

# **SME MEMBERS** DIRECTORY



# **FOREWORD**



AENEAS is an Industry Association, established in 2006, whose purpose is to promote Research, Development and Innovation in order to strengthen the competitiveness of the European industry in the field of Electronic Components and Systems.

AENEAS brings together RD&I partners from Large Enterprises, SMEs, Research Institutes and Universities active all along the Electronic Components and Systems (ECS) value chain.

SMEs are an essential part of our innovation ecosystem. They bring new ideas and an entrepreneurial approach to the industrial community. They are the bedrock of the economy.

By participating in collaborative projects in partnership with Large Enterprises, Research Institutes and Universities, they provide specific knowledge and contribute to deliver very innovative and competitive solutions to the market. Together with their partners, they create economic and societal impact well beyond the boundaries of the project.

AENEAS offers a variety of services helping its members to benefit from a dynamic RD&I ecosystem and plays a pivotal role in stimulating a higher involvement of SMEs in collaborative projects. By organizing events and consortium building sessions, AENEAS provides its members with large networking opportunities. By working closely with the

European Commission and the Members States, AENEAS helps to shape the future funding instruments, based on the ECS Strategic Research Agenda prepared by Industry. In the two programmes in which AENEAS is currently involved, the new tripartite Key Digital Technologies partnership and the EUREKA Xecs, PENTA and EURIPIDES² Clusters, AENEAS supports its members, and particularly SMEs, to participate and increase their footprint, in projects well adapted to their needs.

In order to improve visibility and advertise for SMEs skills, AENEAS is editing this directory. All SMEs which are members of AENEAS can be part of it, it is a living document which will be regularly updated online on the AENEAS website.

I hope you will find it useful to extend your network and wish you all the best in your RD&I endeavours!

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Created in 1994

Company Location Israel



Employees 65

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Acktar is a world technology leader in the development, industrialisation and production of light absorbing Black coatings based on vacuum deposition technologies. Our coatings are integrated in the most sophisticated systems in space as well as in daily used technology.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Acktar is an equipment manufacturer and a service provider.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Acktar's most recent involvements are "UPHO" in EUREKA collaborative programme with two Germany based partners & "IqClock" from the Horizon 2020 program. Also previously involved in FP7 with projects NEXT-GTL, CARENA and CoMETHy.

# TECHNOLOGICAL EXPERTISES

Parts of optical systems, light absorbing tapes, high specific surface area coatings, cold shields & IR detectors parts, emitters, blackbodies, thermal radiators for thermal control system, parts for thermographic cameras, night vision systems, radiation absorbing layers for temperature sensors, heat dissipation coatings, high capacitance anode & cathode foils.

# **MARKETS**

- Optical components,
- Nanotechnology,
- Sensors, detectors, lasers.
- Semiconductors, optoelectronics,
- Automotive

# LOOKING FOR PARTNERS AND EXPERTISES

Looking to team-up with companies from a variety of fields for innovative collaboration.

MORE INFORMATION

www.acktar.com







# Adimec Advanced Image Systems by

Created in 1992 Employees

140



Company Location Eindhoven, The Netherlands



Adimec develops and produces cameras and lens assemblies that deliver true accurate images – the exact information in the scene – for precise decision making in time critical processes. By offering modifications and customizations, Adimec cameras excel beyond general purpose products to resolve specialized and unique imaging challenges.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Adimec provides application-specific leading-edge cameras solutions to enhance our customers' competitiveness in the machine vision, healthcare and global security environment.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

- Member of the "CAVIAR" consortium (PENTA)
- Member of the "Sensation" consortium (PENTA)
- Part of the MEDEA+ project TritonZ (CATRENE)
- Member of the CoaXPress consortium, initiator of the CoaXPress interface standard

#### TECHNOLOGICAL EXPERTISES

Our Core Technologies are:

- Real time high-speed image capture and image processing for specialty cameras.
- Repeatable and Reliable production tooling for both cameras and cameralens-assemblies.
- Qualified Supply Chain management.
   We are an extension of your development team.

#### **MARKETS**

Adimec designs, manufactures, and markets high performance industrial cameras for equipment manufacturers in:

- Machine Vision (Electronics Industry)
- Healthcare (X-Ray diagnostics)
- Global Security (Long Range Observation)

# LOOKING FOR PARTNERS AND EXPERTISES

Adimec develop strategic technology partnerships to enable quick and reliable responses to market requirements and remain stable yet innovative by enriching longtime partnerships while also developing new opportunities. Adimec are always looking for technology partners that are willing to share the project risk and benefits.

MORE INFORMATION

www.adimec.com











advICo is an ASIC design house, R&D and EDA service provider for analog, high frequency and broadband designs, sensors, radiation hard circuits etc. using various Silicon BiCMOS and CMOS technologies.

advICo also offers IP such as for circuit blocks, monolithic optical polarization filters for angle sensors or image sensors (POLDI), or radar polarization sensors (TRAPS).

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

advICo is a service provider for IC design, circuit and patent IP, and R&D

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

advICo's R&D has been both commercially and publicly funded (FP7, BMBF, DLR, ESA, ZIM,...), e.g. fiber-communication, optical and radar sensors, medical devices, wireless, radhard data converters and DC/DC

# **TECHNOLOGICAL EXPERTISES**

CMOS, SiGe BiCMOS, analog and RF, wideband linear circuits, data converters, digital filters and pseudorandom generators, modeling of passives (PEEC,FEM), modeling of sensors, optical sensors design, photonic filter design, modeling of radiation effects, EDA tool programming, PDK programming, integrated optical polarization sensors, integrated radar polarization sensors.

### **MARKETS**

Optoelectronics, Fibercom (for data center, metro, WAN networks, free-space optics), Industrial and automotive sensors (angle, speed, distance, position, etc.), Sensors for home appliances, surveillance etc.,

Medical devices and implants, RF and Radar, Satellite and nuclear research (radhard design), EDA

#### LOOKING FOR PARTNERS AND EXPERTISES

Services: customers with challenging tasks POLDI, TRAPS: partners for realizing advanced bearingless encoders, integrated motor feedback solutions, advanced image sensors, radhard sensors, automotive sensors

MORE INFORMATION

www.advico.de







Created in 1995 **Employees** 

35





Afore Oy designs and delivers intelligent test solutions for MEMS sensor testing and devices requiring application specific test solutions. We offer systems for device characterisation during development, wafer sort and final test. Sensor test solutions provide physical stimulus like motion, pressure, humidity and gas concentration. Afore operates globally and production is in Finland.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Afore Oy is an equipment supplier and service provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Involved in:

- PENTA project ESAIRQ
- ENIAC projects APPLAUSE and EUROPAT-MASIP

# **TECHNOLOGICAL EXPERTISES**

Providing wafer probe and device handling equipment with physical stimulus like motion, pressure and humidity for sensor test and calibration along the device development and production value chain..

# **MARKETS**

- MEMS sensor research and development.
- Wafer sort for MEMS sensors and other devices
- Final test for MFMS sensors and other devices.

# LOOKING FOR PARTNERS AND EXPERTISES

- MEMS development
- MFMS wafer level and final test
- Thermal imaging and photonics devices

MORE INFORMATION

www.afore.fi





# Agileo Automation



Created in 2010
Employees

16





Agileo Automation provides software and robotics solutions for production equipment.

Agileo has developed A<sup>2</sup>ECF Framework to realize control software for robotized equipment (cluster tools) ensuring communication with users (GUI) and with factory IT systems (PLM and MES) specifically using SECS/GEM in semi-conductor industry.

A<sup>2</sup>ECF can be considered as a digital twin of an equipment, being an Industry 4.0 enabler.

### POSITIONING IN THE FLECTRONICS VALUE CHAIN

Agileo Automation proposes consulting, software product and software services for production equipment manufacturers.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Agileo Automation has participated in 2 collaborative projects:

- OEDIPUS (EIT Digital): as a subgrantee from CEA to work on a use case for Industry 4.0 with Siemens & DFKI.
- Productive 4.0 (ECSEL): 109 partners-19 countries- Agileo works on the assessment on OPC-UA, a standard communication architecture for Industry 4.0 compared to SECS/GEM standards.

### TECHNOLOGICAL EXPERTISES

- Semi-conductor automation
- Software engineering
- Software framework
- Interoperability
- Communication standards
- Industry 4.0
- Robotics

### **MARKETS**

Process, test or inspection equipment manufacturers (OEMs) from:

- Semi-conductor, Photovoltaic, MEMS, LED
- Electronics. SMT
- Optoeletronics, Laser
- Aeronautics
- Machining

# LOOKING FOR PARTNERS AND EXPERTISES

Equipment manufacturers / Semi-conductor fabs / Advanced manufacturing / MES vendors / Research laboratory and companies with expertise in Industry 4.0, digital twin, interoperability, OPC-UA.

MORE INFORMATION

www.agileo-automation.com















ALTERIA AUTOMATION is an engineering company that designs & manufactures advanced embedded edge proprietary Industry 4.0 products (smart sensors & wireless connectivity nodes and gateways) for industrial condition-based predictive maintenance.

We resolve the issues created by collecting data from raw data sensors. Our technology pre-processes data at the source, saving 97-99% on the data payload before reaching the database.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Alteria is an equipment manufacturer and service provider (Systems & Applications).

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Alteria has been & is active in:

- Collaboration with Fraunhofer Institute for Production Technology in Aachen ( Predictive Maintenance on Industrial Cutting Machines) No Program Yet.
- PENTA 3 / Euripides2 consortium with Infineon & Fraunhofer (biodegradable smart sensors): PLANtAR
- O Spanish supported R&D (CDTI NEOTEC): Handheld Predictive Maintenance Device

# TECHNOLOGICAL EXPERTISES

- Smart Sensors: Vibration, Ultrasound, Temperature, Environmental, Inertial, Voltage, Current...
- Data preprocessing at source (sensor)
- Embedded Egde
- Sensor Fusion / Data Homogenisation
- Real Time / Time Synch
- Wireless Communication (Node & Gateway)

# **MARKETS**

- Industry 4.0
- Industrial IoT
- Predictive Maintenance
- Machinery Condition
- Smart Sensors
- Industrial Wireless Communications

# **LOOKING FOR PARTNERS AND EXPERTISES**

Specific industrial applications for our Smart Sensors:

- Rotary Machinery
- Robotic Applications
- Personnel Safety and Asset tracking
- Smart Composite Fiber optic

MORE INFORMATION

www.alteriaautomation.com







Created in 2010 **Employees** 







Anteverta-mw is pioneer of large signal device characterisation methodologies and systems, and high efficiency/linearity PA design. Anteverta's patented IP allows non-50 $\Omega$  characterisation at speeds up to 100x faster than traditional systems and is unique in its capability of wideband impedance control for realistic modulated signals. Anteverta offers measurement and modeling device characterisation services with an emphasis on high-speed nonlinear load pull and behavioral modeling.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Anteverta is an RF Test and Measurement equipment provider and a measurement and modelling service provider.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Anteverta has been and is active in several projects:

CATRENE: FAST ECSEL: BEYOND5

# **TECHNOLOGICAL EXPERTISES**

- Load-pull characterisation
- RF and mm-wave measurements
- RF device modelling

# **MARKETS**

RF Test and Measurement

# LOOKING FOR PARTNERS AND EXPERTISES

- RF manufacturing
- Mechanical machining

MORE INFORMATION

www.anteverta-mw.com







Created in 2020 **Employees** 



Company Location **Arakos Limited** Co. Wicklow. Ireland



ArgKos is an IP centric SME focused on the design and commercialisation of a distributed approach to RF filters and antenna for telecommunications across a range of bands including mmWave. With a rich portfolio of distributed resonators, we cater for high performance, modularity and extremely low-profile devices with a global set of manufacturing partners. We collaborate on design and manufacturing projects in mmWave and terahertz domains for filters and antennas.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

ArgKos is an expert design house and manufacturing provider of RF equipment and architectures

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Arqkos an Irish SME has collaborated on product design and production with customers, academic partners and manufacturers in Ireland, UK, Finland, Japan, Canada and the US. We are also engaged with the SFI CONNECT research centre.

# TECHNOLOGICAL EXPERTISES

- Simulation, design, IP protection and licensing of advanced filters and antennas for 5G and beyond.
- Manufacturing optimisation and subcontract management including dicasting, 3D and PCB printed structures.
- Test, verification and certification of discrete RF/mm-wave components, such as phase shifters and attenuators, RF sensors and MEMS switches

# **MARKETS**

- RF and material science research
- O Components and systems of RF/mmwave filter and antenna components
- Manufacturers and telecommunication equipment suppliers specializing in: Filters and antennas. Discrete RF components, wireless communications

# LOOKING FOR PARTNERS AND EXPERTISES

- Innovative telecommunication equipment manufacturers and suppliers
- Contract manufacturers, particularly PCB and dicasting experts
- Telecommunication network validation providers.
- RF chain and front-end academic partners including material scientists
- Network and RF propagation simulation experts

MORE INFORMATION

www.arqkos.com







Created in 1970 **Employees** 100



Company Location Via Foro dei Tigli, 4 - 47015 Modigliana, (FC)



Aurel is a mid-size company of around 100 employees expert in the design and manufacturing of custom microelectronic solutions. Depending on the nature of the requirement, Aurel can select, among different technologies, different materials, different substrates and interconnections, the best dedicated ones, especially in in the High Power Applications.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Aurel is a microelectronic and electronic production equipment manufacturer.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Aurel has numerous ongoing Academic Partnerships, also in the framework of technology transfer programmes. Among others, Aurel has a very strong partnership with CNR Italy (National Research Council), or Fraunhofer Institute EMFT, ENEA (Portici, Italy).

# TECHNOLOGICAL EXPERTISES

- SMD&PTH
- IMS (Insulated Metal Substrate )
- Thick Film
- FineLine
- O Chip on Board

# **MARKETS**

- Industrial
- Medical
- Railway
- Military
- Heating, Ventilation and Air Conditioning
- Home and Building Automation

# LOOKING FOR PARTNERS AND EXPERTISES

- Advanced Semiconductor Manufacturer
- Power Electronic Design

MORE INFORMATION

https://www.aurel.it







Created in 2017
Employees

5 - 10



Company Location Rovaniemi, Finland



Aurora Powertrains manufactures eSled – electric snowmobiles and runs eSled guided tours under brand Aurora eMotion together with selected partners. The heart of the eSled is the electric powertrain platform containing the proprietary patent pending battery modules and control units which can be adapted to different applications.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Design and manufacture of battery/vehicle level management/control units and software.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Aurora is participating in a 3-year ECSEL JU project Energy ECS started in June 2021. There's been also several nationally funded development projects.

# TECHNOLOGICAL EXPERTISES

- Electric Powertrain design and integration
- Battery Modules
- Battery Control Unit
- Vehicle Charge Control Unit
- Embedded software engineering
- Vehicle control software

# **MARKETS**

- Tourism (eSled for guided tours)
- Consumers (eSled)
- Mobility 0EMs in different markets like powersports, off-road and lightweight vehicles

# LOOKING FOR PARTNERS AND EXPERTISES

- Electric motor and power electronics manufacturing/design
- EV system integrators
- 0EMs / Tier 1s from any mobility sector
- Energy storage solution providers

MORE INFORMATION

www.aurorapowertrains.com









CAIRDAC mission is to do the proof of concept, development, regulatory, clinical evaluation, manufacturing and commercialization of implantable communicating medical devices for the diagnostic and/or therapy of chronic diseases.

Such active implantable medical devices have severe constraints for power consumptions, size, longevity, reliability, robustness and resistant to cyberattack.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

CAIRDAC is application oriented.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

CAIRDAC was involved in smart-MEMPHIS H2020 project and is involved EnSO ECSEL project.

# TECHNOLOGICAL EXPERTISES

CAIRDAC has an extended expertise and in-house equipment for the development biocompatible. autonomous and connected medical devices in harsh environment powered by an vibrational energy harvester coupled to a small rechargeable battery.

# **MARKETS**

CAIRDAC is addressing the market of cardiac rhythm management

# LOOKING FOR PARTNERS AND EXPERTISES

- ASIC development
- PCB development
- Assembly
- Energy harvesting
- Accelerometer

- Rechargeable battery
- RF communication
- Embedded software
- Cybersecurity
- Reliability robustness

MORE INFORMATION

www.cairdac.com







Company Location Czech Republic



CAMEA, spol. s r. o. is the Czech market leader in the development and production of embedded systems for specialized applications in traffic monitoring and industrial quality control. Traffic applications include Weigh-In-Motion, video-based red-light and speed enforcement systems, and traffic monitoring. The industrial applications include mass electronics component manufacturing quality control, inspection of automotive wheels welds or cloth-, bottle-, plastic components inspection. The company is active in the areas of R&D of image/signal processing systems and HW-acceleration.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

CAMEA is processing device/sensor developer and manufacturer as well as system application integrator and service provider.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

CAMEA has been and is active in projects with different collaboration schemes:

- Czech supported R&D: V3C (Visual Competence Center TACR),
- O EU projects focused on computer networks (custom HW support): 6NET, SCAMPI, GEANT2
- PENTA or EUREKA projects: MuSiC
- FP7 or H2020 projects: R3-C0P, RECOMP, CRAFTERS, PaPP, R5-C0P, ALMARVI, FITOPTIVIS, MegaM@Rt2, Arrowhead Tools, VALU3S, NextPerception

### TECHNOLOGICAL EXPERTISES

- Embedded algorithms for signal/image processing and computer vision (embedded signal processing)
- O Design and implementation of sensors and signal processing devices (video, radar, ...)
- Hardware-accelerated high-performance computing (using GPU, FPGA, ...)
- Large-scale deployment of image-processing solutions (complex systems for industry/traffic)
- Al for image/signal processing enhancement
- O System integration, installation and maintenance

# LOOKING FOR PARTNERS AND EXPERTISES

- System validation, verification and testing
- Cloud processing (algorithm off-loading) solution provider
- Cutting-edge Al methods for image/signal processing and computer vision

### **MARKETS**

- Industrial Applications: Over 1000 video cameras already manufactured and installed in by the company in factories in both, the Czech Republic and Europe/world.
- Traffic Monitoring: About 2000 cameras currently in use which are installed in several cities and on highways in the Czech Republic and Europe/world.

• HF-grade PCB manufacturing and testing for integrated radar modules

MORE INFORMATION

www.cameatechnology.com







# CELESTIA TECHNOLOGIES GROUP BV



Created in 2016 **Employees** 

Company Location Noordwijk, The Netherlands



CTG BV is a Dutch SME working in the technological innovations of the Aerospace, Telecommunications and Scientific sectors and offering state of the art equipment and systems.

It is also the company holding for Celestia Technologies Group integrating 15 high technology SME companies located in several European countries, and based on innovation, and development of high technology products, as key factors to a steady growth.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

CTG BV is an equipment provider and a system engineering company

### RD&I COLLABORATIVE INNOVATION INVOLVEMENT

CTG BV is involved in the following projects:

ECSEL Project ADACORSA. CTG BV develops an aerial unmanned vehicle transponder based on common aviation technologies providing accurate positioning and identification of the platform.

# TECHNOLOGICAL EXPERTISES

The main background and expertise of the company includes on-board UAV electronics and datalinks, antenna measurement systems, electromechanical positioners, microelectronics, beamforming technologies, signal processing, ground stations and systems.

### **MARKETS**

- Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicles (UGVs).
- Radiofrequency and Antennas
- Signal Processing
- Antenna Measurement Systems
- Satellite Ground Systems and Stations

# LOOKING FOR PARTNERS AND EXPERTISES

- Satellite and/or Teleport Operators
- Cooling and Thermal Analysis
- Structural Analysis
- Additive Manufacturing and 3D printing
- Industry 4.0 and Artificial Intelligence
- Navigation Applications
- Testing & Certification

MORE INFORMATION

www.celestia-tech.com







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Company Location Winnipeg, MB Canada



CEMWorks offers cutting-edge electromagnetic simulation solutions for optimisation of new applications in EDA, enhanced communications, system integration and smart mobility. The innovative approach to EM simulation enables engineers to create and iterate designs in a virtual environment, which helps to reduce project costs and accelerates time to market.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

CEMWorks provides EM simulation software for components, systems and whole applications

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

CEMWorks is involved in confidential RD&I collaborations with global leaders in the semiconductor industry, and with the Government of Canada.

# **TECHNOLOGICAL EXPERTISES**

- Design Automation
- Electromagnetic Simulation
- Modeling of 3D packaging, IC passives, antennas, PCBs, interposers.
- Antenna arrays simulation
- EMC/EMI analysis
- System integration
- Enhanced communications

# **MARKETS**

Companies designing and manufacturing for:

- Semiconductor Industry
- Automotive 0EMs and suppliers
- Aerospace and Defense
- 5G/mmWave/RF
- Flexible electronics
- Machine learning Al

### LOOKING FOR PARTNERS AND EXPERTISES

- O Innovators with complex or large-scale designs that require validation data
- Semiconductor manufacturers designing for 5G/mmWave/RF
- Autonomous vehicle technology component and subsystem design
- System integrators

MORE INFORMATION

www.cemworks.com





# CISC Semiconductor GmbH



Created in 1999 **Employees** 45





(Mountain View, CA)



Adding TRUST in a connected world CISC Semiconductor, established in 1999, is an international operating and highly awarded company that provides competitive and innovative products and engineering solutions to increase performance, conformance, interoperability, security and privacy in communication technologies.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

CISC's value chain includes: Systems, Applications and Equipment (Testing)

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

More than 50 joint national and international R&D projects (several hundreds person-years R&D investment) in European programs such as H2020 (FP7), ECSEL, EUREKA ...

# TECHNOLOGICAL EXPERTISES

- Wireless communication (BLF/UWB)
- o IoT/CPS
- RFID/NFC Design and Test
- International standardisation
- Human Centric Design
- Security and Privacy

# **MARKETS**

- Automotive
- O RFID/NFC
- Semiconductors
- Wireless Communication
- Smart Production

### LOOKING FOR PARTNERS AND EXPERTISES

- Semiconductor Manufacturer
- Automotive Tier1 and 0EMs
- Smart City Service Provider
- Telecommunication Equipment &
- Consumer Flectronics
- RFID/NFC product vendors (tags, chips, systems)
- RFID/NFC users (e.g. automotive, aviation, retails)

MORE INFORMATION

www.cisc.at







Created in 2010 **Employees** 

50

Company Location Hamburg, Germany



consider it GmbH (CIT) has been living its passion for ITC for more than 10 years and is enthusiastic about innovations and the sensible use of technology. Together with customers and partners, CIT works on positively shaping our common digital future.

This means: making current technologies meaningful and usable for every company. Since 2020, CIT also supports companies in both applying for and managing public funding.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

consider It develops, integrates, and promotes products & consultancy based on Electronic Components and Systems.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

CIT has worked in both German national and transnational programs such as ITEA, PENTA/ Xecs, ECSEL/KDT, and IPCEI. Recent projects cover secure dev-ops, drones, autonomous systems, autonomous driving, Blockchain technology, and Artificial Intelligence on the edge.

### TECHNOLOGICAL EXPERTISES

- Communication Technology (V2X, UWB, 5G)
- Artificial Intelligence (focusing on federated Al approaches for privacy preservation)
- Blockchain Technology (Ethereum, Hyperledge)
- Self-sovereign identity and data sovereignty

### **MARKETS**

- Industrial Internet of Things (loT; Industry 4.0)
- Automotive
- Aerospace (including drones)
- Renewable Energy Systems (Wind&Solar)

# LOOKING FOR PARTNERS AND EXPERTISES

Consider it can contribute to projects as a partner with technical expertise but also support in acquiring and managing public funding. Consider It is open for partners across the whole value chain. The main interests are partners providing use cases and business problems as well as partners working further up the value chain on systems and components.

MORE INFORMATION

www.consider-it.de







Created in 1998 **Employees** 

300

Company Location Turnov. Czech Republic



CRYTUR is an optoelectronic producer bringing specialised solutions to the global market. The highly integrated production includes optical material manufacturing, crystal growth, optical polishing and coating, clean room assembly, and an extensive high-precision CNC workshop. They produce high value-added complex products in the area of radiation detectors, X-ray cameras, laser technology, intensive light sources, imaging, medicine and defense.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

CRYTUR is the OEM detector manufacturer and component provider.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

CRYTUR has very strong interdisciplinary R&D team, equipped with the top up-to-date research equipment. CRYTUR works very closely with its customers, launching new products to the market.

# TECHNOLOGICAL EXPERTISES

- Detector design and manufacturing
- Crystal growing and processing
- Precission CNC machining
- Clean-room assembly
- Thin film coating

# **MARKETS**

- OEM detectors for semiconductor inspection
- Electron microscopy detectors
- High-power lighting systems
- High-energy physics and research
- Radiation detectors
- Opto-electronics, lasers
- Sensor components

MORE INFORMATION

www.crytur.com



# DigitalTwin Technology GmbH



Created in 2018 **Employees** 



Company Location Cologne. Germany



At DigitalTwin Technology, we need to continuously strengthen our commitment to make ourselves more inclusive and to contribute to make our world more just. Where every great idea can be heard and where everybody belongs. For the industrial enterprise, digital twin use cases are primarily being adopted across engineering, operations, and service.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

DigitalTwin Technology is edgeAl software algorithm developer.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

DigitalTwin Technology is currently involved in 2 ECSEL JU research projects - IM0C04.E and Energy ECS. We are very much dedicated in the research and innovation projects in order to develop our product line by learning from the Industrial and Research experts from the consortium. In context to this we provide our expertise on table for partners.

### TECHNOLOGICAL EXPERTISES

We have team of experts in the following areas:

- Al algorithm development, training using CNN and GAN technology.
- O Development of digital twin software for the simulation of real processes.

### **MARKETS**

- Physics and nanotechnology research for AI on chip design.
- Neuromorphic computing research for ultra low power SoC design.

# LOOKING FOR PARTNERS AND EXPERTISES

We are looking for partners in the area of SoC design for the neuromorphic computing to be use in fully automation of vehicle driving.

MORE INFORMATION

www.digitaltwin.technology







Created in 2009 **Employees** 

Company Location Schijndel. **Netherlands** 



D4T Systems offers highly specialized software products for IC test verification and test automation focused on analog mixed signal. Customer key benefits include first time right test programs, evaluating "what-if" test scenarios and our modelling approach leads to fast simulation and test integration. We provide services on our tools and help customers in new test technology projects with fast software prototyping and data analysis.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

D4T systems is a software product and service provider for architectural and chip design.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

D4T systems has active involvement in the following:

- PENTA: HADES for systems manufacturing chip test.
- ENIAC JTI: ELESIS for embedded chip test instrument verification
- CATRENE: TOETS for one integrated chip test solution

# TECHNOLOGICAL EXPERTISES

EDA test simulation. IEEE test standard integration and simulation, chip test data analysis with fast prototyping software engineering

# **MARKETS**

Semiconductor processing, test equipment and chip design (ODM) suppliers for high quality, high demanding applications:

- Industrial.
- Automotive
- Healthcare

# LOOKING FOR PARTNERS AND EXPERTISES

We welcome partnerships with semiconductor process and test equipment, chip design and design service providers.

MORE INFORMATION

www.d4t-systems.com







Created in 1993 **Employees** 35



Company Location Lichtenau. Germany



EAAT GmbH has been a competent and reliable partner in the development and production of electrical automation and drive technology for more than 25 years. We offer our customers tailor-made solutions in the areas of power electronics, electric direct drives and magnetic bearings. EAAT is both a design engineering firm and a manufacturing company.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

EAAT is a systems and applications developer and user

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

EAAT is involved in the innovative use of electronics and electrical components for the development and production of high-tech products in the areas of power electronics, direct drives and magnetic bearings.

# TECHNOLOGICAL EXPERTISES

Hardware development

- Variable Frequency Drives
- Power Supplies
- Current & Voltage Sources
- Software programming
- Micro Controllers
- User Interfaces

# **MARKETS**

- Industry
- Energy
- Semiconductors
- Nanotechnology
- Aerospace
- Agriculture
- Mining

#### LOOKING FOR PARTNERS AND EXPERTISES

- Component Developers & Manufacturers
- System Integrators
- Custom Product Designers
- Semiconductor Manufacturers

- Motor Manufacturers
- Capacitor Manufacturers

MORE INFORMATION

www.eaat.de







Created in 2015 **Employees** 15

Company Location Unterhaching, Germany



Eesy-innovation GmbH works in the field of electronic systems design and develops sensor nodes and communications systems for private and institutional use. Its focus of the business activities goes to the development of products in the field of IoT for Smart Home, Smart Health and Safety and Security applications. In addition to research activities, eesy-innovation offers consulting solutions and has the potential to produce small series of innovation solutions.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

eesy-innovation works in field on system design and applications and as service provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Eesy-innovation has been active in the following projects:

- "NexGen" founded by CATRENE: developing system for health care
- "TreuFunk" founded by BMBF: developing a microchip for industry
- "Concordia" founded by H2020: cybersecurity solutions

# TECHNOLOGICAL EXPERTISES

- electronics system design
- sensor nodes development
- wireless communication systems
- development of IoT products for Smart Home, Smart Health and Safety and Security applications

#### **MARKETS**

- Smart Home Market
- Industry 4.0
- Medical sensors
- IoT Market

### LOOKING FOR PARTNERS AND EXPERTISES

Universities for further colaboration

Cooperations partners from high tech industries looking for IoT expertise from demonstrators to high volume production

MORE INFORMATION

www.eesy-innovation.com







# EPIC Semiconductors, Inc. (EPIC)



Created in 2008 **Employees** 



Company Location Vancouver. Canada



EPIC Semiconductors (EPIC) is a fabless technology design firm founded in 2008 in Vancouver, Canada.

EPIC has developed a microscopic AI sensor chip featuring energy harvesting (this eliminates the use of toxic batteries) and bidirectional non-magnetic (RF-free) communication. Its small size allows it to be easily embedded into everyday objects, sensing "human actions, physical forces, chemical reactions and bio-effects".

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

EPIC Semiconductors (EPIC) is a fabless technology systems design firm (IP architecture provider)

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

EPIC is involved in confidential RD&I collaborations with leaders in global markets

# TECHNOLOGICAL EXPERTISES

Proprietary self-powered (batteryless), contactless and wireless communicating technology (magnetic-free) for sensors and Al on chip

# **MARKETS**

Automotive, home appliance, military, medical, retail, IoT, fitness, sensors and devices

# LOOKING FOR PARTNERS AND EXPERTISES

OEMs, tiers, enablers

MORE INFORMATION

www.epic-semiconductors.com





# **FVALAN**

Created in 2005 **Employees** 

25

Company Location Amsterdam. The Netherlands



Evalan is an innovative development and application partner in the field of the Internet of Things. We work in close collaboration with our customers to achieve the best results possible.

Evalan focuses on remote monitoring, biometric measurements, and telemetric solutions for the healthcare, industry, and government sectors. We serve around 100 clients, ranging from large multinationals to small technology companies.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Evalan develops and implements IoT systems to add value to your business.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

 FCSFL: FnSO\_FSFF H2020: SINTEC

CATRENE: NexGen

Eurostars: SACON, COMFORT

# TECHNOLOGICAL EXPERTISES

We develop mobile devices, sensors, data management systems, data processing algorithms, and user interfaces for different platforms. We fully realize and implement the IoT platform. We can manage your IoT system and optimize the performance to make sure it keeps working safely and provides the data that is needed.

#### **MARKETS**

- Healthcare
- Industry
- Government
- Business
- High tech

# LOOKING FOR PARTNERS AND EXPERTISES

- Flexible electronics
- Printed electronics
- Structural electronics

MORE INFORMATION

www.evalan.com











Company Location Headquarters in Stockholm, Sweden / Subsidiary USA



Excillum AB, is a leading SME in the field of high end micro- and nano-focus X-ray sources. We design, develop and manufacture world's brightness microfocus X-ray sources based on MetalJet technology, and smallest nanofocus X-ray sources based on advanced e-beam technology. Our products are available for applications such as diffraction/scattering (XRD, SAXS), spectroscopy (XRF, XPS), imaging (NDT, CT, XRM, phase contrast), etc.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Equipment (sub-system provider to OEMs)

Excillum AB designs, develop and manufactures X-ray sources.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Excillum AB is and has been active in projects within different collaborative schemes such as:

- ECSEL JU MADEin4
- EMPIR NanoXSpot
- HORIZON 2020 (CITCOM, SME Instrument)
- FP7 (NanoXCT, EUROSTARS-E!7892)

# TECHNOLOGICAL EXPERTISES

- Metal Jet anode for X-ray generation
- Advanced Electron Beam
- Micro and Nano focus X-ray sources
- X-ray systems (source + optics)

#### **MARKETS**

Equipment (sub-system) manufacturer for different fields:

- Semiconductor industry
- Electronics industry
- Industrial imaging
- Medical, Pharma
- Additive manufacturing
- Industrial production (aerospace, automotive)
- Quality control
- NDT

Research: materials, bio&medical, X-ray method development.

# LOOKING FOR PARTNERS AND EXPERTISES

X-ray system integrators, X-ray component suppliers (other than X-ray source), X-ray application users.

MORE INFORMATION

www.excillum.com







Created in 1991 **Employees** 220 Company Location Headquarters Dresden. Germany



Fabratics is an experienced specialist for the automation of material flows and handling processes in semiconductor factories, semiconductor process plants and other high-tech production environments. The company has been successfully implementing customer-specific automation projects for more than 25 years. The product portfolio includes mobile robots, robot cells, automated transport and storage systems as well as product identification solutions.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Fabratics is a material handling systems and service provider (Value Chain Category: Equipment).

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Fabratics and its predecessor companies HAP and Roth & Rau - Ortner have actively participated in H2020 & ECSEL projects:

- Cool Fab and Cool Flow
- FPT300
- SEMI4.0 / Productive4.0:
- ADMONT
- SeNaTe

# **TECHNOLOGICAL EXPERTISES**

Integrated automation competence for material handling, transport, storage and identification processes up to clean room class ISO3 / FED1

Mask Handling, also for EUV Lithography in < ISO 1 Environments

### **MARKETS**

- Semiconductor Industry
- MFMS
- Sensors
- PCB-Manufacturing
- Pharmaceutical/Medical Technologies
- Optical Industry

### LOOKING FOR PARTNERS AND EXPERTISES

Advanced semiconductor manufacturing / Material handling automation solutions for transport, storage and handling / Smart intralogistics / Intelligent material identification and tracking / Digitalization of automation engineering companies / Software for efficient control of automation systems

MORE INFORMATION

www.fabmatics.com







Created in 2013 **Employees** 

Company Location Haukipudas Oulu, Finland



Flexbright Oy is a Finnish high-tech startup company designing and manufacturing flexible, thin, light-weight & customizable LEDFOILs for large-area displays, mediawalls & smart illumination. Roll-to-roll manufacturing process enables production of continuous LEDFOILs up to hundreds of meters long. Flexbright offers complete integrated solution, comprising of the LEDFOILs installation & control & power systems.

# POSITIONING IN THE FLECTRONICS VALUE CHAIN

Flexbright is a LEDFOIL component supplier, Integrated system suppliers and Roll-to-Roll electronics manufacturing service provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Flexbright has been active in different RD&I schemes:

Delphi4LED, ECSEL-RIA-2016

Finnish National funded R&D:

- Flex-in-Glass
- ELASTRONICS, "Enabling the future of wearable electronics, Design and assembly of electronics on stretchable circuit boards.

# TECHNOLOGICAL EXPERTISES

- Printed and flexible electronics materials. manufacturing processes and design
- Roll-to-roll manufacturing
- O Design and roll-to-roll manufacturing of customized thin & flexible LEDFOILs with RGB(W) dynamic lighting
- Structural integration of LEDFOILs using various techniques (canvas, plasticencapsulation, injection-moulding, glass lamination etc.)
- Complete integrated system solutions

# LOOKING FOR PARTNERS AND EXPERTISES

- New materials and components for flexible electronics (substrates, adhesives, LEDs, sensors, encapsulation)
- Roll-to-roll manufacturing processes and equipment
- New structural integration opportunities
- Novel large-area application innovations

# **MARKETS**

Automotive, home appliance, military, medical, retail, IoT, fitness, sensors and devices

MORE INFORMATION

www.flexbright.fi







Company Location Konstanz. Germany



Hyperstone is a fabless semiconductor company focusing on NAND flash and SSD controllers. Hyperstone's DNA for the past 30 years has been developing and delivering high quality, reliable and innovative solutions and striving to enable its customers to produce world-class storage systems for industrial, embedded, automotive and global communication applications. The firmware is supplied with the controllers and is customised for each flash application.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Supplying chips, reference systems and application firmware.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

H2020-FP7 / ELITE (leader): Technology development for vertical die stacking/interconnect BMBF / 03FH025IX5 (participant): ECC and Compression

PENTA / XSR-FMC (leader): platform to develop POC silicon for advanced flash memory controller

# TECHNOLOGICAL EXPERTISES

- NAND Flash memory controllers
- NAND Flash Technology
- Error Correction Coding (ECC)
- Flash Translation Layer (FTL)
- Security (AES, SHA, Elliptic Curve, TCG Opal)

# **MARKETS**

- Industrial Automation, Industrial IoT
- Automotive (IVI DashCam ADAS 1)
- Transport solutions
- Telecom Infrastructure (24/7 uptime)
- Smallcells, nanocells
- Energy (distribution, grid management,...)
- PoS, Kiosk, Gaming
- Secure storages (all markets), Medical

#### LOOKING FOR PARTNERS AND EXPERTISES

- Firmware development (security expertise)
- COT flow & Automotive Certifications
- Error Correction Coding
- Automotive Tiers-1 project partner for Disk-on-Board (DoB) solution development
- Channel modelling for flash memory
- Integrators and users of Flash based storage solutions (customisation. know-how transfer)

MORE INFORMATION

www.hyperstone.com







Created in 1987 **Employees** 

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Company Location Peynier Rousset, France



IBS (Ion Beam Services) is an expert in ion implantation offering both state of the art equipment (IMC/FLEXION Beam Line tools and PULSION Plasma Doping tool) and a range of services (implantation foundry, maintenance, refurbishment). IBS has a plant in France, subsidiaries in Scotland, US and Singapore. IBS has been involved with institutes and industrial customers in process development for advanced CMOS, power, sensors, optics, ...

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

IBS is an equipment manufacturer and a service provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

IBS has been and is active in projects within different collaboration schemes:

- French supported R&D projects: SUPERSWITCH oriented to power devices, ISICELL and OXYGEN for efficient solar cell by ion implantation
- FP7 or H2020 projects: SUPERTHEM for process simulation
- ENIAC and ECSEL projects: EPPL, 450 EDL, PLACES2BE, SEMI40, TAKEMI5, OCEAN 12

# TECHNOLOGICAL EXPERTISES

- o lon implantation equipment
- Gas boxes, ion sources, high voltage, mass selection, ion beam scanning, e-chuck, vacuum automation
- o lon implantation and plasma processes.
- Planar and 3D doping, material modification and process integration for nanoelectronics.
- Silicon and wide gap power components processes
- Sensors manufacturing
- O Plasma and ion beam surface treatment
- Solar cells manufacturing

# LOOKING FOR PARTNERS AND EXPERTISES

- Advanced semiconductor manufacturing
- Process integration
- 3D structure fabrication (High aspect ration trenches, FINFET, GAA wire or plates..)
- Nanocaracterisation
- Process simulation
- Equipment part manufacturer

### **MARKETS**

Physics and nanotechnology research. Components manufacturing for different fields:

- Memory and logic
- RF and power
- Optoelectronics, lasers, detectors
- Sensors
- Radiation detectors

MORE INFORMATION

www.ion-beam-services.com









# **IDEAS** -**Integrated Detector Electronics AS**

Created in 1992 **Employees** 



Company Location Oslo. Norway



IDEAS - Integrated Detector Electronics AS - is a fabless supplier of integrated circuits (ICs) and systems based in Oslo, Norway. The company designs integrated circuits (ICs) and systems for radiation detection and imaging subsystems with proprietary readout technology. IDEAS works with research organisations and business partners creating new products based on IDEAS' custom made ICs.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

IDEAS develops Integrated Circuits (Chips) and sensor systems.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Recent innovations are Infrared FPA readout controllers for European customers, including European Space Agency, and ROIC, MEMS and WLP for uncooled infrared thermal image sensors.

Public funding received under H2020 (SONDE, 3DMUSE), EUROSTARS (MINC), ECSEL (APPLAUSE).

# **TECHNOLOGICAL EXPERTISES**

- ASIC, IC, ROIC design, mixed signal, full-custom: amplifiers, ADC/DAC, SPI, FSM, SRAM
- SiPM, PMT, CZT, semiconductor sensors
- MEMS sensors (bolometers)
- CMOS supply chain management

### **MARKETS**

- High-energy and nuclear physics
- Space radiation science and astronomy
- Security scanning using x-rays
- Industrial scanning using x-rays
- Thermography, surveillance

# LOOKING FOR PARTNERS AND EXPERTISES

- 0EM camera manufacturers
- Users of thermal infrared imaging
- MEMS foundry
- CMOS foundry
- MEMS packaging incl. wafer-level packaging

MORE INFORMATION

www.ideas.no





# INOVASYON MUHENDISLIK



Created in 2009 **Employees** 12

Company Location Eskisehir. Turkey



Inovasyon Muhendislik was established in 2010. The company conducts R&D projects on indoor and outdoor positioning systems, robotic systems and intelligent vehicles. This project is based on embedded system design of electronic equipment and systems, which implements the development and production. Our U-plat (Virtual Robotic Laboratory) product is an easier and better learning platform with open source ROS tutorials.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Inovasyon Muhendislik is software and equipment producer and service & technology provider.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

3rd Party Projects: ROSIN PS, ROSIN UPLAT, RPSIN PHM

ECSEL Project: VALU3S

TUBITAK Projects: Autonomous Carrier Robot for Smart Factories, IOTOPRO

KOSGEB Project: Automated Guided Vehicle (AGV) ITEA Projects: INVALUE, WATERM, POLDER

# TECHNOLOGICAL EXPERTISES

- Embedded Sytems
- Robotics Systems
- Data Collecting
- System Health Management
- Machine Learning
- Data Science
- 3D modelling
- Prototyping
- RF Communication
- Data Acquisition

# LOOKING FOR PARTNERS AND EXPERTISES

- Producer at similar platforms
- Production sectors
- Robotic Systems users
- Data collectors

### **MARKETS**

- Automated Guided Vehicles (AGV)
- Indoor Positioning Systems
- Education and Research Robots (EVAROBOT)
- UPLAT (Virtual Robotic Laboratory www.theuplat.com)

MORE INFORMATION

www.inovasyonmuhendislik.com







# Institute of Microelectronic Applications

Created in 1992 **Employees** 







Institute of Microelectronic Applications s.r.o. (IMA) is a limited private company founded in 1992. IMA deals with electronic identification and utilises smart cards, RFID/NFC, biometrics so as IoT / LPWANs. IMA is providing large ID systems in CZ. IMA systems are compliant with GDPR, ensuring privacy and personal data protection.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

IMA is equipment manufacturer system integrator and system provider.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

IMA is member of several international projects and provides practical demonstration of outcomes:

CATRENE (CORTIF, H20), ITEA (ESTABLISH), EUROSTARS (LSU, F2P, SACON), PENTA (ESAIRQ) and ECSEL JU (MOTORBRAIN, 3CCAR, R3-PowerUP, Productive4.0, WAKEMEUP, SECREDAS, ENSO)

# TECHNOLOGICAL EXPERTISES

Smart identifiers: cards Mifare, Desfire, Legic, mobile ID, BLE and applies RFID, NFC, UHF, BLE, Lora, GSM, sensors, LPWANs within own products and systems

# **MARKETS**

IMA B2B and B2C customers are mainly from Czech Republic, Slovakia, Sweden, Poland, Russia, Baltic countries and Germany

Principal activity domains: ID systems, access control, automotive and smart cities / buildings

# LOOKING FOR PARTNERS AND EXPERTISES

Looking for partners involved in standards for secure communication in automotive domain so as partners for secure identification and IDM.

MORE INFORMATION

www.ima.cz







Created in 2013 Company Location Stockholm. Sweden







At Imagimob, we've invented a way to create Al applications that can run efficiently on small devices while still delivering the performance and accuracy typically only found in bigger systems. Combining inspiration from the machine learning field with our own innovations, each of our applications is designed with small MCUs, low CPU usage, and low memory consumption in mind.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Imagimob provides Edge AI Design tools and Applications

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Imagimob is active in ECSEL project: AFarCloud

# **TECHNOLOGICAL EXPERTISES**

- Edge Al application development
- Edge Al design tool development
- Sensors

# **MARKETS**

Product companies aiming to transform to intelligent and autonomous products

#### LOOKING FOR PARTNERS AND EXPERTISES

- Sensor manufacturers
- Semiconductor manufacturers
- System integrators

MORE INFORMATION

www.imagimob.com







Created in 2006

Employees 30+

Company Location Belgium



intoPIX is an innovative technology provider of image processing and compression solutions. We create and deliver market-leading technologies across all audio-visual applications where image quality is a crucial asset. Our FPGA/ASIC IP cores and fast SDKs enable to manage more pixels, preserve quality with no latency, save cost & power and simplify connectivity in many devices and workflows.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

FPGA/ASIC IP-cores & CPU, GPU accelerated SDKs to build chips, systems and applications

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

intoPIX is participating to several collaborative projects (PENTA programne, EUROSTARS) with European partners in Broadcast, Industrial Vision, as well as various Universities & Research Centers.

#### TECHNOLOGICAL EXPERTISES

- Image processing
- Video compression
- Microelectronics (FPGA.ASIC)
- Software Acceleration (CPU.GPU)

#### **MARKETS**

- Media / Broadcast
- Industrial Vision
- Automotive
- Mobile
- Cameras

# LOOKING FOR PARTNERS AND EXPERTISES

Looking for partners involved in standards for secure communication in automotive domain so as partners for secure identification and IDM.

MORE INFORMATION

www.intopix.com







Created in 1998 **Employees** 

35



Company Location Eindhoven Enschede. The Netherlands



ItoM is a Dutch system IP and semiconductor design centre with core expertise on mixed-signal IC design. As an independent design company, ItoM focuses on wireless connectivity, sensor data acquisition, and timing systems. ItoM is internationally recognised for its ground-breaking IP blocks, having a unique track record of innovations implemented for many leading semiconductor customers.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

ItoM is an IC design company, active in architecture, chips and applications

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

ItoM has been and is active in projects within different collaboration schemes:

- H2020 & Eurostars: SmartEEs, FICCaR
- PENTA: HEFPA
- FIWARE: FICHe, SmartAgriFood
- Dutch R&D: MIT. MRE. OP ZUID/OOST. IPC. TALCOM

#### TECHNOLOGICAL EXPERTISES

# Expertise:

- RF Analog Mixed-Signal IC design (CMOS & BiCMOS) with extensive system knowledge on RF transceivers (e.g. 5G, BLE, Bluetooth, Wi-Fi)
- Signal processing
- Embedded design

Service IP- complete designs as well as extensive list of IP blocks in:

- O RF RX & TX
- O PLL & FLL
- O IF & ADC / DAC e.g. ADPLL, TDC, Power Amplifier, Sigma Delta ADC, SAR ADC, RF DAC

# LOOKING FOR PARTNERS AND EXPERTISES

- Digital IC design partners
- Semiconductor product companies
- Supply chain management partners
- Electronic Design Automated companies

### **MARKETS**

Focus on application markets:

- Wireless Communications
- Connectivity
- Sensing
- Timing systems

Sensor product companies

MORE INFORMATION

www.itom.nl







Created in 1972 **Employees** 

70

Company Location Baranzate, Italy Catania, Italy



LPE is a manufacturer of equipment for depositing semiconductors thin layers using chemical vapor deposition (CVD). LPE's strategy concentrates on CVD reactors dedicated to severe applications such as Schottky, Power Transistor, PowerMos and very thick epi layers for IGBT devices both using silicon and silicon carbide. LPE has two plants in Italy and one subsidiary in China. During the years LPE has dedicated many resources to R&D to be always at the edge of the products working in partnership with institutes and industrial partners.

#### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Equipment Manufacturer / Worldwide recognized leader supplier for Silicon and Silicon Carbide Epitaxial reactor manufacturer for power application

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

LPE has been active in projects financed from different sources:

- Italian R&D PON: FleGaNte (GaN on SiC). SiC4FFI (150mm SiC)
- H2020: CHALLENGE
- ENIAC/ECSEL: LASTPOWER. EPT300. R2POWER300. SemI40. REACTION
- KiC Innoenergy: 3DSiC

#### TECHNOLOGICAL EXPERTISES

- Epitaxial reactors: silicon and silicon carbide.
- HTCVD and Sublimation equipment.
- Gas panels and cabinets. Bubblers for liquid precursors.
- Silicon and WBG processes: Epitaxy, LPCVD.
- Process simulation: CFD, EDG, FEM, Thermal
- Semiconductor characterisation.
- Software development: Realtime and SECS-GEM
- Project management

# LOOKING FOR PARTNERS AND EXPERTISES

- Equipment part manufacturer
- Automation manufacturer
- Process simulation

#### **MARKETS**

- Silicon Power devices
- Cool MOS
- O IGRT
- SENSORS
- MFMS
- Silicon Carbide devices
- Schotty diodes
- MOSFFT

MORE INFORMATION

www.lpe-epi.com







Created in 1999 Company Location France





M3 Systems is specialized in reliable and accurate geolocation. Since its creation in 1999, it has been developing in the areas of Space / Defense (GNSS), Air Navigation (ATM) and now Land Transportation (ITS). M3 Systems offers expertise, Test & Measurement software for the needs of innovative applications such as connected and / or autonomous systems.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

M3 Systems is an Applications Provider, a Systems Provider and an IPs provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

M3 Systems has been and is active in several projects among others:

- ENIAC projects: THINGS2D0 for development of IPs on FDS0i technology
- ECSEL projects: OCEAN12 for development of IPs on FDS0i technology
- H2020 Projects: CPS4EU aimed to promote the development of Cyber Physical Systems

#### TECHNOLOGICAL EXPERTISES

- SDR IPs
- High Grade GNSS Receivers
- Ultra Precise geolocation systems
- High performance hybridization
- Signal Processing
- Test & Measurements

#### **MARKETS**

- Automotive
- Rail
- Space and Defense
- Maritime
- Drones

#### LOOKING FOR PARTNERS AND EXPERTISES

- RF partners
- Silicon vendors
- High Grade INS providers

MORE INFORMATION

www.m3systems.eu







Created in 2016 **Employees** 





mi2-factory develops, distributes and applies an innovative proprietary tool, called "energy-filter for ion implantation" (EFII). Customers use this novel technology as a process step for optimized cost performance of semiconductor power devices lespecially of Silicon Carbide SiC). mi2 factory's energy filter technology enables power device cost-performance increase (20-80%). EFII results in high levels of doping accuracy across SiC wafers and from wafer to wafer.

#### POSITIONING IN THE ELECTRONICS VALUE CHAIN

We are a service provider (energy-filtered ion implantation) for precise wafer doping.

#### RD&I COLLABORATIVE INNOVATION INVOLVEMENT

mi2-factory is involved in the Power2Power EU project. European power device manufacturer will profit from the results by enabling cost-performance improvements mainly for Silicon power devices, but also for SiC.

#### TECHNOLOGICAL EXPERTISES

EFII as a production tool, which is specifically tailored for every customer application. The EFII chip consists of a micro-patterned membrane.

When used in ion implantation equipment EFII changes the energy distribution of high energy doping ions, such that the desired customer specific doping profile is produced in diodes, MOSFETs and superjunction. mi2-factory owns several patents.

# **MARKETS**

- Media / Broadcast
- Industrial Vision
- Automotive
- Mobile
- Cameras

#### LOOKING FOR PARTNERS AND EXPERTISES

O Device manufacturers: using our technology in own process steps for the production of microchips (e.g. SiC high-voltage diodes, MOSFETs and superjunction devices) with significantly improved efficiency

 Foundries, ion beam accelerator manufacturers and end-station manufacturers can implement the novel ion implantation technology for their customers.

MORE INFORMATION

www.mi2-factory.com





Created in 2004 **Employees** 

10



Company Location Helsinki. Tallin



Micro Analog Systems (MAS) is a fabless semiconductor house focusing on low power and low voltage analog and mixed signal products, designing and supplying high performance analog and integrated circuits supported by in-house wafer probing and test facility. MAS offers complete development and production services including concept and schematic design, simulations, prototype testing and production volumes.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

MAS is a chip maker and an ASIC design service provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

ECSEL: EuroPAT-MASIP project

# TECHNOLOGICAL EXPERTISES

- Capacitive sensor conditioning
- Resistive sensor conditioning
- Capacitive to Digital converters (CDC)
- Analog Front-end (AFE)
- Ultra wide temperature oscillator control
- o LiPO and LiFe battery management and charging
- Piezo drivers and Piezo speaker drivers

#### **MARKETS**

- Industrial measurement and analytics
- Telecom equipment
- Hand held devices
- IoT sensors and devices
- Medical applications and elderly care
- Power management solutions and chargers

#### LOOKING FOR PARTNERS AND EXPERTISES

- Sensor module manufacturers
- Oscillator manufacturers
- ODM and Design houses
- IC and lay-out design

MORE INFORMATION

www.mas-oy.com







Created in 2008 **Employees** 

50

Company Location Arrasate, Spain



microLIQUID is a CDMO company specialized in microfluidic automated systems who help customers define their product requirements and partner them, from the first concepts to full scale commercial manufacture. microLIQUID's core skill set is essential to establish the process of developing new technologies and translating them into a successful product.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

microLIQUID is a CDMO company specialized in the design and manufacture of microfluidic chips.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

microLIQUID has been active in several FP7 and H2020 projects

### TECHNOLOGICAL EXPERTISES

- Rapid prototyping
- Microinjection molding
- Bonding
- Surface functionalization
- Quality control

#### **MARKETS**

- Cell culture
- Single Cell Analysis
- Drug Delivery
- o IVD/PoC
- O NGS

#### LOOKING FOR PARTNERS AND EXPERTISES

- Surface coating
- Silicon foundry

MORE INFORMATION

www.microliquid.com







# NANOTEST Berliner Nanotest und Design GmbH

Created in 2004

**Employees** 25



Company Location Berlin. Germany



Berliner Nanotest und Design GmbH, serves as a full-scale provider of engineering services for reliability in microsystem technologies and nanotechnology, with special focus on thermal problems. Activities include development and provision of unstandardised, problem-specific measurement and characterisation services as well as development and sale of experimental setups and test beds. Another key topic is in-line failure detection based on thermal effects.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Nanotest is a measurement system manufacturer and service provider for thermal characterisation and analysis on material and system level.

# **RD&I COLLABORATIVE INNOVATION INVOLVEMENT**

Nanotest has been / is active in the following projects:

- BMBF: EHLMOZ, Nano-Proxi, iTSELF, GroTherm
- FP7/H2020: NanoPack QuantiHeat SmarTherm InlineTest
- FCSFL: TRACE, FuroPAT-MASiP
- PENTA: CosmoDU

# TECHNOLOGICAL EXPERTISES

- Thermal measurement techniques (steady-state, transient) for different classes of thermal materials
- Failure analysis, quality assessment and health monitoring based on thermovisual methods (IR. TR)
- Thermal design for reliability (TTVs)

# **MARKETS**

- Materials suppliers
- Electronics components and systems manufacturers (thermal management)
- System manufacturers (quality) assessment)

# LOOKING FOR PARTNERS AND EXPERTISES

- Laboratory equipment manufacturers
- Electronic systems developers
- Thermal & electronic material suppliers
- Thermography equipment manufacturers

- Manufacturing equipment suppliers
- Wafer fabricators for thermal test chips and vehicles

MORE INFORMATION

www.nanotest.eu







Created in 2016 **Employees** 



Company Location Oradea, Romania Copenhagen, Denmark



Octavic provides a complete system for monitoring and optimizing production. The platform covers: Real time visualization and notifications, historical analysis with over 35 KPIs related production, quality, maintenance, real time production planning, energy monitoring and predictive maintenance. It can cover from completely manual processes to fully automated lines in industries like Pharma, Tabaco, Food, Automotive and Construction.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Octavic produces and integrates hardware required for machines monitoring like IO boards and HMIs.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Octavic is active in various projects (ECSEL, H2020) within different areas:

- Predictive maintenance
- Real time planning of production
- o 5G for wood production monitoring

# **TECHNOLOGICAL EXPERTISES**

- Retrofit industrial equipment
- Real time interface with industrial machine
- Real time monitoring and visualization
- Production planning
- Energy monitoring
- Analytics

# **MARKETS**

- Pharma
- Food & Beverage
- Automotive
- Construction
- Tobacoo

# LOOKING FOR PARTNERS AND EXPERTISES

- Industrial equipment suppliers
- System integrators
- Analytics
- Process integration

MORE INFORMATION

https://octavic.io





# PAVOTEK

# **Pavo Design Production** Electronic Trade Inc.

Created in 2003 **Employees** 

231



Company Location Istanbul. Turkev



Pavotek was established in Istanbul in 2003 to provide qualified solutions with its expert engineers on electronic card and systems of product and design. We continue to work as a strategic partner of Turkey's defense companies. Automotive, Energy, Telecom and Power Control is designing products in different sectors. R&D office is located in Teknopark Istanbul, production and testing facilities also in Istanbul.

#### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Pavotek is an electro-mechanic designer and manufacturer and therefore working in the equipment and materials areas.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

TÜBİTAK: These projects are related to power electronics, communication systems and autonomous Systems.

H2020-ECSEL & PENTA: Intelligent Reliability 4.0 (iRel40), Intelligent Secure Trustable Things (InSecTT) & Highly Automated Analog IP Reuse & Creation by Holistic Engineering (ARCHE)

### TECHNOLOGICAL EXPERTISES

- Electronic Hardware Design (FPGA & embedded)
- Electronic SMD Typesetting and Manufacturing
- Electronic Testing and Integration
- Power electronics solutions
- Communication and control systems / products

### **MARKETS**

- IP Communication Devices Surveillance System
- Smart City and Energy Solutions
- O Defense Technology- Communication &Control & Avionics System
- Industry 4.0 Tracking and Electronic Shelf Label(ESL) solutions
- Single Board Computer (to be continued)

# LOOKING FOR PARTNERS AND EXPERTISES

Software application firms

MORE INFORMATION

www.pavotek.com.tr/en









Created in 2006 **Employees** 25







PITON provides cutting-edge electronics and information technology solutions, working on different areas for software and embedded solutions. PITON is not only a software expert but also full system designer and implementer with addition of Electronics and Innovation expertise. With a special focus on critical infrastructures and digital transformation, PITON designs and implements Smart City Solutions, Transportation Management Systems, IoT-enabled Systems and GIS-based Business Intelligence Solutions.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Software development, full system designer and implementer, mobile applications development.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

PITON works on innovative software and electronics solutions in any business especially for public bodies and industry. PITON is an expert on IoT based M2M systems and has already developed many embedded and fully integrated solutions on transportation and governmental organisations.

### TECHNOLOGICAL EXPERTISES

Transportation Information, Passenger Information, Enterprise Management, Fleet Management and Asset Monitoring software systems.

### **MARKETS**

- Smart City
- Transportation
- Mobility
- O GIS
- Logistics
- Public Services

# LOOKING FOR PARTNERS AND EXPERTISES

- Advance Semiconductor Manufacturing
- 5G Communication
- IoT Sensor Fusion

- O AI/MI /DI
- Autonomous Vehicles
- Green Vehicles

MORE INFORMATION

www.piton.com.tr









Created in 2019 **Employees** 

2

Company Location Vienna. **Austria** 



Pregenerate GmbH is a Vienna based microfluidic start-up established in November 2019 which is improving quality of life by In Vitro diagnostic (IVD) and Point-of-care diagnostics (POC). The core technology of Pregenerate GmbH is microfluidics, with offers in two platform technologies: organ-on-chip (arthritis IVD) and lab-on-chip (rapid viral POC).

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Pregenerate is microfluidic chip developer and service provider for IVD and POC.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Pregenerate is involved in ECSEL Research and Innovation Actions (RIA)Calls 2020 for Data treatment & Wearable Integration Technologies for Medical Applications.

# **TECHNOLOGICAL EXPERTISES**

- Microfluidics chip development
- Drug testing for Arthritis Invitro diagnostics
- O Lab-on-a-chip system for detection of Viral infections.

# **MARKETS**

- Organ-on-a-chip
- Personalized medicine
- Drug development
- Equine arthritis market Lab-on-a-chip
- Point-of-care

# LOOKING FOR PARTNERS AND EXPERTISES

- Arthritis patient cells and tissue banks
- Drugs for Arthritis that needs to be tested
- Al system for morphological analysis of images
- Virology Biosensing experts
- Automation of the liquid handling with lab robotics

MORE INFORMATION

www.pregenerate.net













Omicro offers high-tech solutions for gas analysis and diagnostics, enabled by micro chip technology (MEMS).

Application areas for these solutions are industrial process control and automation, laboratory analysis and portable devices or sensors. Omicro is engaged in customised manufacturing and OEM product supply.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Omicro is a gas mixture analysis equipment manufacturer.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Involved in PENTA project ESAIRQ and several innovative micro technology application projects funded by EU or Dutch authorities.

#### TECHNOLOGICAL EXPERTISES

Expert in micro chip Gas Chromatography and its application in (non) explosion safe monitoring equipment for fast gas mixture analysis.

#### MARKETS

Industrial process, (petro)chemical, automation, (bio)gas, natural gas, hydrogen.

# LOOKING FOR PARTNERS AND EXPERTISES

Looking for applications specialists for on-line monitoring of gas mixtures, hydrogen, emissions, gas purity.

MORE INFORMATION

www.qmicro.com







Created in 2007 **Employees**  Company Location Reggio Emilia, Italy



Raw Power Srl was born as spin-off of the university of Modena and Reggio E. Its core business is the design and consultancy in static power conversion, electrical machines design and electric power drives for industry applications. Raw Power's mission is promoting the technology transfer from the research to the enterprises and Raw Power supports its customers during product design and manufacture offering innovative and up-to-date solutions with the body of knowledge.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Raw Power is a services company in power electronics, electric machines and electric drives.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

- Regional POR FESR 2014–2020: for the development of diagnostic and prognostic sensors in automation:
- o ECSEL 2020 RIA 2, project YESvGaN: definition of new vertical GaN technical data and compare its performance with the ones of traditional WBG technologies (SiC and Si)

# **TECHNOLOGICAL EXPERTISES**

- Static power inverters design;
- O Electrical machines design: permanent-magnetic synchronous motors, pure reluctance motors, linear electric motors, etc ...:
- Electric power drives;
- Flectrical machines standards.
- Diagnostic and prognostic;

#### **MARKETS**

- Gardening:
- Renewable energies;
- Parcel sorting;
- Household electric appliances;
- Textile machines:
- Automotive
- O Automation:
- Gas and oil industry;
- Sensors:
- Fitness equipment;
- o etc.

# LOOKING FOR PARTNERS AND EXPERTISES

- Semiconductor manufacturers:
- Rapid prototyping manufacturing of electric steels;
- Permanent-Magnet manufacturing;
- SMC manufacturing:
- Sensor manufacturers.

MORE INFORMATION

www.rawpowergroup.it





# **RECIF Technologies**



Created in 1982 **Employees** 

60







RECIF Technologies designs, manufactures, distributes and maintains robotic handling equipment for highly sensitive environments dedicated to the semiconductor industry.

Acknowledged as expert in wafer handling and innovative solutions, RECIF Technologies is dedicated to customers satisfaction and established in the main semiconductor industry regions to ensure proximity (USA, Asia, and headquarters in France).

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

RECIF Technologies is an equipment manufacturer - Automation AMHS

### RD&I COLLABORATIVE INNOVATION INVOLVEMENT

RECIF is involved in collaborative programs for several technology nodes ENIAC & ECSEL: E450LMDAP, Senate, Takemi5, TapeS3, Pln3S Project leader in CATRENE programme: NGC450 & TSV-HANDY

# TECHNOLOGICAL EXPERTISES

- Automation
- Heterogeneous wafer handling & 3D Packaging
- Atmospheric
- Front end / Back end

# **MARKETS**

- Memory
- Logic
- Foundry
- o OFM
- o IDM

### LOOKING FOR PARTNERS AND EXPERTISES

- Advanced semiconductor manufacturing
- Metrology & sensors experts
- Research Institutes

MORE INFORMATION

www.reciftech.com









21

Company Location Hengelo, The Netherlands



REDEN BV is a Research & Development company that excels in simulation-driven product development and the development of Digital Twins. We support our clients in achieving a breakthrough in their product development.

Based on our simulation models, we offer product developers better understanding of the relationship between production design and performance; the Digital Twin. We make performance predictable (design for 6 Sigma).

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Reden is involved in new product and process development and optimising existing products and processes.

### RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Involved in PENTA project Hyb-Man.

# TECHNOLOGICAL EXPERTISES

- Multi physics modelling & simulation
- Digital Twinning
- O Design for 6 Sigma
- Artificial Intelligence

# LOOKING FOR PARTNERS AND EXPERTISES

OEM's in different sectors, Big Data specialists.

#### **MARKETS**

OEM's in machine Industry, consumer products, automotive and aerospace.

MORE INFORMATION

www.reden.nl





# RULEX INNOVATION LABS



Created in 2007 **Employees**  Company Location Genova. Italy



Rulex Innovation Labs (RIL) represents the headquarters for the research and development of the American company Rulex Inc. which specializes in Artificial Intelligence and in particular in B2B applications on decision and process automation through the machine learning technology called LLM (Logic Learning Machine), contained inside the software Rulex Analytics®.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Rulex is a software and service provider

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

RIL manages all the R&D activities for Rulex Inc. RIL is involved in several research projects, both at European and National level.

H2020: NEXT PERCEPTION, VALU3S, FRACTAL, SAFECOP

POR: PICK-UP (energy), LIGURIA 4P HEALTH

#### TECHNOLOGICAL EXPERTISES

RIL develops innovative methods for Explainable AI (namely Logic Learning Machine) and helps business users to implement Rulex-based automated decision process powered by XAI.

#### **MARKETS**

Thanks to its domain-independent approach, Rulex can apply its technologies in many fields, such as: cyber-physical systems, industry automation, IoT, supply chain, fintech, energy, transports and health.

# LOOKING FOR PARTNERS AND EXPERTISES

Rulex looks for partner with strong expertise in specific vertical fields to apply its algorithm in real-world context.

MORE INFORMATION

www.rulex.it













Salvia has been founded in 2017 to develop bioelectronic solutions that restore health for people suffering from chronic migraine. Salvia aims to provide drug-free solutions that are effective and inherently side-effect free and make its novel solutions widely accessible.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

To develop and bring to market medical devices.

## RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Salvia is an active participant in international collaborative projects, including ECSEL, PENTA and Furostars

# TECHNOLOGICAL EXPERTISES

Implantable device development, including:

- Bioelectronic foils
- Low power electronics
- Mechanical design, usability
- Biocompatibility

### **MARKETS**

- Active implantable medical devices
- Chronic migraine therapy

# LOOKING FOR PARTNERS AND EXPERTISES

Looking to team up with companies for medical app development, modelling and reliability assessment (e.g. electromagnetic compatibility, mechanical reliability).

MORE INFORMATION

www.salvianeuro.com







Created in 2017 **Employees** 



Company Location Valencia. Spain



SINGLAR INNOVACIÓN has an experienced and skilled team that develops its own products and offers services in the Cyber Security sector, specifically in:

Development and commercialisation of developed products in regulatory compliance and security.

Cybersecurity services: implementation of national and international standards (compliance), forensic analysis and deployment of specific security solutions.

Distribution of third-party security products specialised in cybersecurity.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

SINGLAR is working from systems to ultimately, and more significantly, in applications and services.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

SINGLAR is active in R&D funded projects in cyber security. The company permanently works with a R&D department that works continually in the opportunities detected in the market with the aim of satisfying customer and market innovation needs.

#### TECHNOLOGICAL EXPERTISES

SINGLAR is specially focused on the security and privacy concerns of operational tools and platforms, having developed solutions that support services in critical infrastructures

We are currently in coordination with the Spanish National Cryptologic Centre to cooperate in the security of ICT Systems within Public Administration

#### **MARKETS**

- Industrial Security Audit.
- Operation Management and Industrial Cybersecurity.
- Operation and maintenance of ISO quality management system.

# LOOKING FOR PARTNERS AND EXPERTISES

Companies with expertise and solutions in systems where applications could be deployed and integrated to offer Singlar's cyber security services.

MORE INFORMATION

www.singlarinnovacion.com







10+

Company Location Maisons Laffitte (78). France



SiPearl is the industrial hand of European Processor Initiative, and is indeed the fabless company integration, supporting and selling the chip to the market

SiPearl is focused on Advanced Data Processing for High Performance Computing, Artificial Intelligence and Edge Computing. SiPearl Common Platform will enable and speedup European AI, Cryptographic and Quantum startupWe are focused on the P3S. Performance - Sovereignty - Safety - Security

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

SiPearl positioning is in Architecture, and chip design, being fabless

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

SiPearl is deeply involved in the European Processor Initiative (H2020 consortium initiated in Dec 2018) and supported by DGConnect and will own EPI chip

#### TECHNOLOGICAL EXPERTISES

- Digital and High Speed
- o 2.5D and large dies
- Deep note submicron process (beyond 7nm)
- Interconnect and HPC software

#### **MARKETS**

- High Performance Computing, Al and Edge Computing
- Cryptography

# LOOKING FOR PARTNERS AND EXPERTISES

Looking for advanced packaging, interposer, 2.5D, 3D expertise in EU. Looking for automotive safety expertise for high performance CPU's

MORE INFORMATION

www.sipearl.com







Created in 1999 **Employees** 10 Company Location Sweden and the U.K.



Spacemetric transforms satellite and airborne raw data to analytics-ready image products. The Keystone Image Management System is a SW data hub handling, processing and serving imagery with rigorous photogrammetric techniques, minimising costs and storage footprint by on-demand services. Spacemetric's Bluestone® gives users, from the ground, on-board data access with low band-width, see https://business.esa.int/projects/docs-2

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Spacemetric delivers image data management systems, transforming raw data into analysis-ready data.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Long experience, for example as following:

- Aggregate Farming in the Cloud (ECSEL);
- European Space Association, often as Lead;
- Innovair, the Swedish national strategic innovation programme for aeronautics;
- SAAB's UAVs and Gripen aircraft.

# TECHNOLOGICAL EXPERTISES

- Satellites: Image processing, Payload commissioning, In-flight calibration, and Sensor design & monitoring.
- Archiving solutions, Data hubs / web portals
- Defence forces / integrators Sensor ground stations, Modules for data access / sharing
- Airborne: Operator data handling, Web portals, Ortho image production systems, and 3D data production.

#### **MARKETS**

- For satellite data, some of our clients are satellite manufacturers and operators.
- Among clients for data archive solutions, data hubs and web portals are found National Space Agencies, national land surveys, and the European Space Agency.
- For defense forces and defense integrators (e.g. SAAB and the Swedish Armed Forces).
- In the airborne segment (deliver to airplane manufacturers and integrators).

#### LOOKING FOR PARTNERS AND EXPERTISES

Wherever clever satellite and/or aerial image data management is needed we want technology development and new market access. Aims can be develop / include:

- Our Bluestone technology (for selecting on-board data for priority download) to also handle video
- On-board edge computing for de-selecting non-priority data and selecting priority data
- Image data handling in the cloud with low-cost entry costs and full scalability

We encourage partner(s) for R&I applications, looking for new applications, and for increasing market access.

MORE INFORMATION

www.Spacemetric.com







Created in 2004 **Employees** 

50

Company Location Helsinki, Finland Stockholm, Sweden Berlin, Germany



Growth through innovation, technology and corporate renewal - Spinverse is the Nordic leader in innovation consulting, specialised in open innovation, arranging funding and commercialisation of emerging technologies. Our 50-person team has coordinated over 2.3 B€ of large scale innovation programs. Since the beginning of H2020, we have helped our customers get more than 420 M€ of EU funding. Knowledge of successful collaborative R&D&I projects is in the DNA of Spinverse.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Private consulting company specialized in open innovation and multi-party project coordination, management, and communication, especially for the whole electronics value chain.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Day-to-day management and/or dissemination and communication management of the following projects:

- ECSEL JU: EuroPAT-MASIP, APPLAUSE
- FNIAC JU: Prominent
- H2020: Smart-MEMPHIS, CEFOW, Stardust, INNPAPER
- O BBI JU: PEFerence. VEHICLE. SWEETWOODS
- FP7: IP4Plasma (as a coordinator)

#### TECHNOLOGICAL EXPERTISES

We can offer effective tools and processes, insights from evaluators as well as technology and sector expertise; we have altogether 12 PhDs with industry background from Electronics, ICT & Security, Health, Bio and Circular economy, Energy and Manufacturing

#### **MARKETS**

Spinverse has offices in Helsinki, Stockholm and Berlin, Our focus is in-

- Open innovation
- Management consulting
- Public funding

# LOOKING FOR PARTNERS AND EXPERTISES

Need help in building or managing innovation projects? We can improve your odds to get funded and take care of all practicalities in proposal building.

We can help in daily administration and support your project delivering communications, commercialization strategies or business plans. We help you build new businesses through partners, funding & new ideas.

MORE INFORMATION

www.spinverse.com







Created in 1997 **Employees** 25 Company Location Genoa. Italy



STAM is an Italian engineering firm specialized in the high-tech sector which develop turnkey solutions in the following areas: Space & Defence, Security & Transport, Energy & Environment, and Industry & Automation. Since the company establishment in 1997, STAM provides engineering and management services during the overall product life cycle thanks to its set of facilities and capabilities.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

STAM is a system integrator and applications developer.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

To date, STAM has directly participated in more than 50 EU R&D projects from FP4 to H2020. The following projects concern electronic systems: VALU3S, COGNIPLANT, SHAREWORK, SOFTMANBOT, LIGHTME, ADRIEN, RE4 and STREAM-OD.

#### TECHNOLOGICAL EXPERTISES

Multiphysics and FEM modeling, design and integration of mechatronic systems, monitoring and control systems, development of IoT solutions, computer vision systems, Al-based software development, risk analysis and LCA tools, design of electronics system for smart metering and energy system automation, power electronics for energy management

#### **MARKETS**

- Automation of assembly lines
- Control of industrial processes
- Safety & Security of industrial plants and automated systems
- Waste management systems
- Asset management
- Energy & Utilities demand side management

# **LOOKING FOR PARTNERS AND EXPERTISES**

- Equipment manufacturers
- Industrial end-users
- Asset managers/owners
- Energy providers
- Waste managers
- Experts in cyber-security

MORE INFORMATION

www.stamtech.com









Company Location Delft. The Netherlands



Synano is a start-up with a vision to become a worldwide provider of nanotech cooling solutions for companies, keen to reduce their energy consumption and/or facing demanding thermal management challenges. Synano develops nano-structured cooling fluids to replace standard coolants in markets ranging from automotive to data centers. Currently active in the R&D of nano-coolants for single and two-phase cooling systems along with nano-scale surface modifications using nanofluids.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

Synano develops nano-materials for thermal management of high-power equipment

## RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Synano participates in various national and European R&D projects as follows:

- ECSEL 'BRAINE' project: developing nano-coolants for thermosyphons for high power density servers
- MG-2020-INEA 'ADENEAS' project: R&D of surface modification using nanofluids for a two-phase cooling system in electric aircrafts
- Dutch MIT-R&D projects: 'Nano-graph' (develop graphene-based nano-coolants) and 'Opti-Rec' (study feasibility of nanofluid use in data center cooling)

#### TECHNOLOGICAL EXPERTISES

- Formulation and characterization of nanofluids of various types of nanoparticles (carbon-based, alumina) and base fluids (water, ethylene glycol);
- O Conductive, convective and boiling mechanisms of heat transport for cooling applications;
- Effect of surface modification with nanoparticles on the heat transfer across the solid-liquid interfaces;
- Experimentation, analytical and numerical estimates, case study.

### LOOKING FOR PARTNERS AND EXPERTISES

- Cooling hardware manufacturers
- High power electronics manufacturer
- Nanomaterial producers
- Thermal management simulation and design consultancy firms
- Organisations focused on energy conservation and CO2 reduction

# **MARKETS**

Nano-material research for cooling applications in fields like:

- Automotives
- Data centers
- Aircrafts
- Solar panels/concentrators
- High power electronics
- Space heating/cooling

MORE INFORMATION

www.synano-cooling.com







Created in 2017 **Employees**  Company Location Vilnius. Lithuania



TeraGlobus is a Lithuanian-based company acting in the field of dissemination and exploitation in numerous EU projects, assisting partners from academia and the private sector to implement and ensure the broadest possible outreach of the measurable project outcomes. Tera Globus has a team of experts to support engineers and individual inventors in developing international partnerships to advance their technologies from the early stage to the global market.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

TeraGlobus is dissemination, communication and exploitation partner.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

ESCEL JU:

- Al4DI Artificial Intelligence for Digitizing Industry
- AI4CSM Artificial Intelligence for Connected Shared Mobility
- ArchitectECA2030 Full advantage of automation, Electronic Components and Systems (ECS) vehicles through homologation and type approval.
- NewControl Integrated, Fail-Operational, Cognitive Perception, Planning and Control Systems for Highly Automated Vehicles

#### TECHNOLOGICAL EXPERTISES

Communication expertise:

• The project website, Print material and online tools, Project meetings, Stakeholder management, Design resources and templates, Promotional material

Exploitation expertise:

• Exploitation plan, IP management, Stakeholder mapping, Market analysis, and Business models. Exploitation roadmap, Strategic Grant Planning

#### **MARKETS**

TeraGlobus has expertise in autonomous vehicles and healthcare sectors, however is interested in collaboration with other markets too.

# LOOKING FOR PARTNERS AND EXPERTISES

TeraGlobus is looking for partners whom are willing to coordinate the projects and have project ideas - we support projects from an idea to implementation and act as full partners of the consortium.

MORE INFORMATION

www.teraglobus.lt





# 3R Technical Experts SL (Suigeneris)

Created in 2015 **Employees** 

10



Company Location Madrid. Spain



3R Technical expert SL bases its business on a comprehensive professional service positioning of digitisation solutions for industry and industrial maintenance with the application of new technologies in Industry 4.0. With a focus on digitisation solutions for machinery and the operator and integration with information and analytical systems, including the manufacture of IoT devices for traceability of the entire life cycle of the product.

# POSITIONING IN THE ELECTRONICS VALUE CHAIN

loT manufacturing, embedded intelligence, software monitoring, IA Predictive maintenance

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Participant in H2020 Fast Track to Innovation (FTI) programme and currently participating in PENTA project PLANTAR.

# TECHNOLOGICAL EXPERTISES

- Manufacture of mobility devices with miniaturised sensors with incorporation of different wireless telecommunication systems
- Development of Al platform for predictive maintenance, incorporating data from devices and sensors
- Development of a real-time monitoring platform
- Integration of device data into a BlockChain certified traceability platform

# LOOKING FOR PARTNERS AND EXPERTISES

- IA algorithmics development
- Transductors
- Nano-electronics

#### **MARKETS**

- Manufacturing.
- Medical Pharmaceutics and Health
- Automobilistic and aeronautical.
- Transport & Logistics
- Livestock & agriculture
- Food and Supermarket

MORE INFORMATION

www.isuigeneris.com











Ubiqu has revolutionised digital identification by adding the same level of assurance to every digital transaction, as if displaying an ID in person.

The innovation Ubiqu brings is a way to remotely add a hardware- based token to existing mobile phones maintaining the high level of security that hardware provides.

- Easy to use
- Level of assurance 4
- Hardware based and easy to use and easy to scale

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

Ubiqu is a secure element provider to larger applications. Examples are; use of a mobile phone as an epassport, edriver license, ebank card, elicense, ecard key or ephysical key

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

H2020: FIDES FCSFL: Secredas

# TECHNOLOGICAL EXPERTISES

- Cryptography
- Crypto protocols
- Secure elements
- Physical Access
- Logical Access
- Authentication, Signing, Decryption

# **MARKETS**

- Banking
- Telecom
- Automotive
- Access
- Identity and Access
- Security
- Defense

# LOOKING FOR PARTNERS AND EXPERTISES

Banking

Access

Defense

Telecom

Automotive

Security

Identity and Access

MORE INFORMATION

www.ubiqu.com







Created in 1990 **Employees** 

340



Company Location Dresden. Germany



XENON has more than 30 years of experience in the development of automated plant solutions for automotive, electronics and medical technology, with over 1500 machines delivered. Highest precision with micrometer accuracy, short cycle times, product and process data acquisition and -processing are key competencies of the company.

### POSITIONING IN THE ELECTRONICS VALUE CHAIN

XENON is a provider of automated solutions for production equipment.

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

- ECSEL projects: loSense, productive4.0
- PENTA projects: Hyb-Man
- German supported R&D: AllMeSa (Mechatronics Alliance Saxony), ProMoA (automated machine planning and -development), safe-UR-chain (use of block chains in value chains)

# **TECHNOLOGICAL EXPERTISES**

Assembly and testing of mechatronics products.

Broad technology platform, starting with classic, partly robot-assisted pick-andplace and joining technologies, up to technologies of assembly and connection technology: Fitting, bending, dosing, heating, joining, handling, marking, cooling, lasering, testing, cleaning, welding, cutting, packing, feeding...

#### **MARKETS**

Actors. Sensors, Electric and Mechatronic Systems, Plug Connectors, Contact Systems for the markets of Automotive, Electronics and Medical Technology

# LOOKING FOR PARTNERS AND EXPERTISES

- Medical Technology
- Digitization of processes for development of custom-made automation solutions
- Human-Robot-Collaboration
- Industry4.0

MORE INFORMATION

www.xenon-automation.com





# YONGATEK Microelectronics R&D



Created in 2014 **Employees** 

53

Company Location Istanbul. Turkey



Yongatek Microelectronics is a high-tech company operating in highly demanding industries worldwide. Its mission is to be one of the few global brands to develop technology in Semiconductor IC/ASIC/SoC/Chip Design, 5G/6G and Satellite Communications, Video Processing and IoT. Yongatek Mikroelectronics develops special solutions and turnkey projects in cooperation with universities and institutions.

## POSITIONING IN THE ELECTRONICS VALUE CHAIN

Chips, Applications, Architecture, Equipment, Systems

# RD&I COLLABORATIVE INNOVATION INVOLVEMENT

Yongatek Microelectronics provides a wide range of end-to-end solutions in

- FPGA and ASIC Design
- O D0-254 Compliance and UVM Verification
- H264/H265 Video Codec

# TECHNOLOGICAL EXPERTISES

- FPGA and ASIC Design
- O D0-254 Compliance
- UVM(Universal Verification Methodology)
- H264/H265 Video Codec
- Al Based Video Processing Algorithm Dev.
- Electro Optic Platforms and sensors
- RISC-V / ARM Microprocessors
- LDPC. Turbo. Polar Encoder/Decoders
- 5G/6G RRU IP and SoC Developments
- Embedded Systems
- Edge Computing

#### LOOKING FOR PARTNERS AND EXPERTISES

- SoC Chip Design and Verification
- Avionic and Space developers
- Video Processing
- RISC-V Microprocessor and IP Development companies
- o IoT and Edge Computing Sensor developers
- 5G/6G and Satellite Communications

# Video and Image Processing

- 5G/6G and Satellite Communications
- IoT and Edge Computing

#### **MARKETS**

- IC/ASIC/SoC/Chip Design,
- 5G/6G Communication
- Satellite Communications
- Video Processing
- o loT

MORE INFORMATION

https://www.yongatek.com



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Innovation Create Shape

Community Network Influence

AENEAS is an Industry Association promoting RD&I in Electronic Components & Systems (ECS) to strengthen European competitiveness along the complete ECS value chain.AENEAS federates all RD&I players, from large industrial companies, Small and Medium Enterprises, research organisations and Universities.

AENEAS represents its members in the ECSEL Joint Undertaking, the Public-Private Partnership for the ECS Value Chain. The Joint Undertaking funds RD&I projects for world-class expertise in key enabling technologies essential for Europe's digital future. AENEAS is also operating the EUREKA cluster PENTA dedicated to micro and nanoelectronics enabled systems and applications.

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