

EMBRACING A BETTER LIFE



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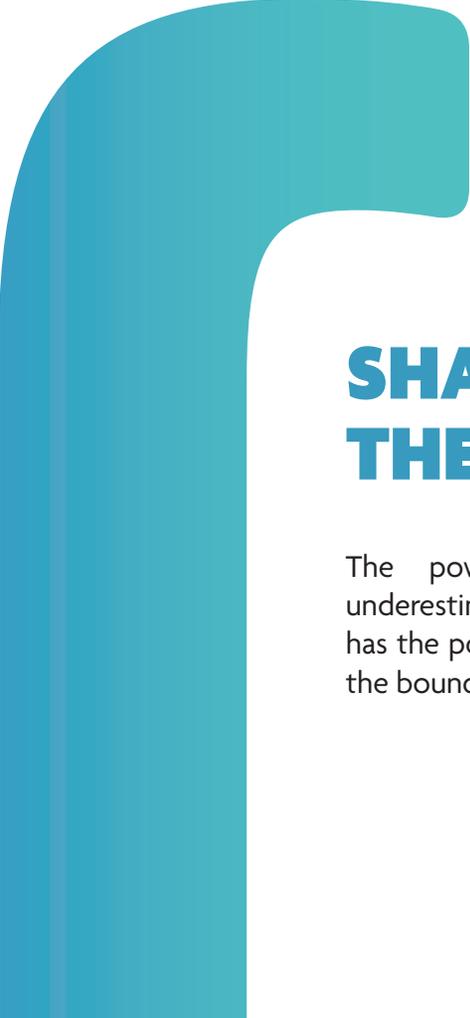
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www.imec-int.com

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How 3,500 people change the world
Imec USA
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SHAPING THE FUTURE

The power of technology should not be underestimated. We firmly believe that technology has the power to improve lives. That is why we push the boundaries of technology forward.

INNOVATION PLATFORM

APPLICATION DOMAINS

SMART HEALTH



SMART MOBILITY



SMART CITIES



SMART INDUSTRIES



SMART ENERGY



SMART EDUCATION



SEMICONDUCTOR & SYSTEM TECHNOLOGIES

CORE CMOS



SENSOR TECHNOLOGY



FLEXIBLE TECHNOLOGY



PATTERNING TECHNOLOGY

LOGIC TECHNOLOGY

MEMORY TECHNOLOGY

INTERCONNECT TECHNOLOGY

3D INTEGRATION OPTICAL I/O

DIGITAL TECHNOLOGY PLATFORMS

NETWORKING



DIGITAL PRIVACY & SECURITY



SOFTWARE & DATA MANAGEMENT SKILLS



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CHANGING THE GAME

The combination of the most advanced microchip technologies and state-of-the-art software expertise is what makes us unique. The evolution in microchip technology towards more powerful and smaller chips allows us to make every object intelligent and to bring tons of data at our fingertips. By combining and translating the collected data from billions of connected sensors into meaningful information, we help our partners create truly smart applications that enhance our life – all while putting digital privacy and security center stage.



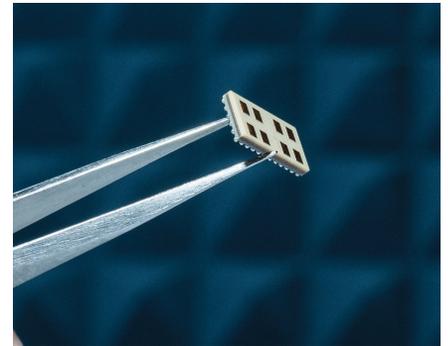
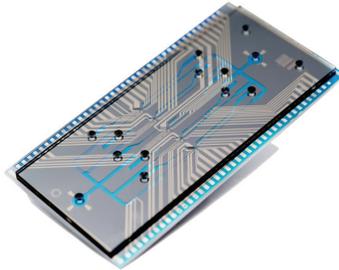
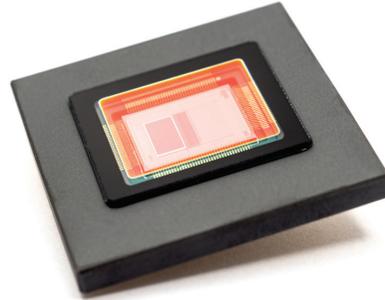
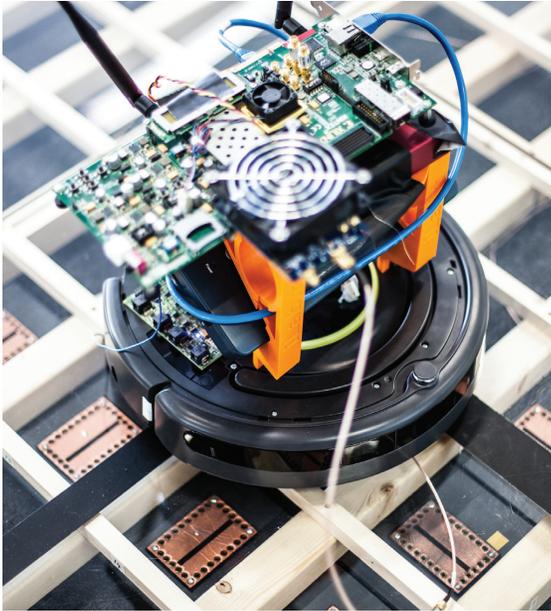


DRIVING MICROCHIP MINIATURIZATION

We have been driving the advances in microchip technology for over 30 years.

Together with our global partners, we perform groundbreaking research on materials, devices and chip processing to make chips smaller, faster, cheaper, and with increased functionality.

We join forces with the entire nanoelectronics ecosystem, many of them world-leading companies, to push the boundaries of next-generation microchip technology.



ENABLING THE INTUITIVE INTERNET OF THINGS

Thanks to microchip technology, every object – machines, buildings, vehicles, personal appliances – can be connected to the internet to provide us with a continuous flow of useful information. Imec develops the building blocks and digital technology for an intuitive Internet of Things.

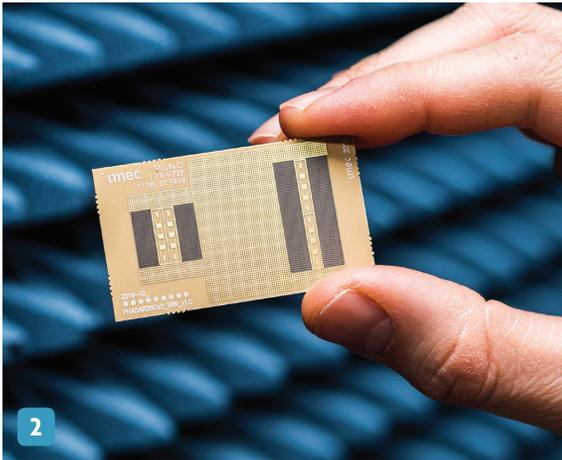
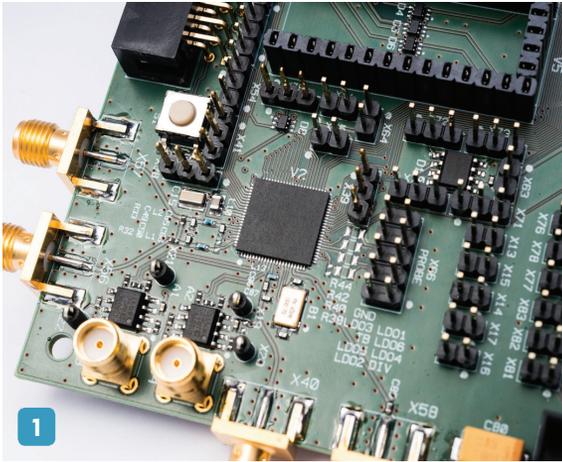
The intuitive IoT consists of 'thinking objects' – networked sensors that constantly monitor the environment, provide status reports, receive instructions, and take short-term and long-term actions, based on intelligent processing of the gathered data. This intuitive IoT will interact with us and learn from our habits, preferences and health, etc. It will make better-informed decisions and take the right actions while taking our privacy and security concerns into account.



A low-angle, long-exposure photograph of a city street at sunset. The sun is low on the horizon, creating a strong orange and red glow. A white bicycle symbol is painted on the asphalt in the foreground. In the background, a cyclist is riding away, and a large, blurred vehicle is moving across the frame. The overall scene conveys a sense of motion and urban mobility.

SMART MOBILITY

We envision comfortable and safe transportation for everybody. To make this happen, imec develops key technologies for connected, driverless cars.



1. Low Power Wide Area (LPWA) Multi-Standard Radio Chip
2. A phased array radar highly integrated in CMOS chip, incl. 2 active transmit & 2 active receive chains



SMART HEALTH

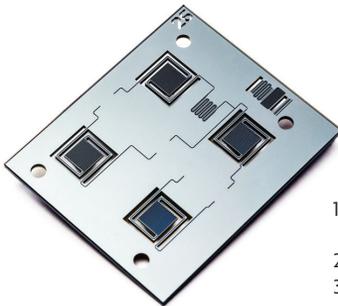
We aim to bring diagnostics and healthcare within the reach of everybody. We enable comfortable monitoring of health parameters in daily life using medical-grade wearables, allowing early diagnostics and personalized feedback to encourage people to change their behavior and live more healthily. And by combining knowledge of the patient's DNA with comprehensive disease and therapy data, precision medicine becomes possible, delivering the most effective treatments at reduced cost.



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1. Neural probe enabling electrical and chemical recording and stimulation of single neurons
2. EEG headset developed by imec and Holst Centre
3. DNA sequencing chip
4. Wristband for ambulatory stress monitoring
5. Health patch combining Holst Centre system-in-foil and imec's ultra-low power circuits and advanced algorithms



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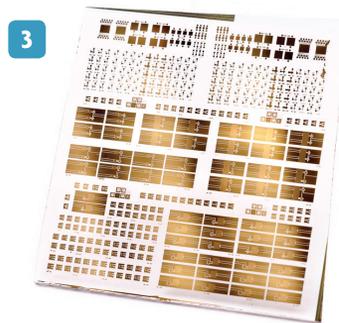
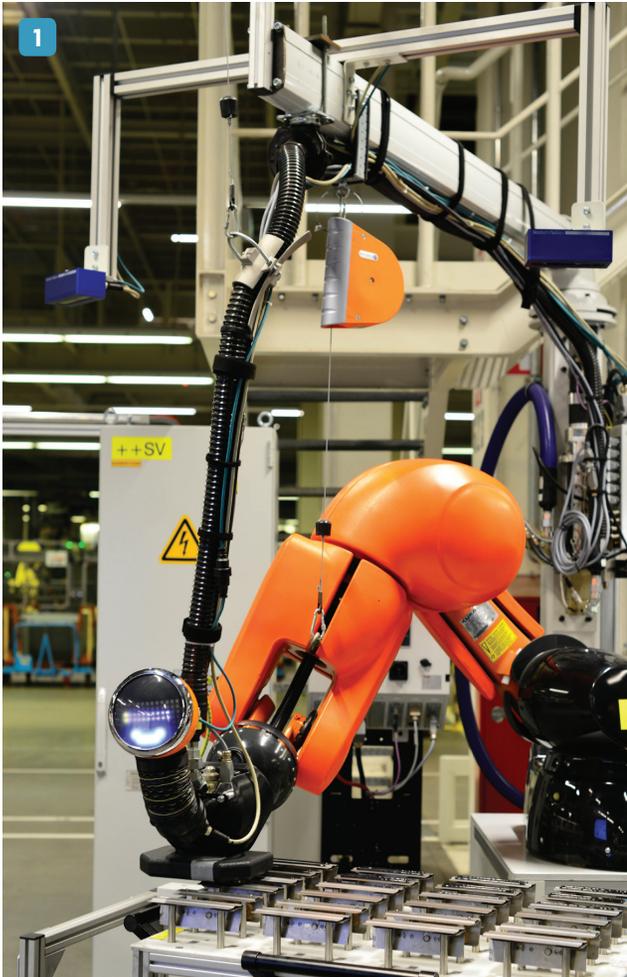


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SMART INDUSTRIES

Tracking and tracing the quality of food from production until delivery can make logistics more efficient and cost effective. The same goes for the storage and stock management of other consumer goods, as well as for medical supplies to the hospital. Smart robots interacting in a natural way with their human co-workers, will enhance the entire manufacturing process.

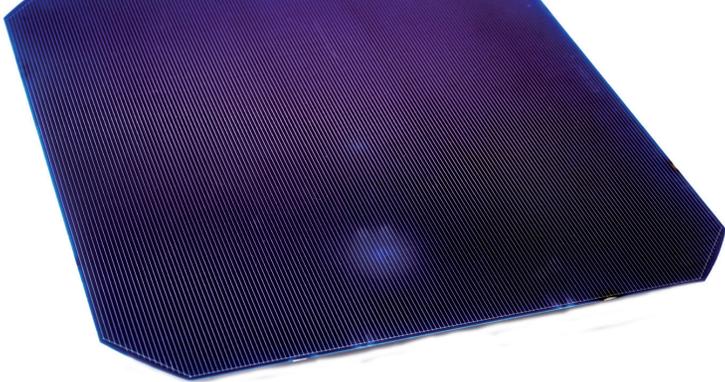


1. ClaxOn robot: improving the interaction between people and collaborative robots in factories
2. Imec's High-speed Ultrasonic SNAPSCAN Camera: enables hyperspectral imaging acquisition in less than one second
3. Ultrahigh-frequency IGZO Schottky diode for intelligent item-level RFID tagging to replace bar codes

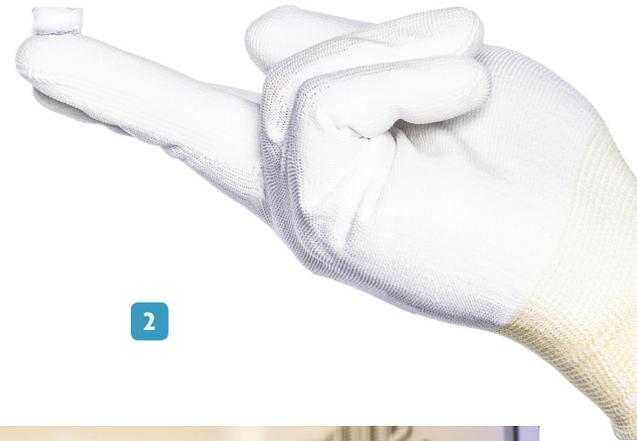
A silhouette of a person leaping horizontally in a grassy field at sunset. The sun is low on the horizon, creating a bright lens flare effect behind the person. The sky is filled with soft, orange and pink clouds. The person's arms are outstretched, and their legs are also extended, capturing a moment of pure motion and freedom.

SMART ENERGY

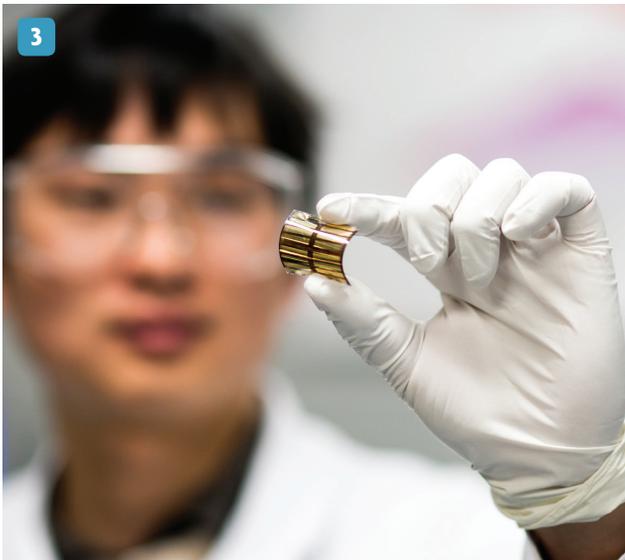
We believe distributed energy generation from renewables such as sun and wind will become one of the greatest enablers of a sustainable future. Imec performs research into solar and power systems, batteries and digital technologies to accelerate the shift towards smart energy systems.



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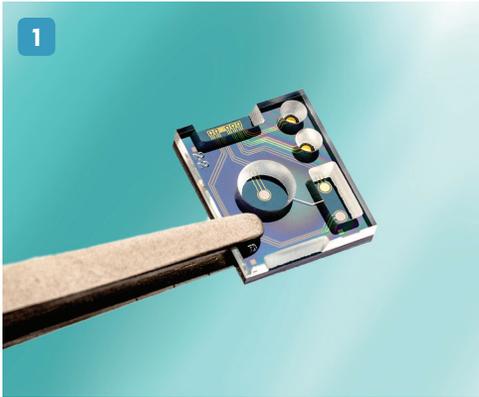
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1. Highly-efficient bifacial solar cells with near 100% bifaciality
2. Nanocomposite electrolyte for next-generation batteries
3. One of imec's solar cell researchers holding a flexible perovskite solar cell on foil with an efficiency above 10%
4. Silicon solar cell line processing 156mm x 156mm Si solar wafers

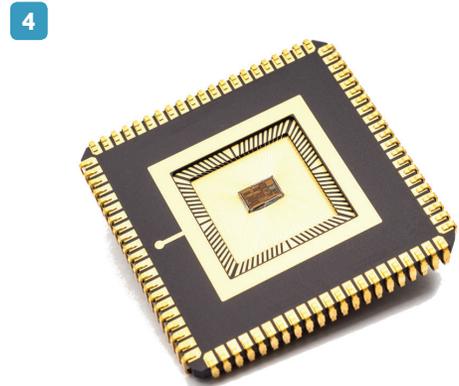


SMART CITIES

Imec aims to bring the intuitive Internet of Things to the city, improving the quality of living for its inhabitants. We are currently transforming the city of Antwerp (Belgium) into one of Europe's largest smart city laboratories, putting key technologies for smart cities to the test.



1. Solid-state multi-ion sensor for IoT applications
2. Multi-sensor node for environmental sensing
3. City of things: Antwerp
4. Sensor read-out chip made in 40nm CMOS



SMART EDUCATION

Imec wants to increase learning effectiveness using smart technologies. We do so by developing and testing educational technologies that facilitate interaction and collaboration and that lay the foundation of tailor-made learning solutions.

The resulting research outcomes are also applied within our own imec.academy-training offer, which includes a wide range of professional courses on nanoelectronics and digital technology; courses that attract students from around the world. Training provided by imec.academy features a smart, blended mix of e-learning and classroom sessions – while course content is dynamically adjusted in function of students' level and the questions they ask.





1. Demo session on e-learning
2. Interactive classroom session
3. Imec.academy



BOOSTING YOUR RESEARCH

At imec, we believe in the power of collaboration to push your company's technology forward. Along such research trajectory, we give you access to our state-of-the-art infrastructure – including 12,000m² of clean room capacity containing the most advanced collection of microchip processing tools in the world, and state-of-the-art (bio, wireless, imaging, ...) labs.

Collaboration agreements with imec come in different forms and shapes – ranging from:

- Pre-competitive R&D with multiple partners to reduce advanced research costs and risks
- Bilateral projects
- Government-funded research in a Flemish or European context
- Collaborative demand-driven research tailored to the exact needs of the consortium partners

A wooden door stands open in a field of tall grass and wildflowers under a dramatic, sunset sky. The door is on the left side of the frame, and the landscape extends to the horizon under a sky with soft, golden light and scattered clouds.

GUIDING YOU ON THE PATH OF PRODUCT INNOVATION

From the moment your idea takes shape until it evolves into a fully functioning product or service (and even in the stages beyond), imec guides you on the path of product innovation. Whether it is hardware, software, or both.

Our specialized support includes:

- Evaluating early-stage ideas in terms of feasibility and viability, and translating those ideas into blueprints, designs and models
- Prototyping and testing products and technologies – in real-life environments with real users
- Producing chips and systems in low volumes and helping you grow in a sustainable way

KICKSTARTING YOUR BUSINESS

Getting a tech start-up off the ground requires skills, resources and the right technology. And turning it into a long-term success is even more of a challenge.

Through the **imec.istart** business incubation program, we provide tech entrepreneurs with specialized coaching, facilities and support – and a safe and stimulating environment to develop and grow their business.

www.imec-int.com/istart

The **imec.xpand** instrument enables us to invest in innovative, early-stage ideas and projects – grown both inside and outside of imec; projects in which imec's knowledge, expertise and infrastructure is the differentiating factor. Imec.xpand comes with access to imec's infrastructure, the potential of extended incubation periods, and the support from corporate investors and venture capitalists.

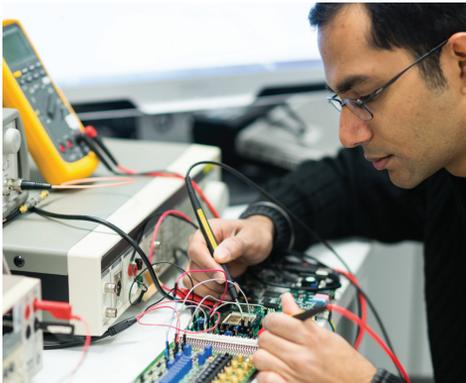
www.imec-int.com/xpand



Close to 3,500 researchers work at imec.

Technology starts with people. At imec those people have names such as Hilde, Kim, Praveen and Umberto. 75 nationalities who drink about 200 cappuccinos a day. 3,500 researchers who make our company grow. 3,500 researchers who grow at our company.

HOW 3,500 PEOPLE CHANGE THE WORLD



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IMEC USA

NANOELECTRONICS DESIGN CENTER FOR PHOTONICS AND HIGH-SPEED ELECTRONICS

Imec offers a suite of services to develop and manufacture innovative electronics focusing on healthcare, aerospace, security, and transportation. With state-of-the-art research on photonics and high-speed electronics, imec enables smart, market-disrupting products capable of making the life of consumers around the world healthier or more comfortable.

Our specialized support includes:

- Locally-embedded R&D hub
- World-class research in photonics and high-speed electronics
- Support for US-based SMEs, universities and research
- Backed by 30+ years expertise of one of the world's premier R&D centers
- Suite of services to develop and manufacture innovative electronics
- Partnership with local fabrication facilities
- Access to worldwide advanced foundry services

IMEC – THE CORNERSTONE FOR DESIGNING AND MANUFACTURING YOUR SMART ELECTRONICS

Imec is a global research brand with a strong commitment to close collaboration with our partners. With this in mind, imec established its first US-based design center in Kissimmee, Florida, in order to come closer to one of our strongest markets and the home of many of our partners. The center gives US-based semiconductor and system companies, universities, and research institutes an additional possibility to leverage imec's expertise.

Imec's activities in Florida concentrate on high-speed electronics, photonics, and specialized imagers. Imec has been a pioneer in the miniaturization of these advanced technologies, which are an excellent fit for the US-based design center because of their potential to be disruptive in many domains that are strategic for the US market.



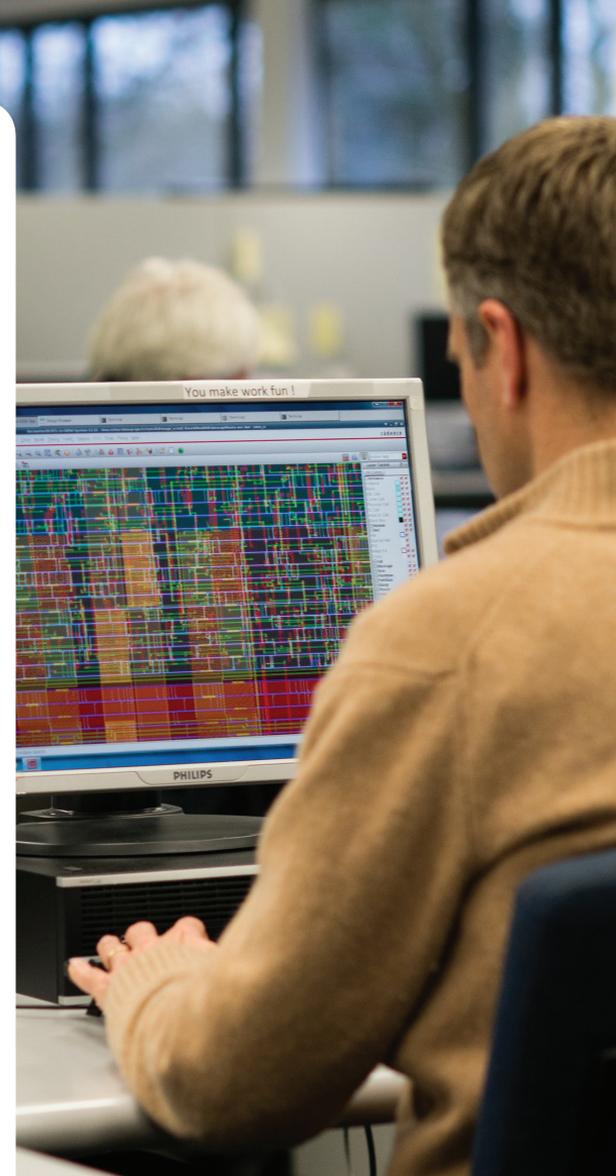
BERT GYSELINCKX

GENERAL MANAGER IMEC USA

Imec's expertise and the availability of a local, approachable design center make us especially appealing for SMEs and R&D groups, offering a much-needed suite of services for local initiatives to develop and manufacture innovative electronics. As an added asset, our US design center is located at a high-tech park along with BRIDG. BRIDG is a fabrication facility developing advanced technology platforms for sensors and other future high-tech products (emitters, modulators, energy and communications devices/systems). The BRIDG fab will specialize in technologies such as the ones designed at imec, and will be one of the fabrication options for SMEs and R&D groups that have their designs made by imec.

For companies in the US that are interested in taking their applications and sensors to the next level, we complement the services of imec's design center with those of imec.IC-link.

Imec.IC-link is the industrial arm of imec and provides low-cost access to worldwide advanced foundry services.



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The logo consists of a small white square followed by the lowercase letters 'imec' in a bold, white, sans-serif font. The background is a teal gradient with abstract shapes on the left side.

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