



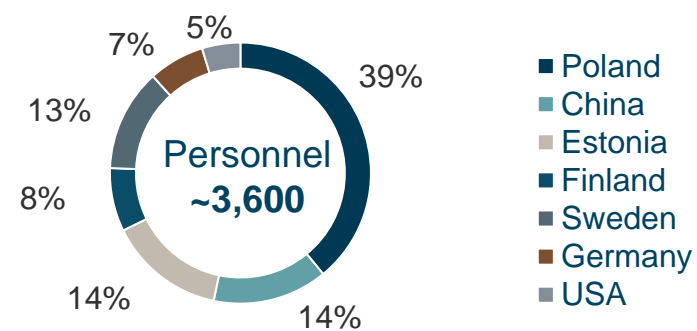
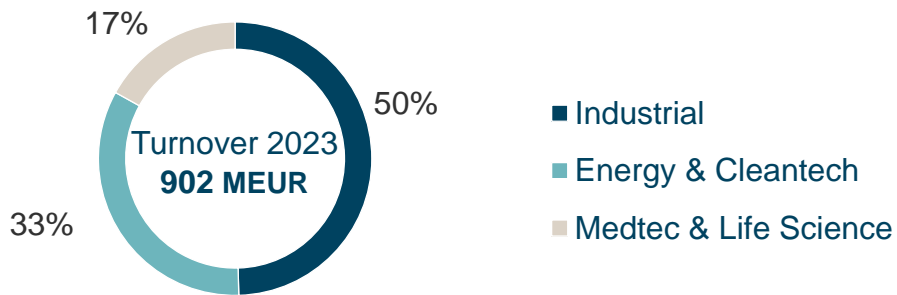
**SCANFIL**  
Electronics GmbH

## **Your reliable Partner**

for electronics development and  
electronics manufacturing

E<sup>2</sup>MS

# Scanfil in a Nutshell



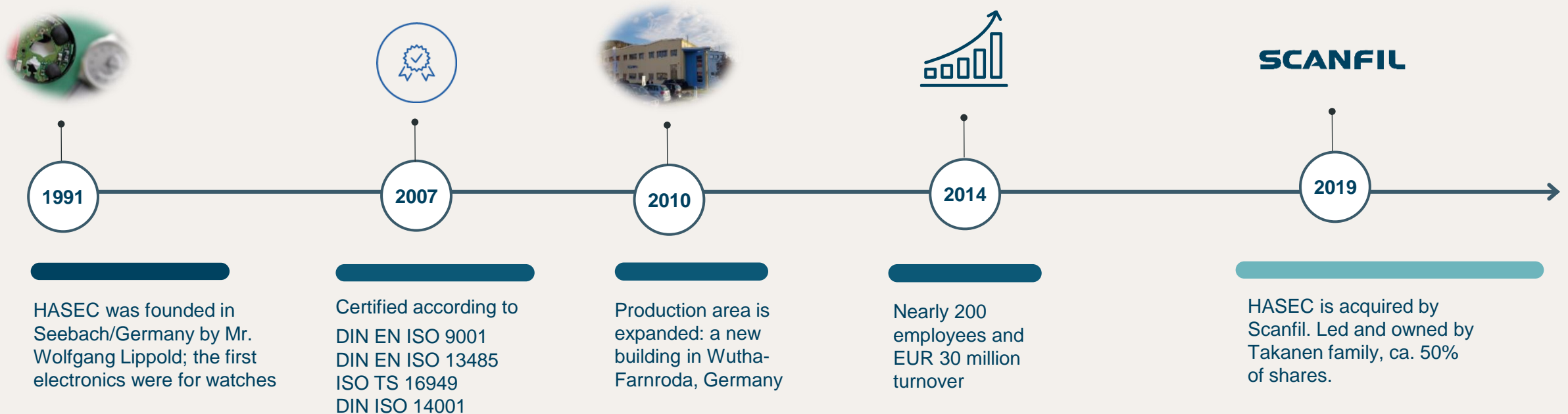


# Scanfil Electronics GmbH, Wutha-Farnroda

- Electronics Engineering and Manufacturing Services (E2MS) provider
- Founded as “HASEC-Elektronik GmbH” in 1991 as one of the spin-offs from the former „Uhrenwerke Ruhla“
- Following a 130 years tradition in precision mechanics and watch making in the region
- Joined Scanfil Group May 2019
- Global Certifications:
  - DIN EN ISO 13485 (MedTech)
  - DIN EN ISO 9001 (Industrial)
  - EMAS incl. DIN EN ISO 14001



# Key Milestones of Our Growth





# Wutha, Germany

PCBA and Boxbuild in medium volumes

- Complex System integration
- Production of medical devices
- Production in clean room
- Mechanical assembly
- Dedicated staff for fast prototyping
- High quality, fast delivery

~230

Personnel  
Headcount + third party

~ 6,200 m<sup>2</sup>  
66,000 sft

Floor area



Wutha  
Germany



# Customer Segments



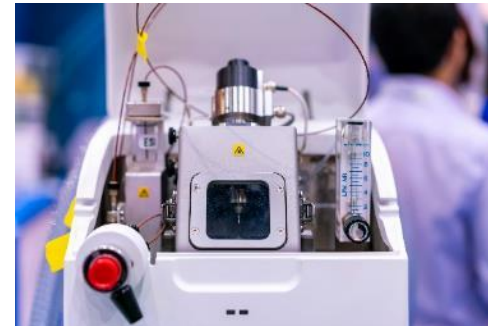
## Industrial

- The foundation of Scanfil
- Wide range of industrial and B2B clients
- Growth drivers: industry 4.0, self-service applications and urbanization



## Energy & Cleantech

- “The greenest energy is the energy we don’t use”
- Heat pumps, smart control units, electricity grids etc.
- Growth drivers: regulation, electrification, circular economy



## Medtech & Life Science

- Demand changes are quite modest - resilient
- Mass spectrometers, analyzers, air control devices
- Growth drivers: growing middle-class

somfy

techem

efr

ThermoFisher  
SCIENTIFIC

audifon  
hearing systems

Tunstall

SIKA®

dormakaba

Roche  
Diagnostics

STEGO

# Products we have produced

- Prosthetics
- Hearing aids
- Blood preparation and blood analysis
- Hospital emergency call systems
- Plasma therapy systems
- Analytical instruments
- Control and power units for industrial automation
- Vacuum and pressure sensors
- Magneto resistive and optical sensors
- IoT applications
- High speed data transmission systems
- Telephone and data networks in buildings
- Fire security systems
- Official document chip card readers
- Sun protection, climate control
- Smart Metering solutions
- Time control
- Locking systems
- Physical access control
- Position monitoring
- Voice control
- Power applications
- Battery management
- LNG gas fueling systems





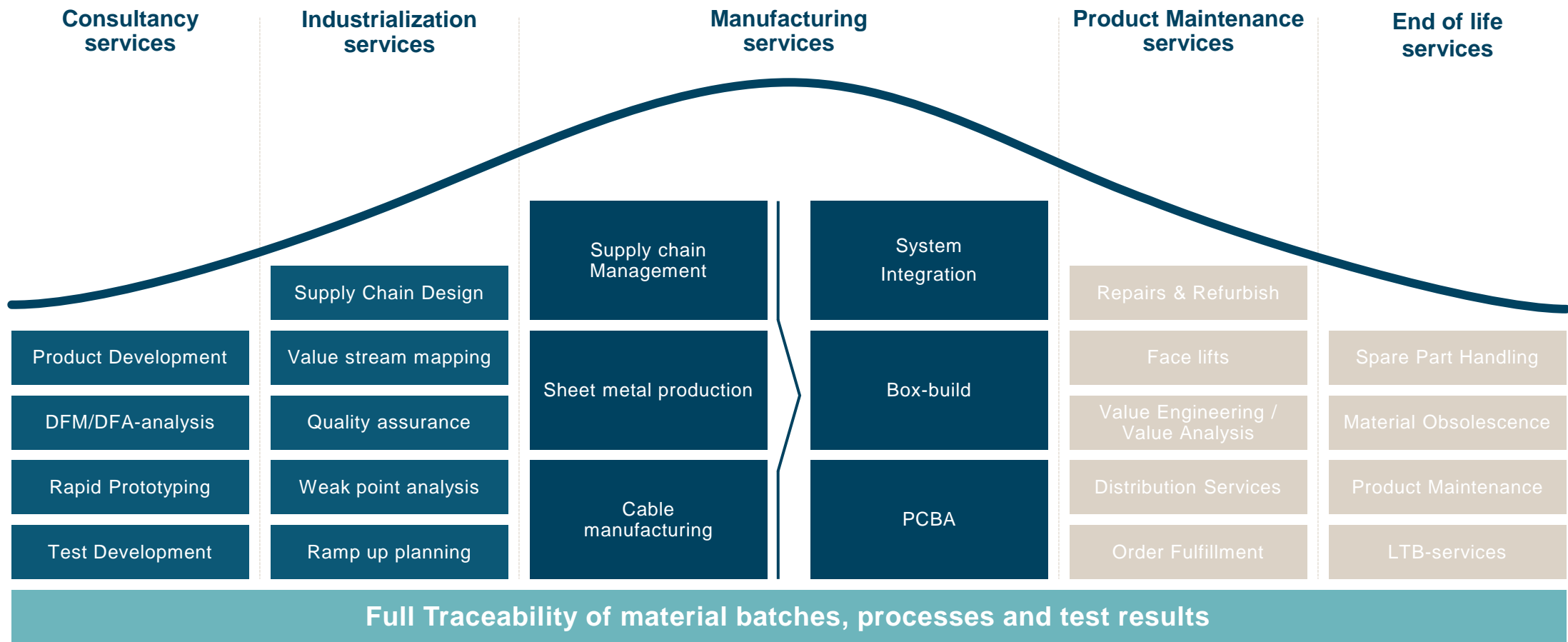
# Our Aspiration

- Generate value for existing and new customers and to grow the business in Central Europe
- Reduce time to market (prototyping, first time right in NPI, perfectly fitting services during design and ramp-up, standardized processes)
- Give our customers access to Scanfil's Global Sourcing Organization
- Ensure Best-in-Class production concepts and infrastructure with Scanfil Smart Operations strategy
- Provide flexible capacity and the setup to scale up according to our customer's global needs
- Live the spirit of the German "Mittelstand" and complete it by the strengths of a reliable global player





# Our offer throughout your products life cycle



# Scanfil Development Services - Value Proposition

We have designed & developed products for our customers for decades, helping them ***focus on their core business***, optimizing their fixed cost structure and total product cost of ownership.

Scanfil Development Services adds value thru ***fast & seamless time-to-market execution***, turning your idea into sellable products.

Through Scanfil's ***own design house*** & our ***strategic design partners*** with integrated processes, Scanfil is able to enhance and transform our customers' businesses with ***state-of-the-art technology - optimized for manufacturing***.



# Scanfil Development capabilities

## SCANFIL

**Scanfil In-house team**

*Experienced and skilled in-house team with close contact to manufacturing that leads to industrialization-friendly products*

## Etteplan

**Strategic partnership with Etteplan**

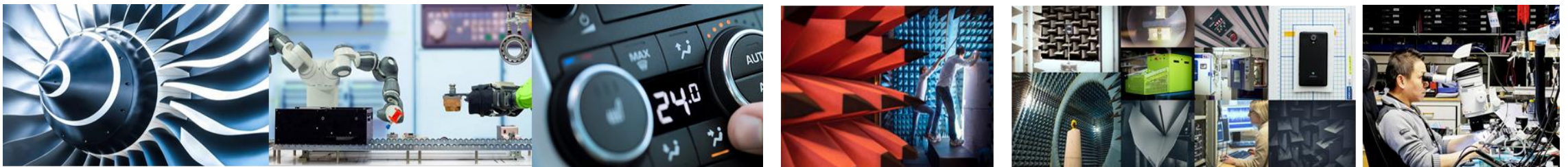
*A wide spectrum of technical capabilities & competence  
Large geographical footprint  
Capacity to run several large projects in parallel*

## IMG

Electronic & Power Systems

**Partnership with IMG Electronic & Power Systems**

*State-of-the-art competence to supports all phases of electronics development for hardware, software, FPGA design and power electronics.*



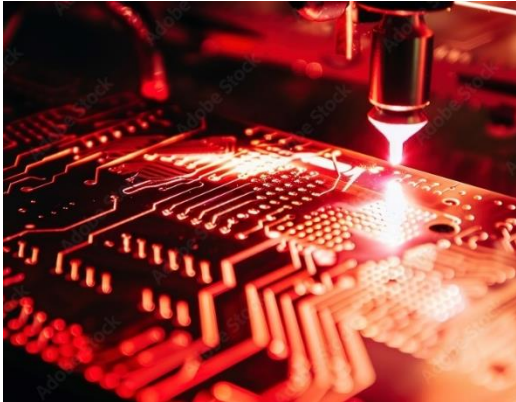


# Tool Box for fast and reliable NPI

- Project management software platform
- Standardized processes with clear design rules
- Fast DfX analysis using CAD/CAM platform Valor / BOM Connector
- P-FMEAs ready for all standard processes
- Test FMEA / MSA tool for save test coverage
- Fast prototyping process using separate production infrastructure
- In-house mechanical workshop
- In house 3D printer for tools and fixtures
- Test development team integrated in the factory

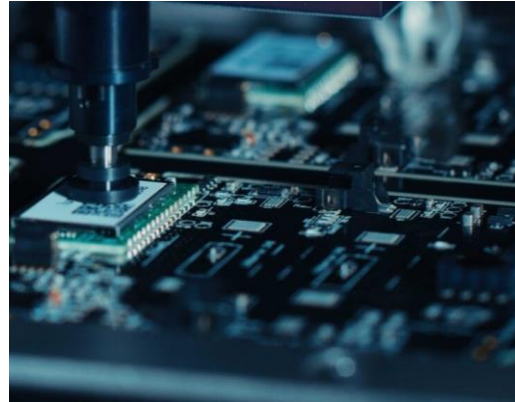


# Our Core – Manufacturing Services



## Laser Marking / Traceability

- Fibre laser marking
- Datamatrix and alphanumeric characters
- Full Traceability of material batches, processes and test results



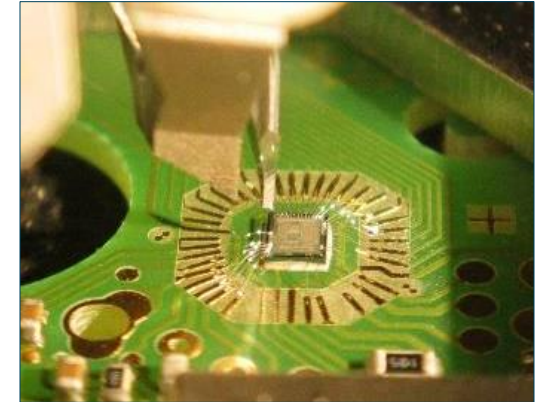
## Surface Mount Technology

- All established components
- Validated process for processing 01005 components
- Process control using inline 3D-SPI- and AOI-systems (according to IPC-A-610)



## Through Hole Technology

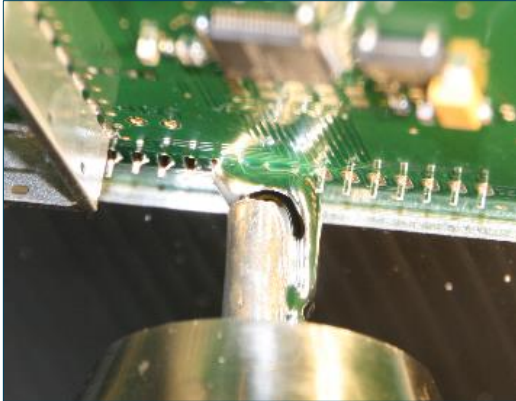
- Assembly of wired components
- Full tunnel machine with nitrogen atmosphere



## Chip on Board (COB)

- Die- and wire bonding
- Glob Top encapsulation
- Flip Chip assembly

# Our Core – Manufacturing Services



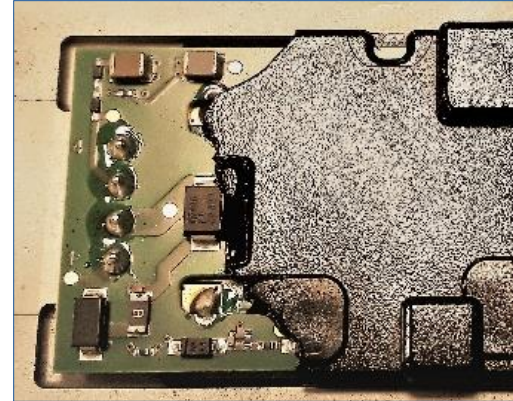
## Selective/Manual Soldering

- manual or automatic soldering of wired components
- Cobot Soldering



## Cutting / Panel separation

- Manual and automatic panel separation
- Laser depaneling process for flex, semi-flex and FR4
- Milling and sawing depaneling for FR4 material



## Hot Melt Molding

- Low Pressure Molding to cover PCBAs
- No damage of the electronic components
- Low-cost aluminum tools



## Varnishing / coating

- coating for the protection of PCBAs against high humidity
- limitation to selected areas possible



# Our Core – Manufacturing Services



## Potting

- protection of high voltage applications in harsh environments
- complete encapsulation of the PCBA



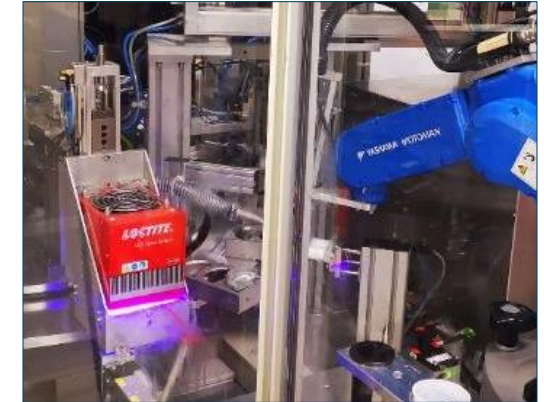
## Pad Printing

- multi-color marking of plastic housings (e.g. for branding)



## Electrical / Optical Testing

- Programming, ICT, FCT
- Boundary scan, Radio Frequency, High voltage
- Automated optical control by cameras



## Fully automated lines

- integrated assembly, quality control, testing and assembly
- Stable mass production with best cost, yield, throughput and quality level

# Our Core – Manufacturing Services



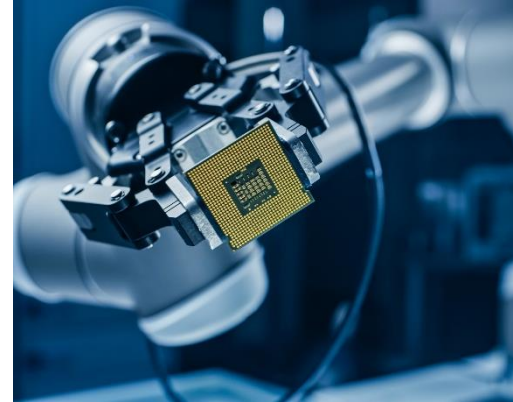
## Box build

- Manufacturing of complete products directly for the end customer



## System Integration

- Complex systems



## Cobot Solutions

- Soldering
- Glueing and potting
- Pick and place
- Packaging
- Screwing
- Assembly and test



## Packaging and Shipment

- Packing, logistics and shipment services

# Customer Case A: Fast replacement times

## Customer challenge

- Short-term reaction to the needs of end customers

## Scanfil solution

- Reduction of the processing time in the manufacturing process
- Implement outsourced processes internally
- Investment in new equipment and processes

## Customer Benefits

- Shorter production time by reducing of external logistics
- Internally stored processes







# Customer Case B: Product transfer

## Customer challenge

- Change from another EMS to Scanfil with a complete product range

## Scanfil solution

- Providing a project team
- Pre-procurement of material even before the change of location
- Fast samples for validation of processes

## Customer Benefits

- Involvement even before direct product takeover
- Transfer without breaking off the ability to deliver to the end customer

# Customer Case C: Fast growing of demand

## Customer challenge

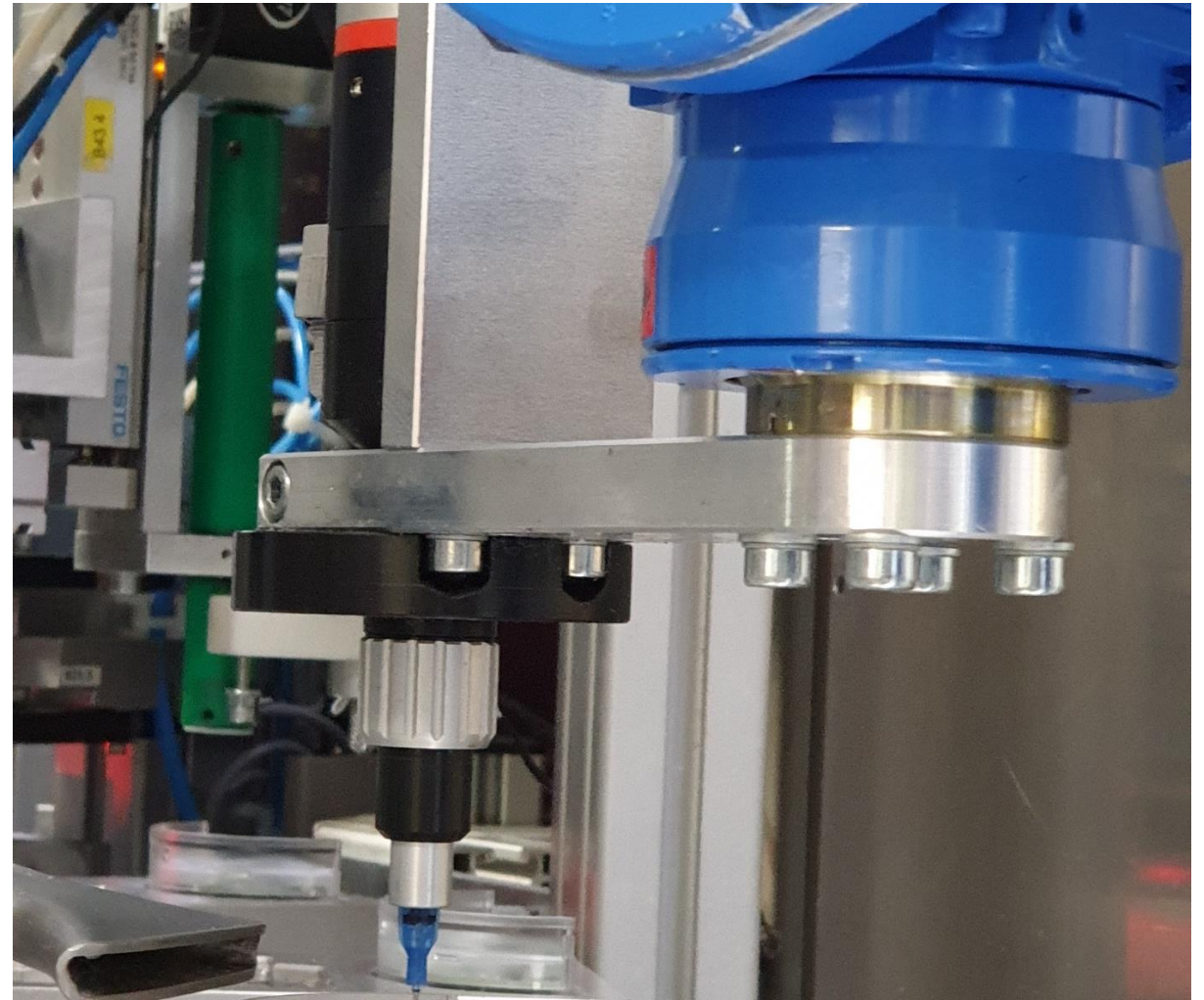
- Rapidly increasing end customer demand

## Scanfil solution

- Capacity increase with a cobot solution
- High quality with excellent efficiency

## Customer Benefits

- Better quality
- Short lead time





# Customer Case D:

## process with 01005 components

### Customer challenge

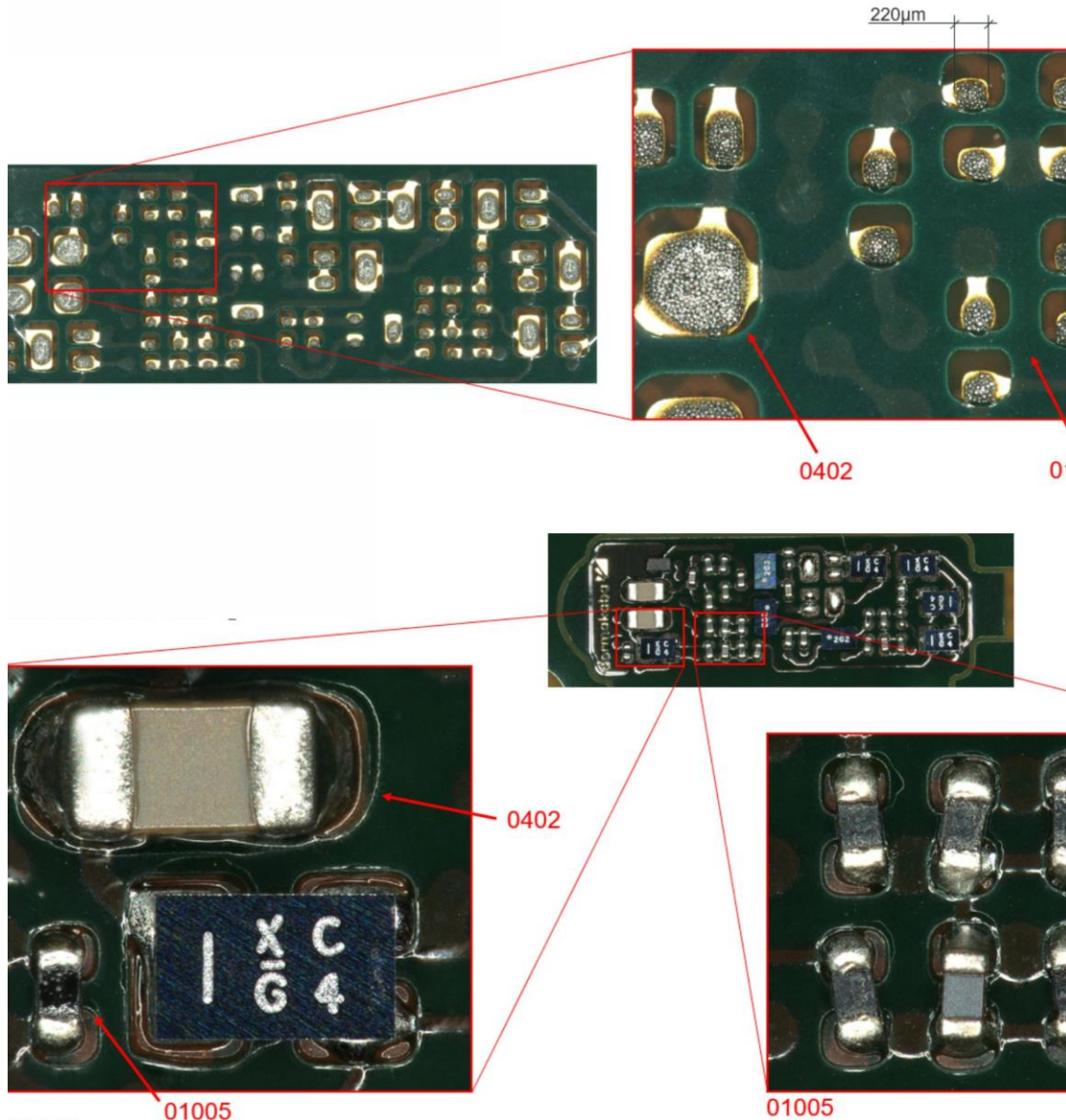
- Use of small components (01005) to reduce the size of the customer's product

### Scanfil solution

- Investment in new equipment and processes
- Validation and introduction of a new production process

### Customer Benefits

- Cost savings due to use of smaller components
- Successful miniaturization of customer products





# Summary: Added value for our customers

- **Highly skilled personnel** and wide access to resources
- **New ideas** with influence from other technique areas (cross contamination).
- SCANFIL's **long experience** in working with production and quality requirements
- Close to the customer
- **Short coordination** channels
- Open Book pricing
- **High flexibility** in the production process
- Wide range of technologies
- Partnership-based cooperation



# **SCANFIL**

## **Electronics GmbH**

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