# **DOMICRO BV**



## FLEXIBLE HYBRID ELECTRONICS

#### DOMICRO COMPANY PROFILE

DoMicro BV is a high tech company creating value by additive technologies in electronic manufacturing. As a startup DoMicro is focusing on flexible hybrid electronics market providing innovative and new technology, solutions and applications. Circuitry, transparent conductive films, OPV electrodes, transistors on flexible substrates, OLED, Lab-on-chip, wearables, IC and MEMS integrations. New products find their application into this rapid emerging industries. More information: www.domicro.nl



MEMS

Sensors



MedTech Microfluidics





Semicon Micro Assembly



Printing



Printing



**Flexible Electronics** Printing

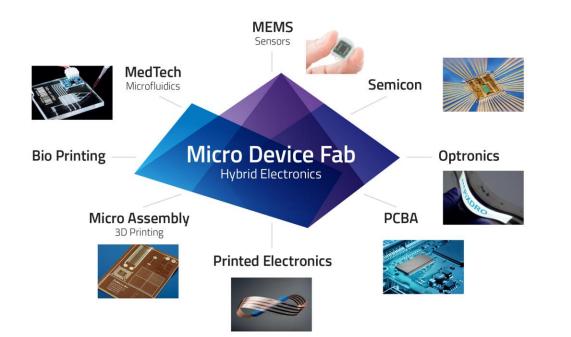
**Reducing Time to Market** 

Lower total costs

Enabling Ramp Up to Volume Manufacturing

Protected IP

#### TRENDS IN ELECTRONICS



Integration in different field of application

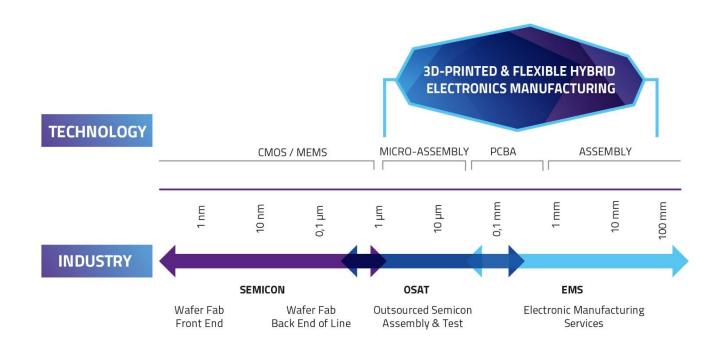
Low volume, High mix

Local versus Global supply

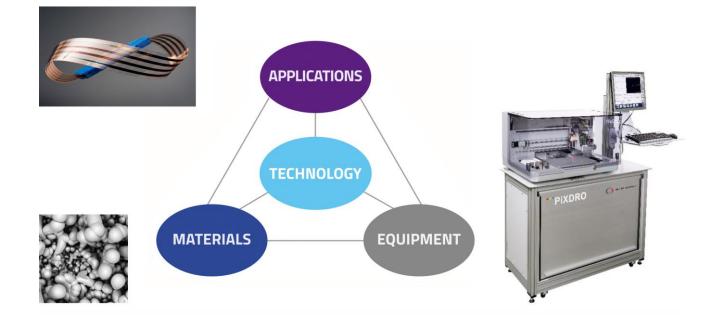
Wireless IoT

Wearables

#### ELECTRONICS INDUSTRY



#### TECHNOLOGY INTEGRATION



#### CONTENT



Integration of electronics in products for IoT Internet of Things:

- make things smart
- make things connected

### Development of base technology:

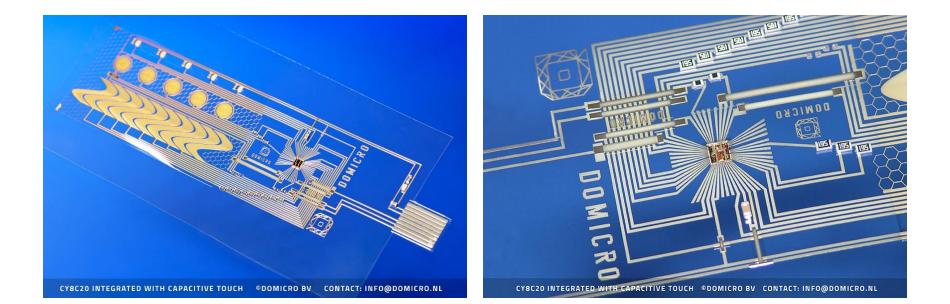
- Interconnect bare dies in foils by inkjet printing





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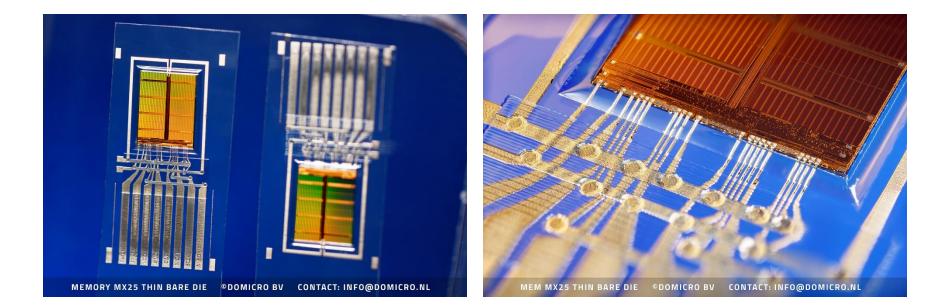
#### MCU INTEGRATION



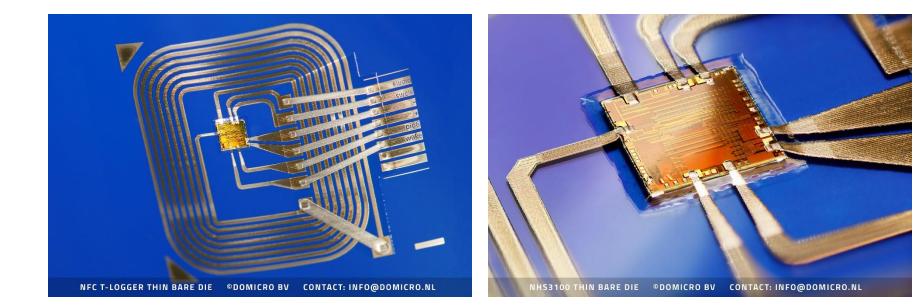




MEMORY INTEGRATION



#### NFC INTEGRATION



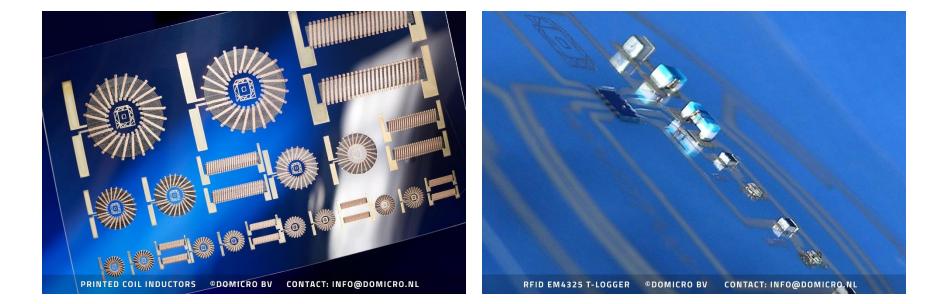




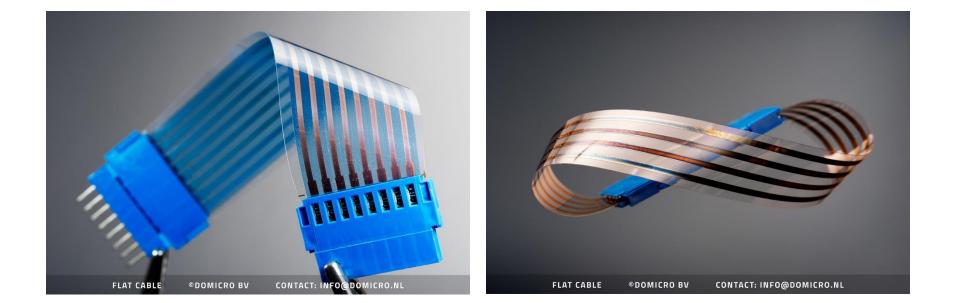
#### INKJET PRINTED PASSIVES



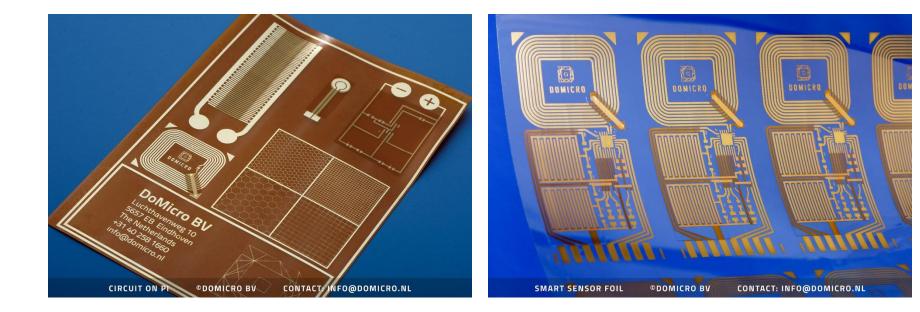
#### INKJET PRINTED PASSIVES



#### INKJET ON PEN



MULTILAYER CIRCUITS



**BGA INTERCONNECTION** 





#### HYBRIDS FOR WIRELESS APPLICATIONS







#### FLEX BATTERY & ENERGY HARVESTING



#### TECHNOLOGY READINESS



#### **TECHNOLOGY READINESS LEVEL (TRL)**

- TRL 1 Basic research
- TRL 2 Applied research
- TRL 3 Critical function or proof of concept established
- TRL 4 Laboratory Testing / validation of Alpha prototype component / process

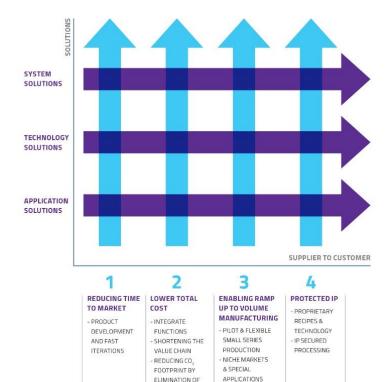
- TRL 5 Laboratory Testing of integrated / semi-integrated system
- TRL 6 Prototype system verified
- TRL 7 Integrated pilot system demonstrated
- TRL 8 System incorporated in commercial design
- TRL 9 System proven and ready for full commercial deployment

#### MICRO DEVICE FAB

- Integrated and automated process flow & handling
- Multi functional and versatile toolset
- Stand alone availability of tools
- Local clean room
- Shop floor control
- Process tuning

- Multi material substrates Si, Glass, Ceramics, Flexibles
- Fast NPI and ramp up from 10 → 10.000 pieces

#### VALUE PROPOSITION



GLOBAL LOGISTICS



#### MICRO DEVICE FAB



### AUTOMATED PROCESS SEQUENCE







#### AUTOMATED TRANSPORT & PROCESSING





**BUSINESS RELATIONS** 

#### Brainport Eindhoven

### St Petersburg Elektrotechnical University











Europäische Unic Europese Unie

# Production Technology for Flexible Hybrid Electronics

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