory to industrial production.

Notion Systems is based in Schwetzingen close to Heidelberg in Germany and works together with leading sales and service organizations worldwide with a focus on Asia, Europe, and North America.

With our **industrial inkjet systems** and **process solutions**, we **supply key high-tech industries** and **support the world's leading manufacturers** to produce their products in a more **ecological and economical way**.



REDUCED PRODUCTION STEPS



REDUCED ENERGY CONSUMPTION



REDUCED MATERIAL WASTE

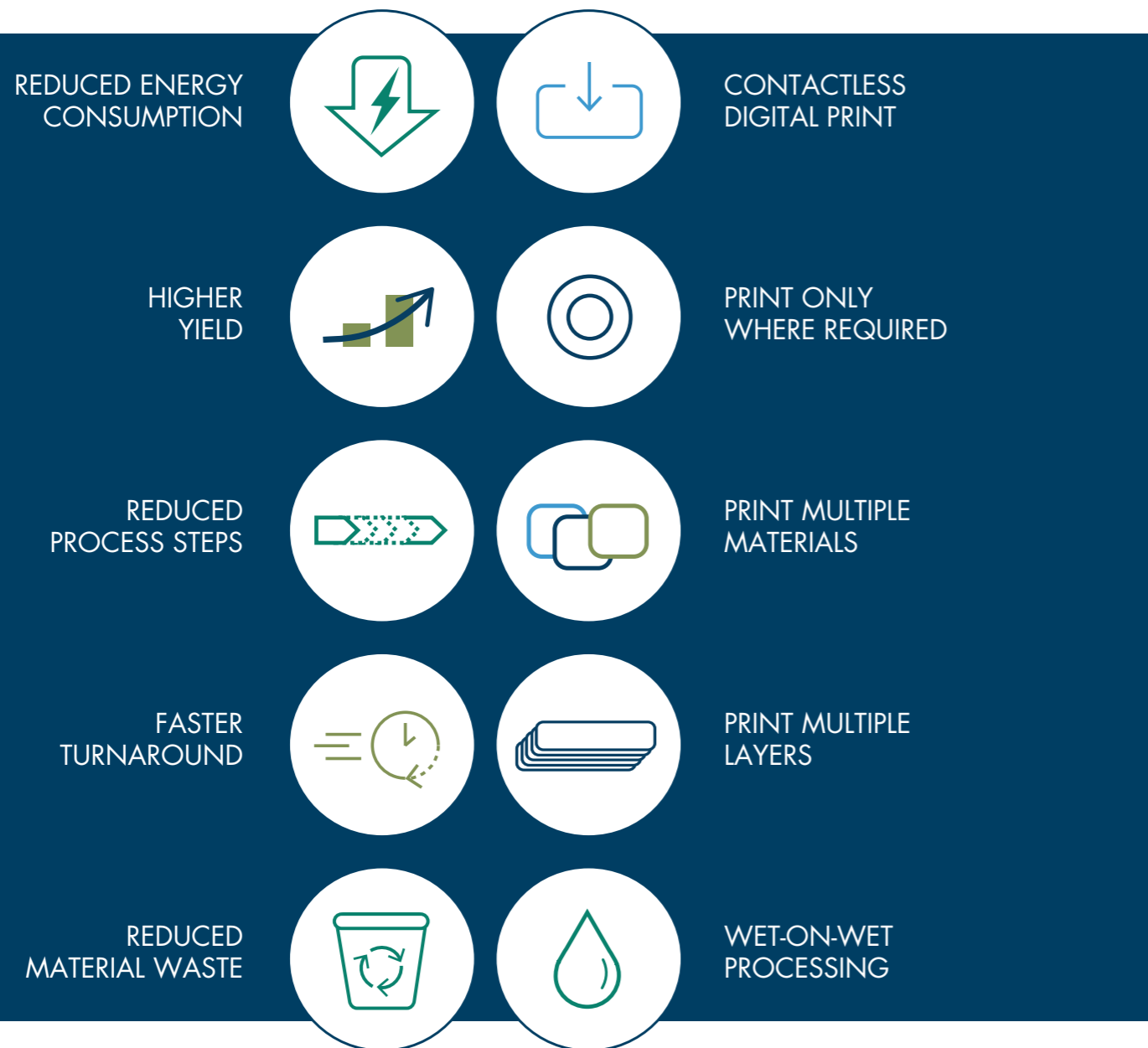
# NOTION SYSTEMS AT A GLANCE



# ADVANTAGES OF INKJET PRINTING

Inkjet is a non-contact, digital printing technology which creates fine structures of 30 microns and below. The fully digital non-contact printing enables wet-on-wet processing without the need for masks or screens".

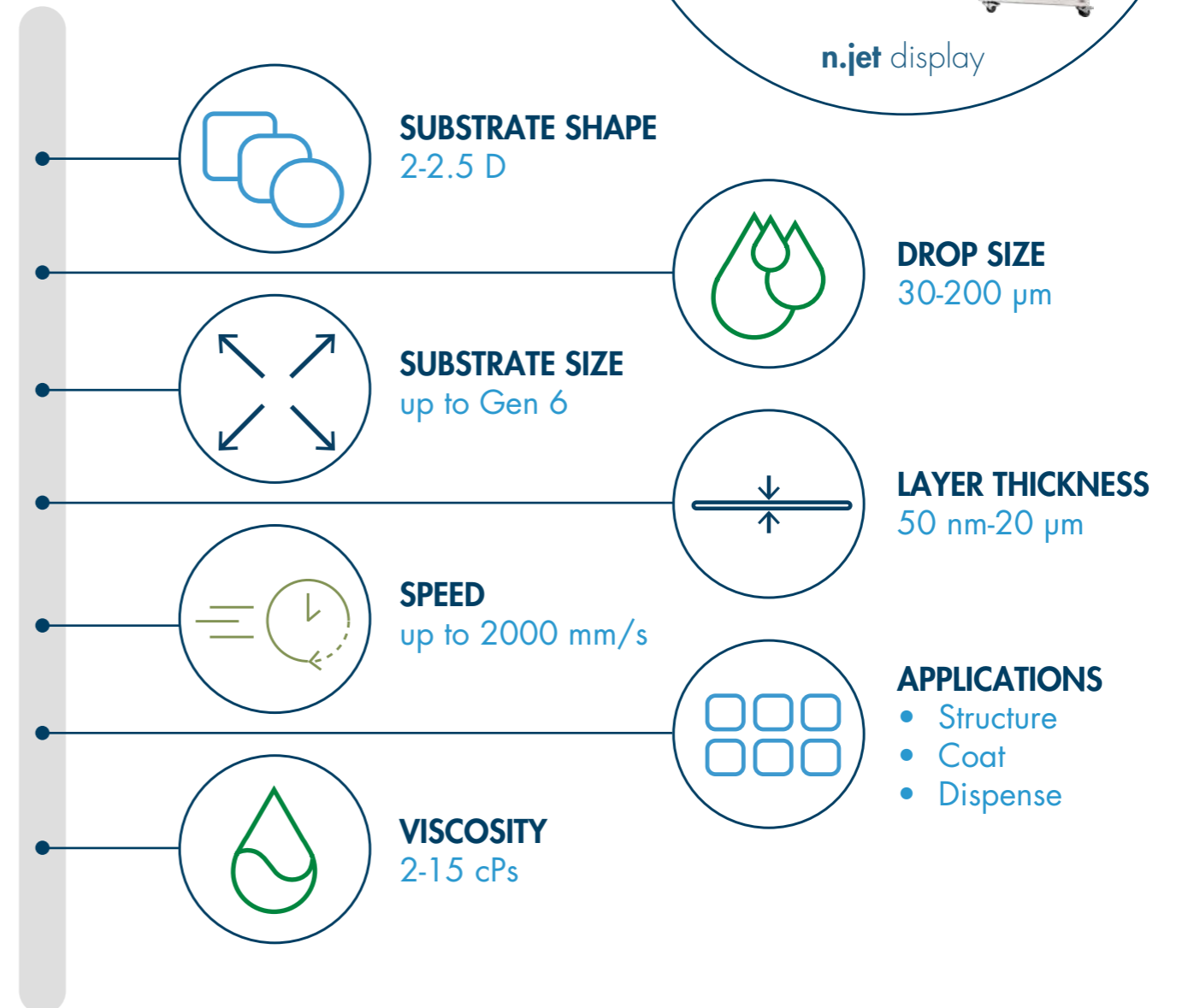
Inkjet is used to replace established subtractive process sequences and reduces waste and energy consumption, which makes electronics production more economical and ecological.



# WHAT CAN INKJET DO?

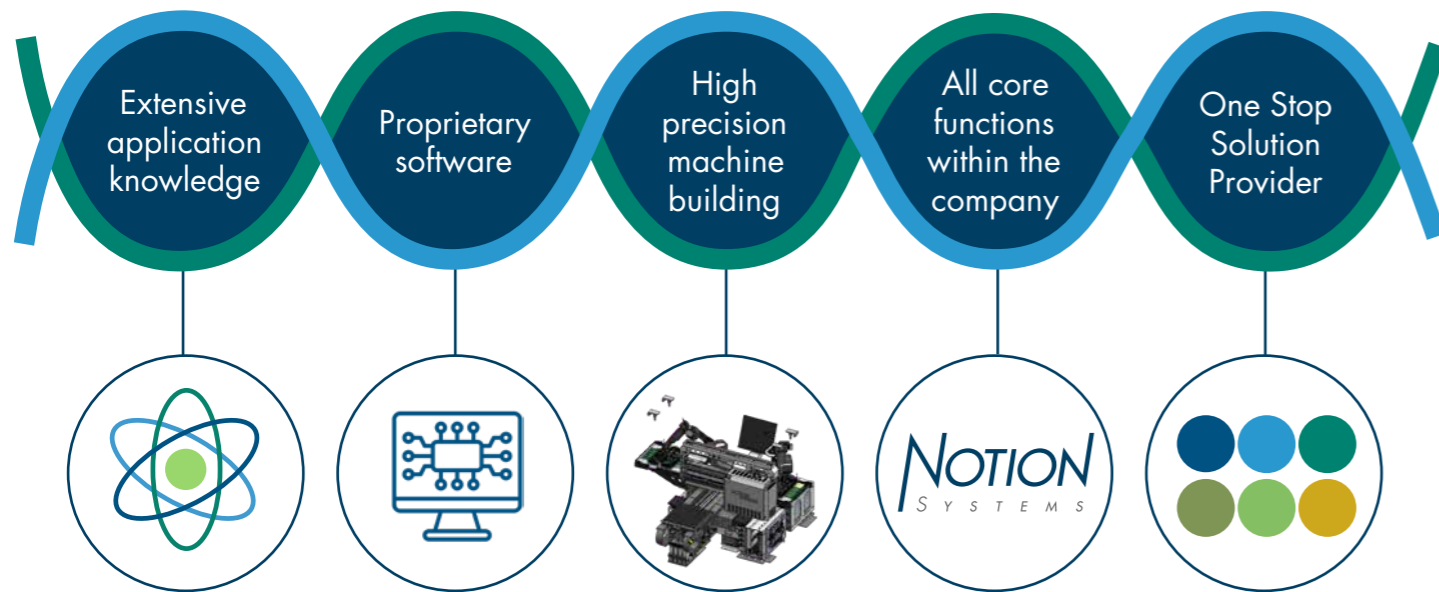
Inkjet is a highly integrated printing method utilizing several thousand nozzles to print at production speeds of up to 2 meters/sec.

Outstanding printing precision, high repeatability and high throughput are for example very important parameters for the production of novel OLED/QLED displays.



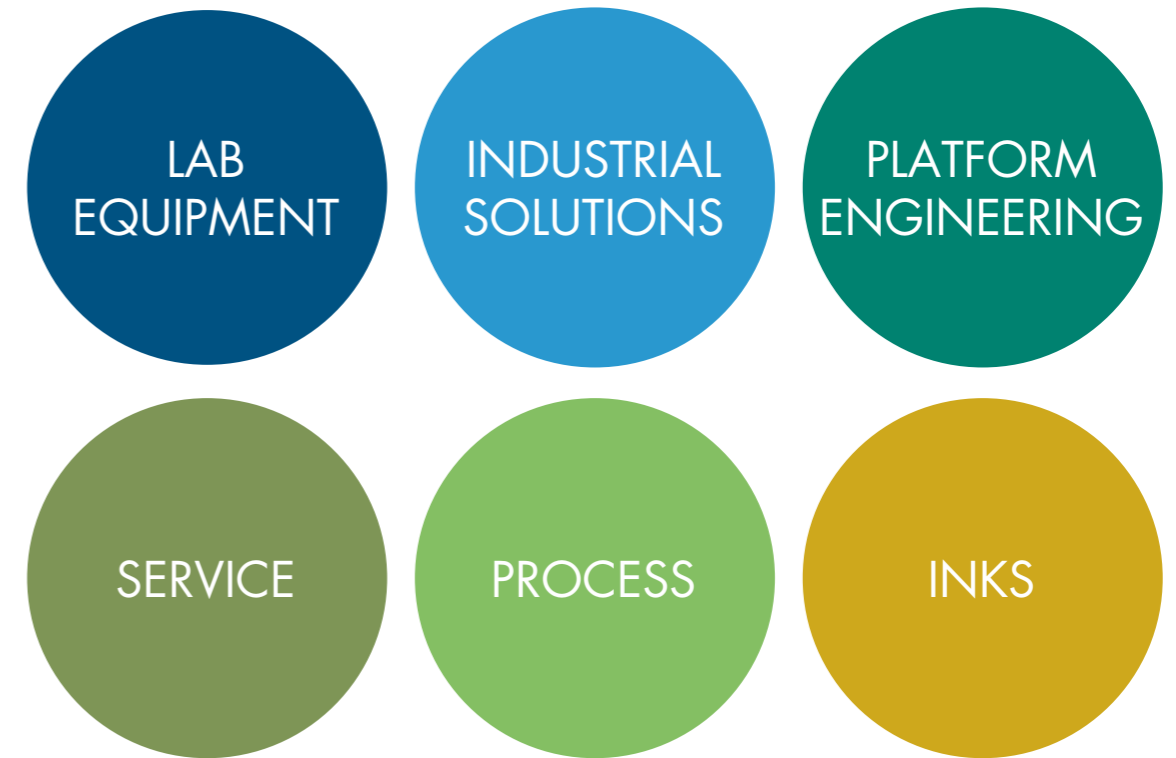
# OUR DNA IS INKJET

Developing high-quality inkjet systems, custom software and stable inkjet processes is a complex assignment that requires advanced expertise in a range of technical areas. Inkjet printing is our passion and we brought together a range of experts in the field of process development, software and engineering to develop tailor-made inkjet systems for functional materials with the highest standards.



# ONE STOP SOLUTION PROVIDER

With decades of experience, we bring precise inkjet systems to our customers and cover all steps for scaling digital inkjet printing processes from the lab to industrial production.



# LABORATORY EQUIPMENT

Notion Systems offers various types of laboratory equipment for testing new functional printing inks, substrates and printing strategies to develop new applications. We are the right partner no matter the application, development goal or budget. We have every system in use ourselves, which allows us to give accurate field support and real world training.



## Fujifilm DMP 2850

The Fujifilm Dimatix Materials Printer (DMP) is a benchtop materials deposition system designed for micro-precision jetting a variety of functional fluids onto virtually any surface, including plastic, glass, ceramics and silicon, as well as flexible substrates from membranes, gels and thin films to paper products.

## n.jet lab

The modular design of the n.jet lab allows adapting the platform to your exact specification with industrial grade components including full automation and environmental control. Compatible with all major printheads manufacturers, that n.jet lab allows the simultaneous use of multiple inks with fully automated printhead cleaning solutions available.

A drop watch system can be fully integrated into the platform making the visualization and analysis of the drop formation process possible. These factors make the n.jet lab the primary option for scaling your process from lab to fab.

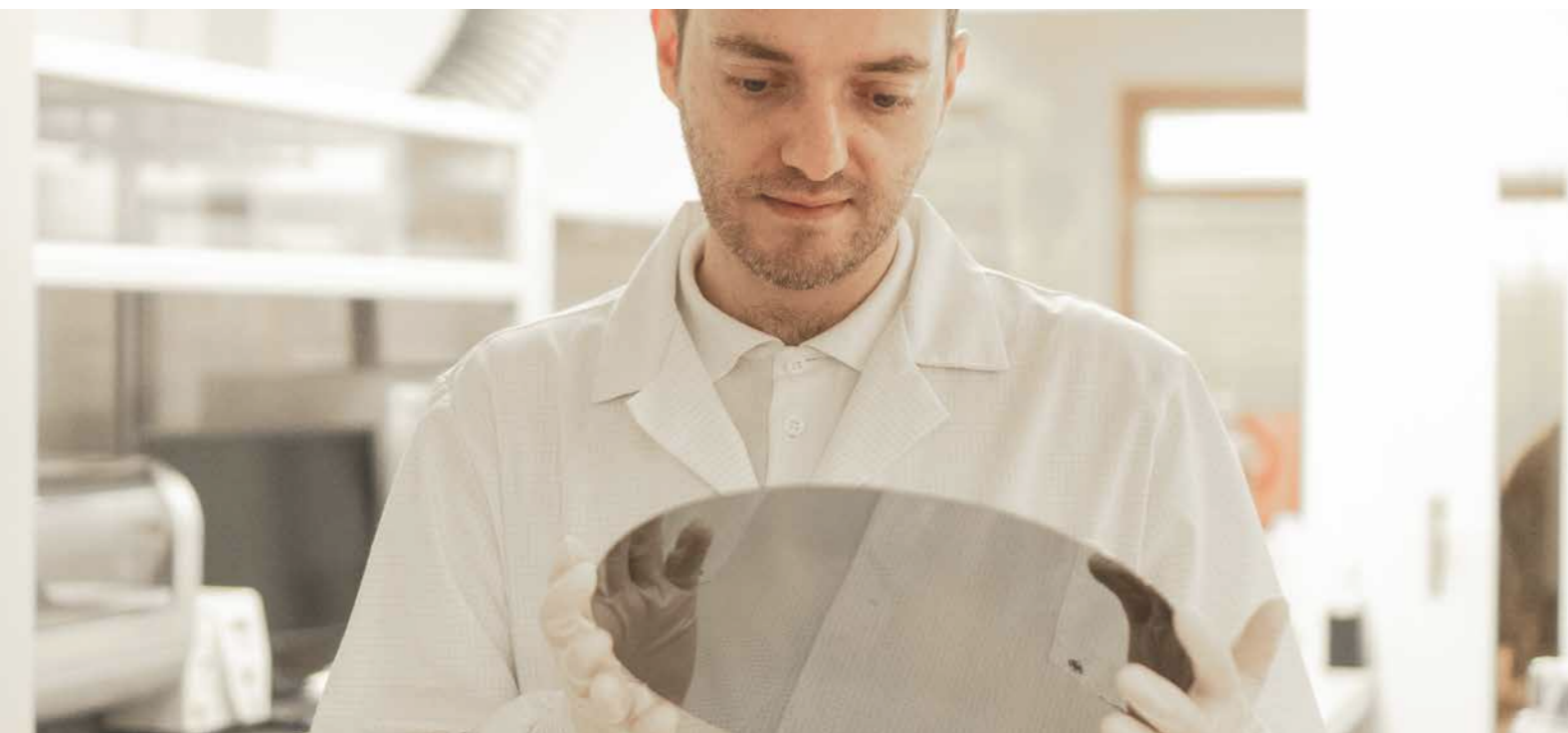
### Advantages

- Open platform that provides access to all process parameters
- Smooth scale-up from R&D to 24/7 industrial production
- Versatile applications with printheads from all major manufacturers
- Multiple configurations with heads and inks from different suppliers possible
- Up to four active printhead configurations, each with their own ink
- High precision mechanical design with self calibration including nozzle calibration and nozzle substitution strategies
- Clearly structured graphical user interface

## n.jet EHD powered by Scrona

Electrohydrodynamic (EHD) nanodrip printing is a new high resolution printing technology enabling maskless, direct-write, 3D, non-contact, conformal and additive patterning at the nanoscale with a variety of ink systems and materials.

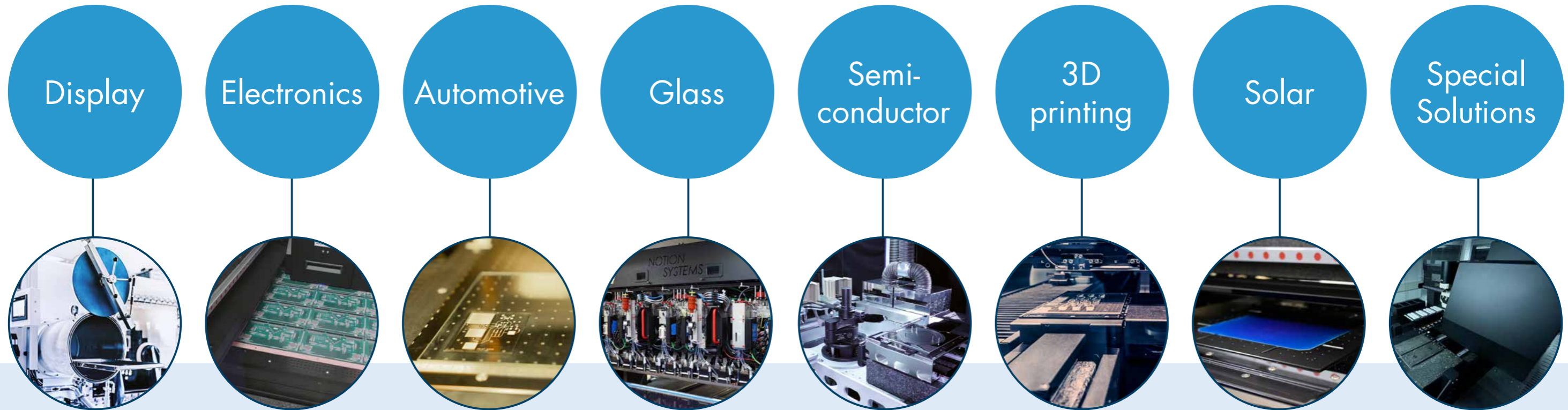
Scrona develops multi-nozzle MEMS printheads with ultra-high printing resolution capabilities lower than 1  $\mu\text{m}$ . This R&D tool is addressed to advanced development labs in various fields of micro-fabrication and digital additive manufacturing.



# INDUSTRIAL SOLUTIONS

Our innovative inkjet production solutions for functional materials have contributed to important success in the high-tech industry - from innovative new OLED displays to perovskite-based solar cells.

Depending on the application and customer requirements, we are able to offer the right production solution and various options such as automation or different types of pre- & post-treatment options.



### Applications

- Pixel printing
- Encapsulation
- Light blocking, switching & guiding layers

### Applications

- Conductives
- Dielectrics (e.g. soldermask)
- Etch resists

### Applications

- Sensors
- Antennas
- Adhesives

### Applications

- Adhesives
- Conductives
- Blackmask

### Applications

- Resists
- Deposition of sensor active inks
- Chip packaging

### Applications

- Advanced optics
- Precision parts
- Hybrid manufacturing

### Applications

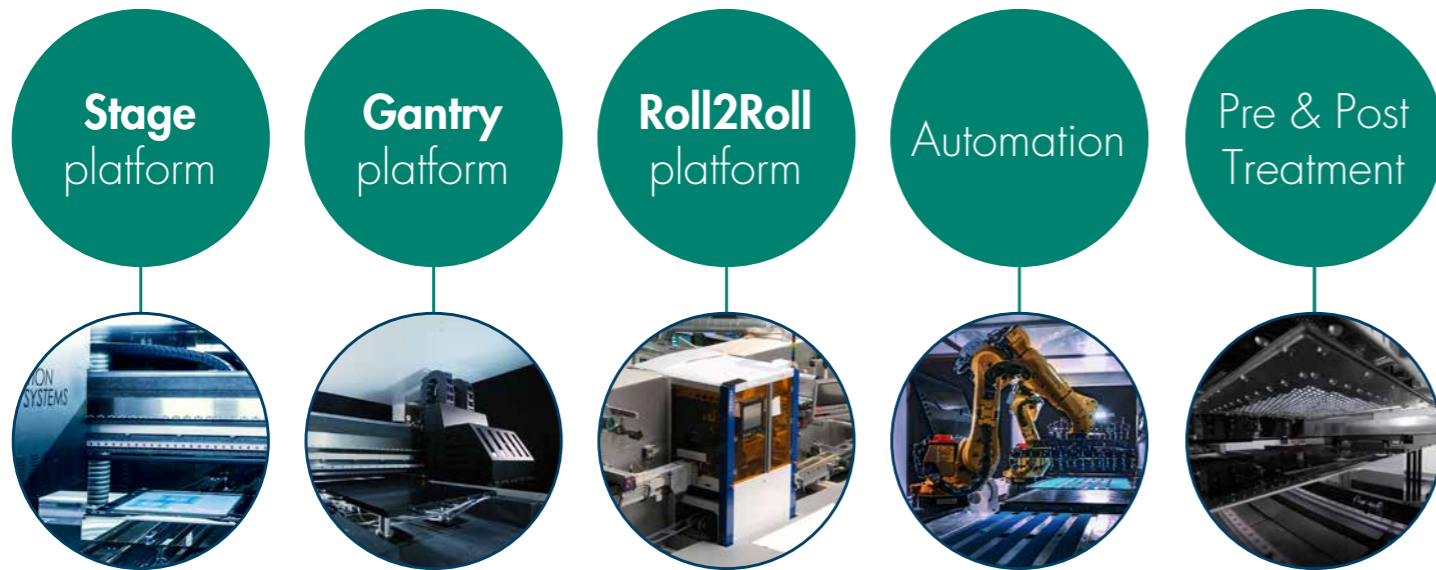
- Conductives
- Persovkites
- Resists for crystalline and thin films

### Applications

- Tailormade systems depending on customer request

# PLATFORM ENGINEERING

Notion Systems has developed a modular and open inkjet platform, which can be adapted to end user requirements in almost any respect. Our inkjet solution portfolio sets international standards in terms of efficiency increase while reducing production costs.

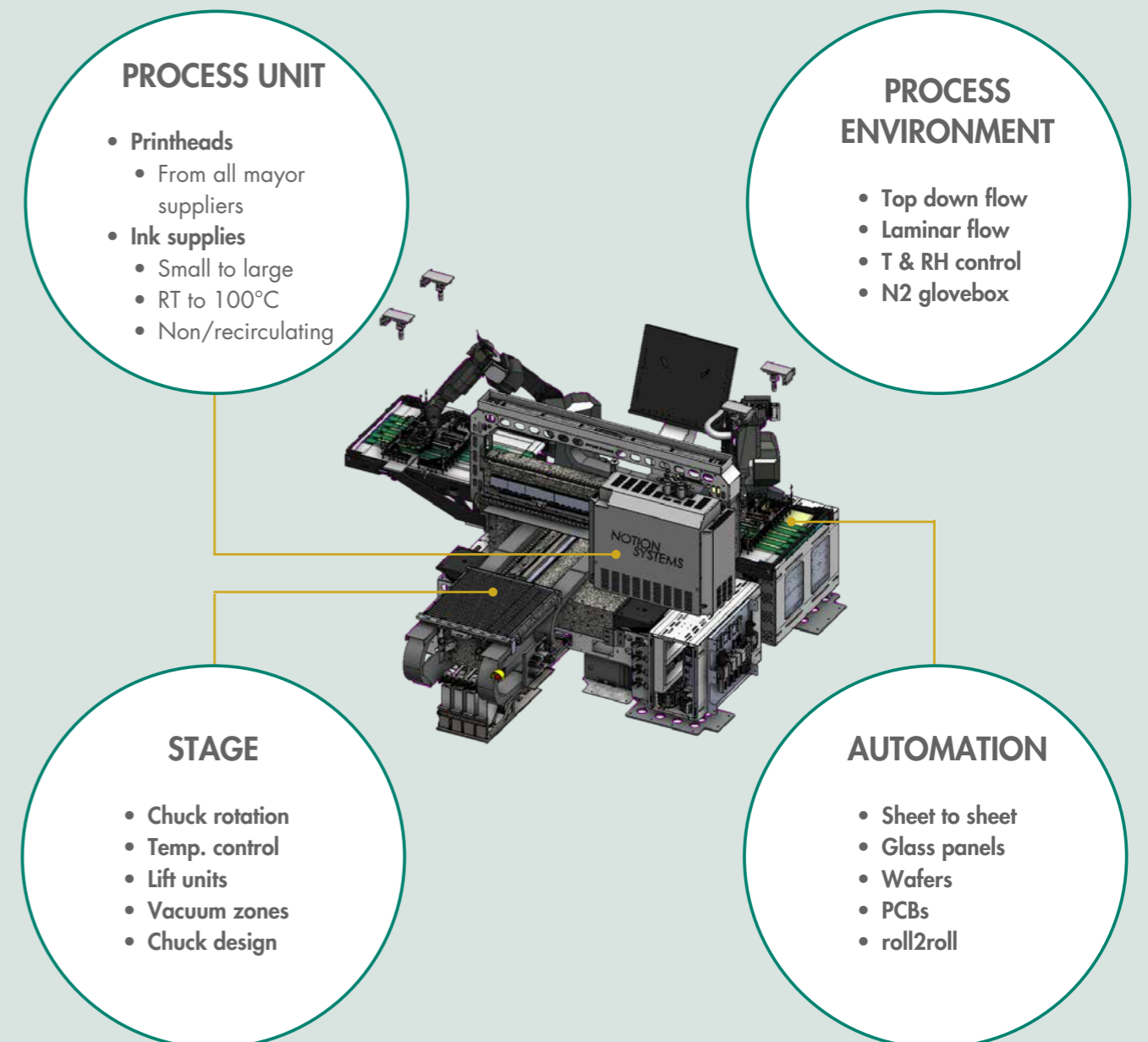


Our modular n.jet platform can be adapted to any production layout



# MODULAR ENGINEERING OPTIONS

Without compromising process stability or precision, our n.jet platform can be adapted to suit your needs including printhead assemblies in any configuration for almost any industrial printhead, stage sizes up to Gen 6, stage temperature control, hardware & software modules for drop formation analysis, optical alignment, automatic platform calibration, AOI modules as well as various stages of process environment control.



# PROCESS DEVELOPMENT

Process development helps optimize various parameters such as

- Ink formulation,
- Printhead selection,
- Substrate choice,
- Substrate preparation,
- Printing speed, and
- Image resolution.

By systematically adjusting these parameters, process development can enhance the **printing quality, efficiency, and reliability of inkjet printing**.

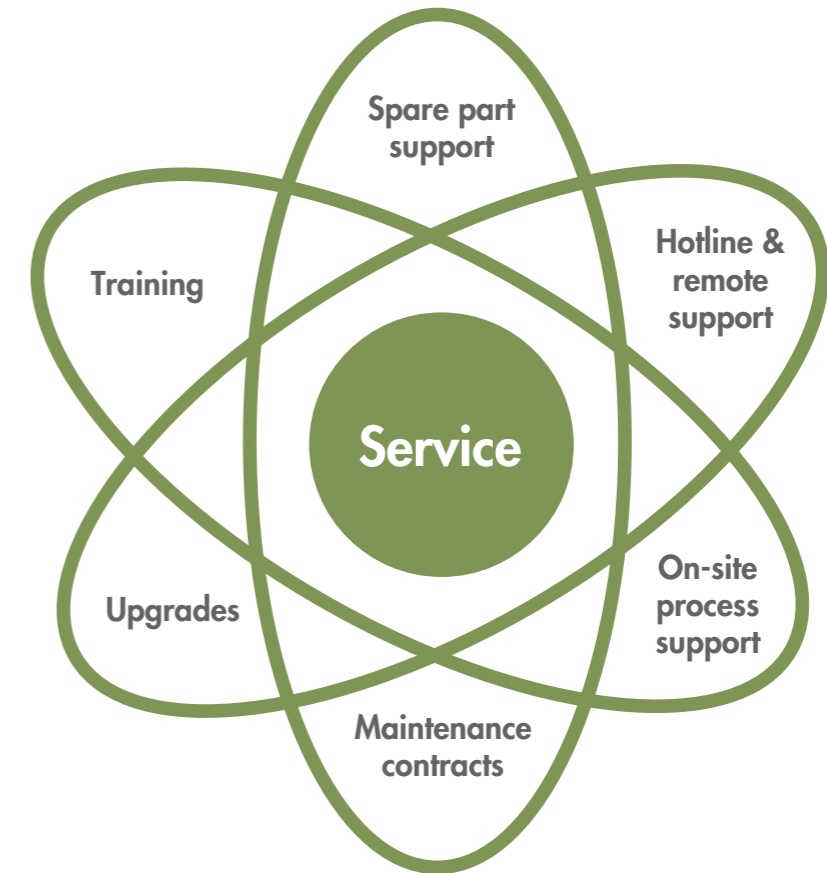
This is particularly important for industrial applications, where consistent and high-quality printing is required for mass production. Additionally, process development can help **minimize the environmental impact of inkjet printing** by reducing ink and energy consumption and waste generation.



# AFTER SALES SERVICE

**We support our clients in achieving their goals**

We offer a worldwide service and spare parts service to ensure our customers the highest possible operational uptime of our inkjet systems.





# NOTION

S Y S T E M S



## Headquarter

Notion Systems GmbH  
Carl-Benz-Straße 22a  
68723 Schwetzingen  
G E R M A N Y

☎ +49 6202 57877-0  
📞 +49 6202 5787799

sales@notion-systems.com  
www.notion-systems.com



## THE FUTURE OF ADDITIVE MANUFACTURING

