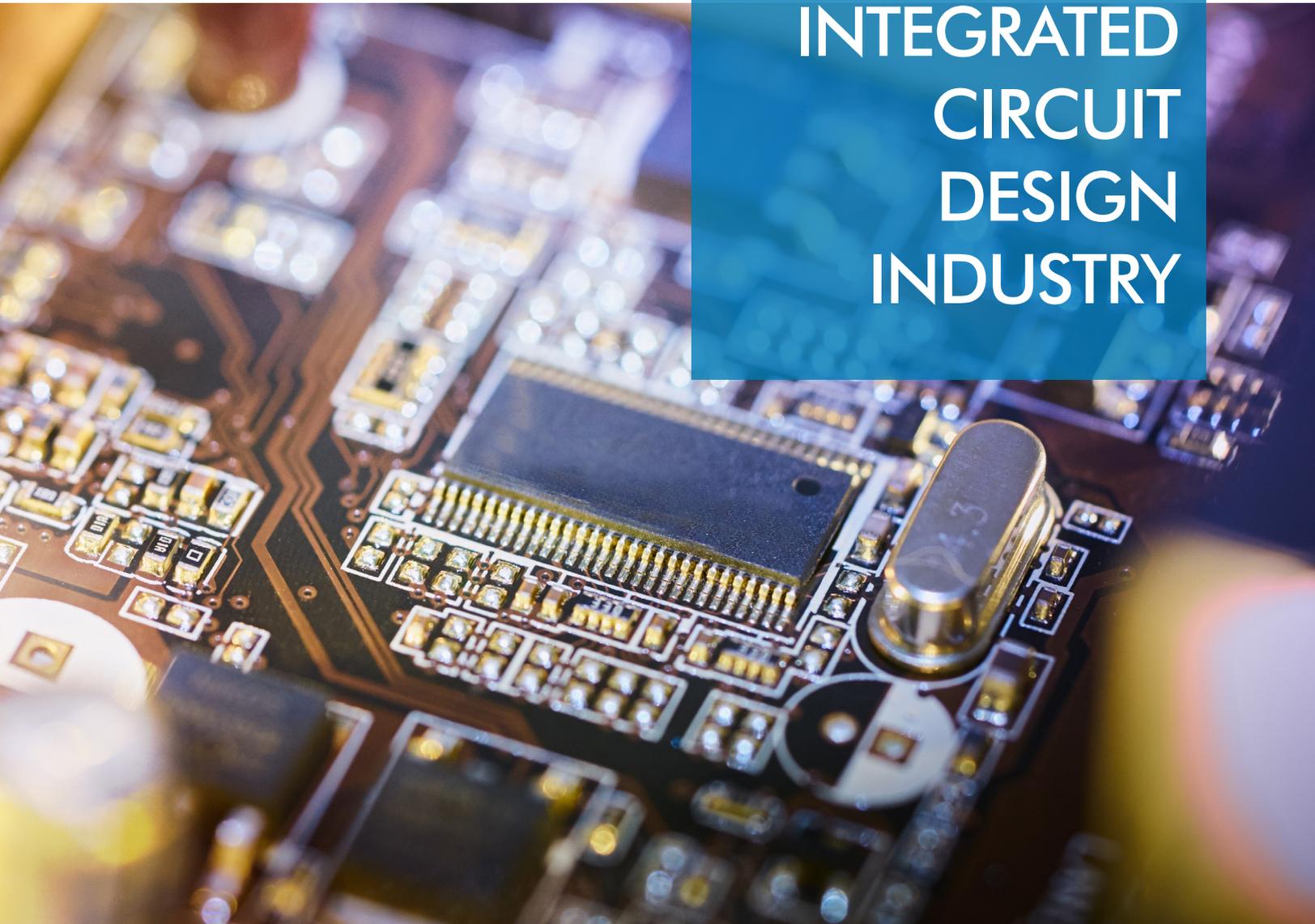


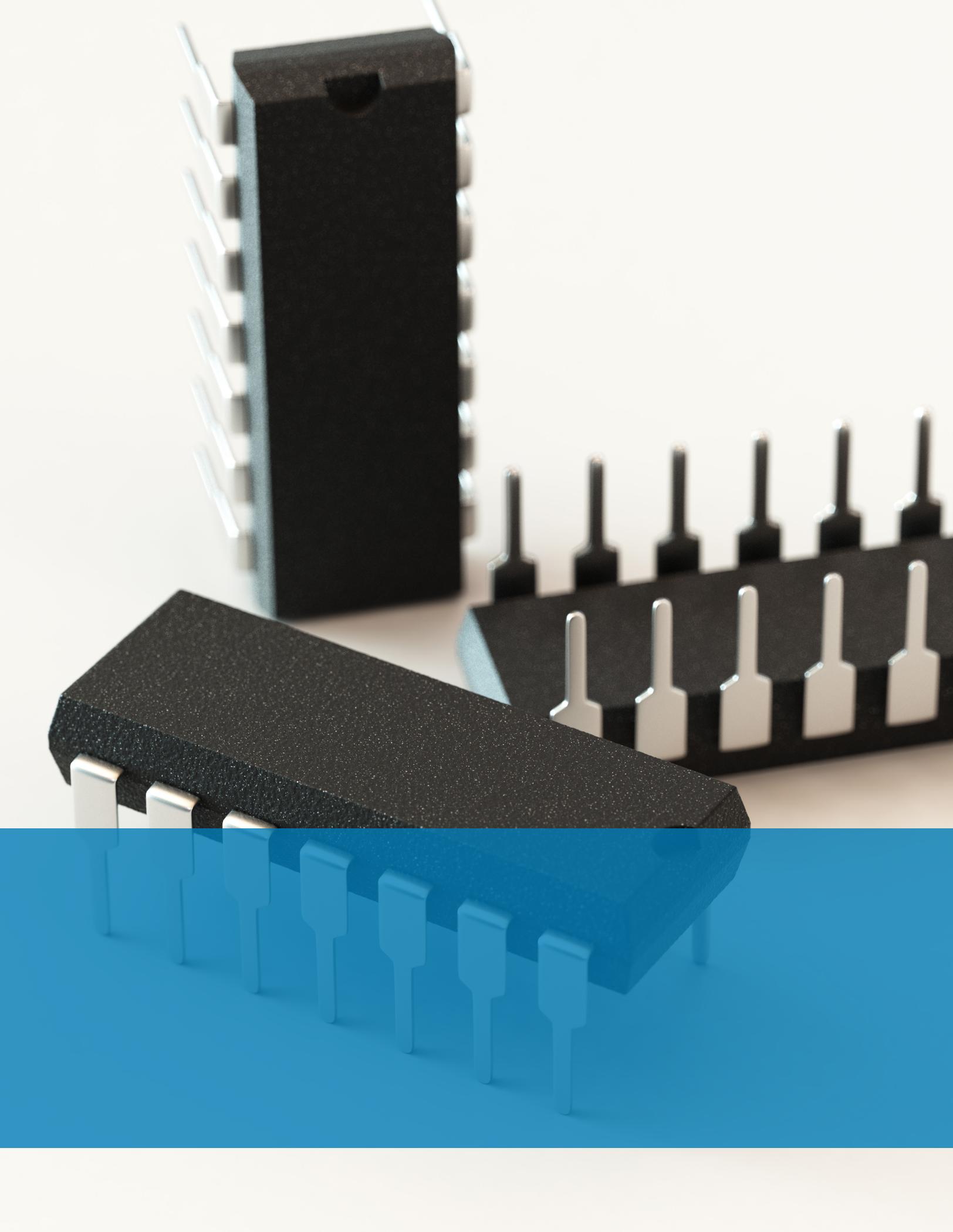


**FIRST PHILIPPINE
INDUSTRIAL PARK**
OUR PARK, YOUR BUSINESS

2019

**THE PHILIPPINE
INTEGRATED
CIRCUIT
DESIGN
INDUSTRY**





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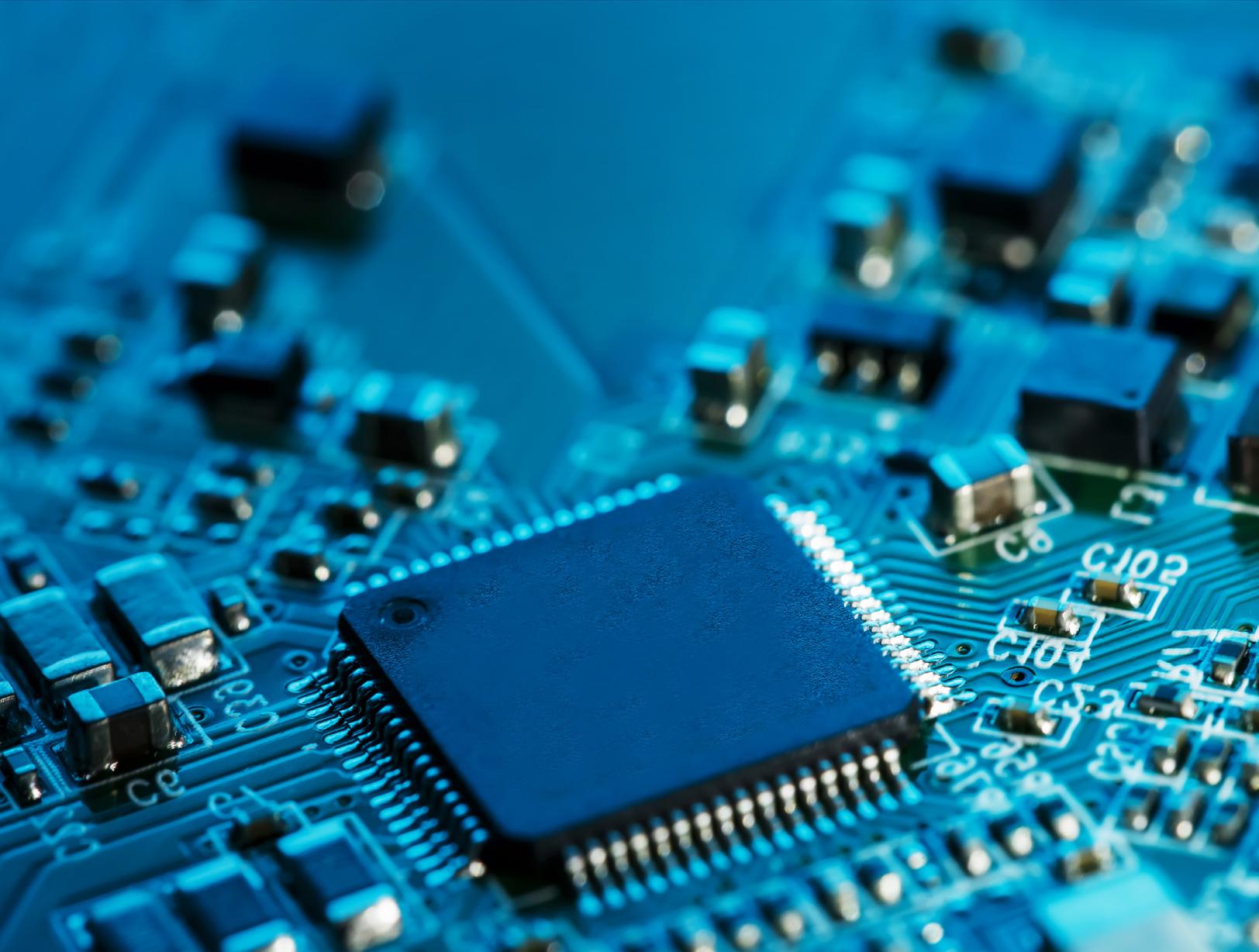
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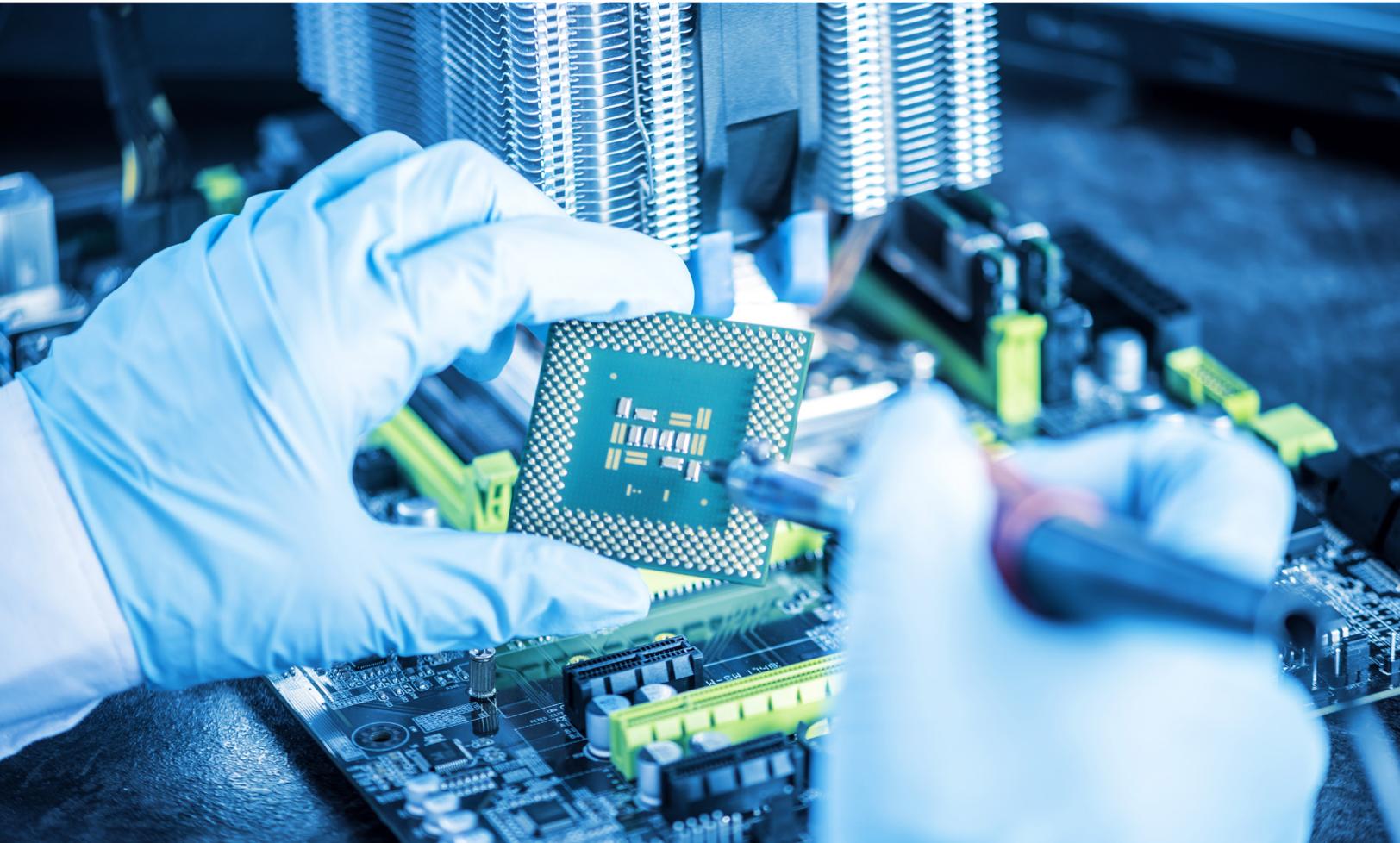
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Abbreviations

ADAS	advanced driver-assistance systems
ASIC	application-specific integrated circuit
AI	artificial intelligence
BE	back-end
BOI	Board of Investments
BPO	business process outsourcing
CAGR	compound annual growth rate
EDA	Electronic Design Automation
EMS	electronics manufacturing services
FE	front-end
FPIP	First Philippine Industrial Park
ICs	integrated circuits
IDM	integrated device manufacturer
IPR	intellectual property rights
IoT	internet of things
IT	information technology
LED	light-emitting diode
ME	middle-end
MCUs	microcontroller units
MSMEs	micro, and small, and medium enterprises
ODM	original design manufacturer
OEM	original equipment manufacturer
PCBA	printed circuit board assembly
PEZA	Philippine Economic Zone Authority
PIIC	Philippine Institute for Integrated Circuits
R&D	research and development
ROW	right-of-way
S&E	semiconductor and electronics
SiP	system in package
SMS	semiconductor manufacturing services



Global Context

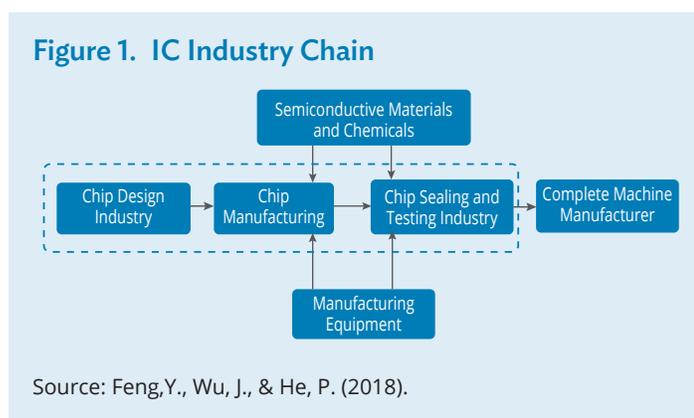
Integrated circuits (ICs) enable the storage and/or processing of information in electronics, making them the most important electronic component. Some of the various types of ICs are memory, logic, microprocessors, and microcontrollers. Among the recent trends that boost the demand for ICs worldwide are cloud computing, Internet of Things (IoT), big data, and 5G. Advanced driver-assistance systems (ADAS) are expected to have the largest increase in consumption for the years to come and further drive the demand for ICs, microcontroller units (MCUs), and sensors.

The global IC industry's revenues in 2018 amounted to a total of US\$480 billion, representing a compound annual growth rate (CAGR) of less than 10% from 2014 to 2018.

The Asia Pacific region reaped benefits from an increasing demand in the memory market as the rising price of memory generated great revenue. In Mainland China, the IC industry grew by 24.8% in 2018, making a major contribution to the region.

IC Value Chain

The IC value chain has the following main subdivisions: the upstream chip design industry (technology-intensive attributes); the midstream chip manufacturing industry (capital and technology intensive); and the downstream chip packaging and testing industry (labor and capital intensive), which together constitute the core of the value chain.



Chip Design Industry

Chip design is the core part of the IC industry. IC, being the most expensive component in electronics, costs high expenses for research and development (R&D), with high technical barriers. However, a high number of skilled employees is more critical than high capital requirements because chip design does not require investment in the production line. Product creativity, performance, quality, and service are some of the key factors needed to improve competitiveness in the market. Qualcomm, Broadcom, and Mediatek of Taiwan are among the leaders in chip design.

IC design activities are performed both at integrated device manufacturer (IDM) and fabless companies. Related companies usually maintain strong design expertise in-house, while looking at different external options in order to reduce chip design cost, accelerate product time-to-market (TTM), and mitigate risks on R&D budget flexibility.

Table 1. Ranking of Global Integrated Circuit Enterprises

Chip Design Companies			Chip Manufacturers			Chip Sealing and Testing Enterprises		
Enterprise	Headquarters	Sales (US\$ million)	Enterprise	Headquarters	Sales (US\$ million)	Enterprise	Headquarters	Sales (US\$ million)
Qualcomm	United States	15,436	TSMC	Taiwan, China	29,488	ASE	Taiwan, China	4,896
Broadcom	Singapore	15,322	Global Foundries	United States	5,545	Amkor Technology	United States	3,894
MediaTek	Taiwan, China	8,610	UMC	Taiwan, China	4,582	JCET	China	2,874
Apple	United States	6,493	SMIC	China	2,921	SPIL	Taiwan, China	2,626
Nvidia	United States	6,340	Powerchip	Taiwan, China	1,275	Powertech	Taiwan, China	1,499
AMD	United States	4,272	TowerJazz	Israel	1,249	Huatian	China	823
Hisilicon	Mainland China	3,978	VIS	Taiwan, China	800	Tongfu	China	689
Marvell	United States	2,318	Huahong Grace	China	712	KYEC	Taiwan, China	623
Xilinx	United States	2,311	Dongbu HiTek	South Korea	672	UTAC	Singapore	689
Spreadtrum	Mainland China	1,912	X-ray Fab	Germany	510	ChipMOS	Taiwan, China	568

Source: Feng, Y., Wu, J., & He, P. (2018).

Chip Manufacturing

Chip manufacturing (mainly wafer manufacturing) processes include lithography, etching, oxidation, deposition, diffusion, and flatting. Intricate generation and maneuvering of extreme ultra-violet (EUV) require high-end technical equipment, which is also very costly to develop and manufacture. This results in the advanced semiconductor device fabrication industry involving capital barriers that are very difficult to overcome. Moreover, the industry has high technical barriers: long learning curve for the chip manufacturing process and increasing costs of R&D as processing precision develops. In 2017, South Korea's Samsung's semiconductor division surpassed Intel's annual revenue of US\$62.8 billion with US\$69.1 billion, presenting its dominance as the world's biggest chipmaker.

Chip Sealing and Testing Industry

The last step of the IC industry chain is the chip packaging test link. In this segment, the silicon wafer is connected with wires to the pins of its packaging devices (i.e., shells that encapsulate the semiconductor IC), to connect with other devices. This segment is labor-intensive and has relatively low technical capital requirements. Companies offering encapsulation testing are mainly in Original Equipment Manufacturer (OEM) mode. Some countries and regions engaged in semiconductor packaging testing worldwide are Taiwan, Malaysia, mainland China, the Philippines, South Korea, and Singapore. China has comparative advantage in terms of labor cost and has, therefore, developed the highest industry maturity.

The current dominant trends in chip packaging technology is still in the era of surface packaging. Other technologies such as 3D lamination, 3D through-silicon vias (TSVs), and other 3D packaging technologies are still under development. Ball grid array (BGA) and chip scale packaging (CSP) are the mainstream technology routes adopted by international IC packaging technology.

**US\$480
billion**

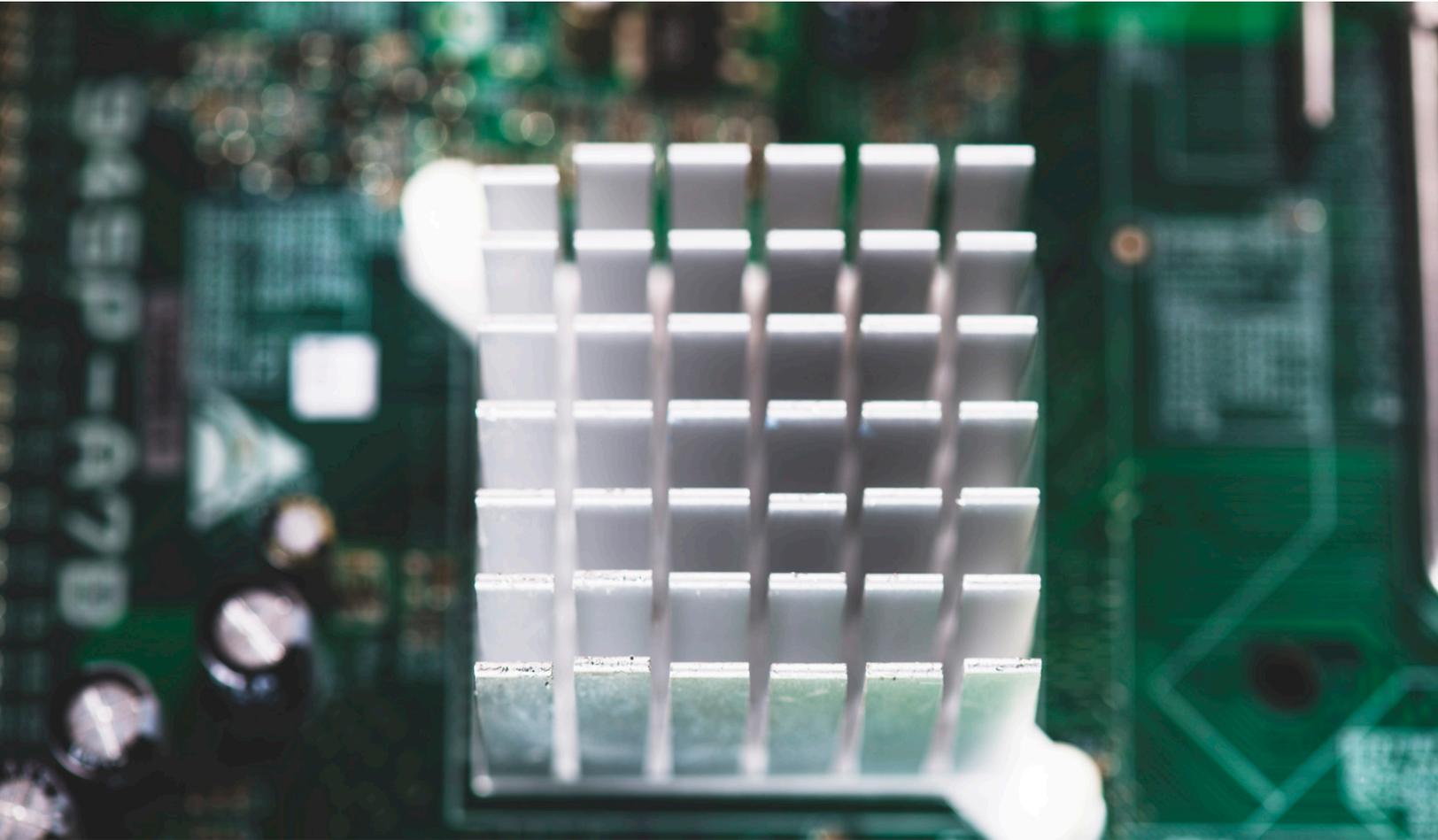
IC INDUSTRY REVENUE
FOR 2018

25%

INCREASE IN IC
INDUSTRY IN 2018
IN MAINLAND
CHINA ALONE

500

PHILIPPINE
GRADUATES READILY
EMPLOYABLE IN THE
IC DESIGN INDUSTRY



Summary of the Philippine Integrated Circuits Industry

The Philippines aims to position itself as a key player in the global IC design industry ecosystem by becoming a home base of competitive IC design companies that would provide services to the worldwide IC ecosystem and by being an attractive destination for foreign IC design-related companies so they would invest in the country.

The Philippines accounts for 2.8% of world IC exports, and has been among the top 10 exporters for at least the last decade. Among the largest global IC companies located in the Philippines are Texas Instruments, STMicroelectronics, NXP, ON Semiconductor, Analog Devices, and Maxim. IC, particularly assembly and test (A&T) activities for analog semiconductors, are the main area within electronic components in the country.

Included in the Philippine electronics components manufacturing cluster is a growing silicon design and development industry. The sector requires more technical and engineering backgrounds, and has a higher value added than components manufacturing, placing it higher up in the value chain. Companies involved in integrated circuit design such as Intel, Sanyo Semiconductor, Eazix, Symphony, and Bltmicro

conduct application-specific integrated circuits (ASIC) and Field Programmable Gate Arrays (FPGA) design, as well as Very High Speed Integrated Circuit Hardware Description Language (VHSIC-HDL) verification. Companies such as TI Phils. and Fairchild Semiconductor operate IC packaging design.

IC design is among the preferred activities for Strategic Services in the 2017 Investments Priority Plan. It covers all logic and circuit design techniques required to design ICs.

The Philippine IC Value Chain

The semiconductor and electronics (S&E) supply chain is traditionally divided into two different segments: (1) the semiconductor segments - from IC design, IC front-end and IC back-end manufacturing (SMS); and the (2) electronics manufacturing services (EMS), which is addressing the printed circuit board assembly (PCBA) and device/assembly c-box level. Due to recent technology evolutions and business model changes, two other key segments are now co-existing, finding their own value proposition in the supply chain, intercalated with the other segments, as follows:

- Middle-End (ME) segment: this IC manufacturing segment is between the front-end (FE) and the back-end (BE). It is a fairly new segment addressing the advanced packaging new technologies that need to be performed in an FE environment (e.g., wafer-level processing).
- Sub-system/Module segment: This segment is a derivative from the EMS, but also includes some microelectronics and micro-assembly process (e.g., Flip-chip, Chip-on-board, optical micro-assembly, system in package [SiP]). This segment is producing some parts (sub-assembly) that needs to be assembled at system level by an EMS.

Therefore, the supply chain has evolved into six different segments, as follows:

1. IC Design
2. IC Front-End (Silicon/ SC wafer fabrication)
3. IC Middle-End
4. IC Back-End (IC assembly and test)
5. Subsystem/Module
6. EMS (PCBA, devices, system)

Table 2. Key Players in the Philippine IC Supply Chain

Sector	Key Players
IC Design	Fabless: LATTICE SEMI, BITMICRO IC design services: XINYX IDM and global players: ANALOG DEVICES, KYOCERA, CANON, ROHM
IC Back-End (or IC Assembly and Test)	IDM: TI, ANALOG DEVICES, STM, FAIRCHILD, MAXIM, ON SEMI OSAT: AMKOR Assembly and test houses: FASTECH, PHOENIX, PSI, TONGSHIN, ATEC, AMERTRON
Subsystem/ Module	SiP houses: IQXPRZ, PSI Module EMS/ODM: LITEON, IMI, EMSCAI, IONICS, TONGHSIN
EMS (PCBA, devices, system)	EMS: IMI, IONICS, EMSCAI ODM: Fox Electronics Manufacturing, Micrologic Systems, Himmax, Alexan, Innovatronics, Centertronics, Trident electronics, Star Communications OEM: CANON, LEXMARK, MOOG, EPSON, BROTHER, MURATA, TOSHIBA, CONTINENTAL, REMEC, KNOWLES

The supply chain is also supported by different key segments as follows:

- Research institutes and intellectual property (IP) houses - feed the supply chain at every stage/segment level with innovation
- Materials providers - very active along the supply chain from FE (bare wafer), ME/BE (interposer, interconnect, packaging materials), as well as on the Module/EMS (printed wire board [PWB], PCB) and other materials needed for electrical/mechanical specifications
- Equipment providers - supply manufacturing, assembly and testing equipment to production lines at every stage/ segment

In the Philippines, as part of the legacy of the semiconductor history, the main part of the presence is at the BE side, either IOM with Assembly and Test facilities in the country or short message service (SMS) providers (i.e., assembly and test houses, outsourced assembly and test [OSAT]). Recently, the testing part of the BE segment has been reinforced in the Philippines with more added value type of services, such as testing development and engineering for new product introduction.

Advantages and Capabilities

Labor Force. The current population of the Philippines is more than 108 million, of which 43.5 million comprise the labor force and 66.4 million compose the working age population. The Philippine labor force is young, relatively cost-competitive, and English-proficient. They are highly trainable (within eight weeks or two months), adept at technology, and with short learning curves. The Semiconductor and Electronics Industries in the Philippines Foundation, Inc. (SEIPI) estimates that approximately 500,000 graduates are readily employable in the industry annually. Employees in the electronics industry receive around 17% higher compensation compared to workers in other industries (National Statistics Office [NSO], 2013).

Critical Mass of Global Players. The majority of the electronics companies are concentrated in

Metro Manila (52.11%), CALABARZON (39.85%), Northern/ Central Luzon (4.98%), and Cebu (2.68%).

Strategic Location. The Philippines, being equidistant (four-hour travel time) from all major Asian countries such as Thailand, Korea, Japan, Guam, Vietnam, Hong Kong, Singapore, Brunei, Malaysia, Shanghai and Xiamen in China, and Taiwan, is an ideal hub with its strategic position and potential vital link in the supply chain.

Competence of the Philippine Export Zone Authority (PEZA). The Philippines' special economic zones (SEZs), which are managed by PEZA, are chosen by most foreign investors that have located their manufacturing plants in the country due to their lower overall costs of manufacturing and greater ease of doing business. According to a survey by the Duke University, PEZA has been rated by foreign investors as being organizationally stable and responsive to their needs.

Key footprint in some industrial segments (e.g., Automotive, Aerospace)

Current Initiatives

IC design is considered among the priority areas for an investment promotions plan. The Board of Investments (BOI) has worked on an industry value proposition to include initial supply chain mapping of high-growth subsectors such as auto electronics, consumer electronics, electronic data processing (EDP), light-emitting diode (LED), and photovoltaic cells.

IC design is among the priority areas for an investment promotions plan

Table 2. Short-Term and Medium-Term Plans for the IC Design Industry

	Short-Term (2016)	Medium-Term (2020-2025)
Aggressive fast-track targets for IC design	<ul style="list-style-type: none"> • US\$50 million/year • 600 fully operational designers (~2000 related jobs, in total) • Productivity > US\$80,000/designer 	
Realistic S&E targets (leverage effect)	<ul style="list-style-type: none"> • US\$40 million investment • 40,000 direct workers • 280,000 indirect workers 	<ul style="list-style-type: none"> • US\$310 million investment • US\$2.3 billion export • 150,000 direct workers • 1 million indirect workers
Aspirational S&E targets (multiplier effect)	<ul style="list-style-type: none"> • US\$120-200 million investment • 120-200,000 direct workers • 0.81-1.4 million indirect workers 	<ul style="list-style-type: none"> • US\$930-US\$1,500 million investment • US\$6.9-US\$11.5 billion export • 450-750,000 direct workers • 3-5 million indirect workers

Source:

At present, IC design activities in the Philippines represent about 1,000 related jobs, mainly engineering level. Among this pool of professionals, around 300-400 people are fully-trained and operational within the Philippines. Around 700-800 IC designers from the Philippines are working abroad in the US, EU, Australia, and more recently in terms of destinations in Singapore and Malaysia. The IC design Industry is just emerging with a business level just below US\$1 million for pure

service provider, and a rough estimated total value of US\$8–US\$15 million yearly from the Philippines.

There are current initiatives implemented by the private sector to increase the availability of engineering talents on IC design (verification, layout capabilities) out from Batangas and to reproduce synergies (technology development, incubation, etc.).

Table 3. Philippine IC Design Structure

Companies	Type	Headquarter	IC Design in the Philippines
XINYX Design	IC Design House	Philippines	Greater Manila
LATTICE Semi	Fabless	USA	Greater Manila
ANALOG DEVICE	IDM	USA	Greater Manila
BITMICRO	Fabless	USA	Greater Manila
CANON	Global S&E player	Japan	Greater Manila
ROHM	IDM	Japan	Greater Manila
KYOCERA	Global S&E player	Japan	Cebu

Source: IC Design Roadmap.

There is an emergence of a strong clustering axis between Manila (where there is dispersion of SMS activities) and Batangas, with the academe and emerging facilities on both North and South ends, with the private companies located along the axis. Another emerging competitive cluster for S&E is identified in Cebu Island, attracting investments from multinational companies (MNCs) (e.g., KYOCERA, KNOWLES, etc.).

A potential list of targets on IC design based on BOI's identified opportunity for growth at system level includes the following:

- IC design for automotive applications (including electric vehicle [EV]/hybrid electric vehicle [HEV])
- Microelectromechanical systems (MEMS) IC design (could also include microbolometer technology for IR sensor)
- Imaging IC design: focusing on simple design (ambient light sensor, IR detector)
- Radio-frequency (RF) IC design and global navigation satellite system (GNSS) IC design

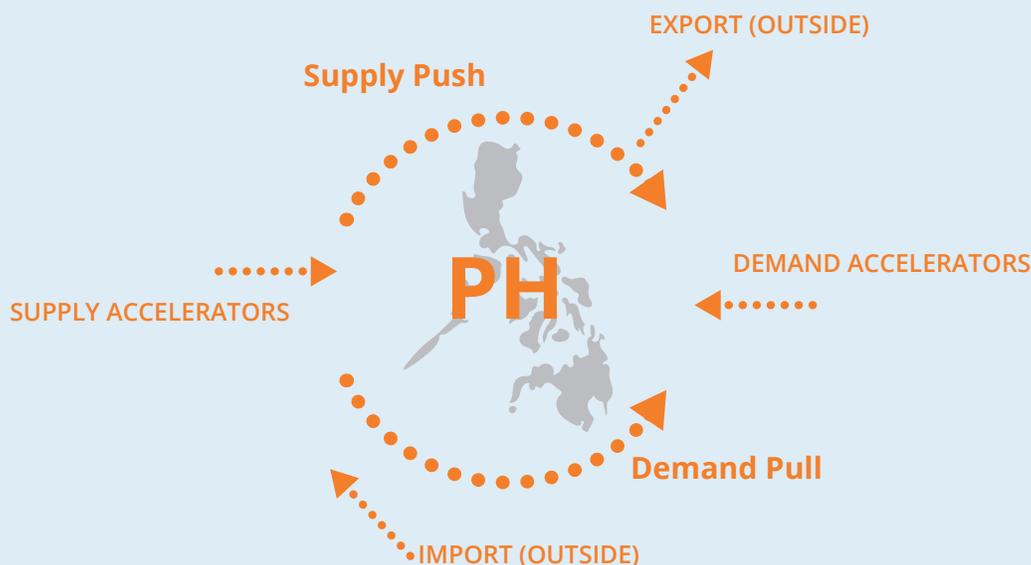
- Power electronics IC design (inverters)
- IC design for smart systems (e.g., Smart LED lighting), sensor hubs and measurement units (controller, driver, ASIC, digital signal processor [DSP]/ application-specific standard product [ASSP])
- IC for industrial and harsh environment (including re-design for aerospace/ military)

Action Programs

Three development tracks have been drafted as part of a comprehensive strategy aligned with the supply/demand drivers for growth, to address the different issues. These are:

- Track I (Accelerator for Supply Drive): Revamp the local supply chain for IC design industry's integration
 - Boost Philippine attractiveness to investors
 - Increase visibility and ensure competitiveness as a home base and destination for IC design activities

Figure 1. IC Demand/Supply Economic Circle



- Build on existing assets
- Form around two clusters and reinforce innovation
- Reinforce incubation centers
 - Incorporate innovative companies and start-ups into the ecosystem
- Develop multidisciplinary skills
- Develop research and technology
 - Enable industry-university ties and partnerships beyond the manpower education mission
- Defragment the supply chain flows
- Technology roadmapping (tech push)
- Track II (Accelerator for Demand Pull): Accelerate the demand for IC designed in the country
 - Develop initiative on IoT
 - Create centers of excellence (hubs and platforms)
 - Coordinate nodal activities and international cooperation
 - Create a specialized area for the Philippines to address key market segments
- Track III: Launch key enhancement actions (that is particularly linked to facilitate the clustering foundation)
 - Invest in people
 - Enhance intellectual property rights (IPR) in the Philippines and differentiate versus competitors
 - Provide support for the incubation of start-ups and growth of small and mid-size enterprises
 - Access to IT and EDA tools

The Philippine Institute for Integrated Circuits (PIIC), funded by the Philippine Council for Industry, Energy, and Emerging Technology Research and Development of the Department of Science and Technology (DOST-PCIEERD), aims to develop a training program that will supply the human resource requirements of local IC design companies. The training program features the fundamentals of IC design, from circuit analysis,

simulation, to full custom layout and verification, and includes modules that utilize industry-grade Electronic Design Automation (EDA) tools. Through capacity building and training, the PIIC represents the substantial efforts of the academe and the government in supporting the competitiveness of the local electronics industry.

PIIC's activities are vital to strengthening the "Academia Pillar" for the Philippine IC design industry and these include the following::

- Reaching a critical mass of IC designer talents from local universities
- Improving awareness of potential attractive careers for young people
- Improving the quality of curriculum for "hard skills" (e.g., analog to be reinforced)

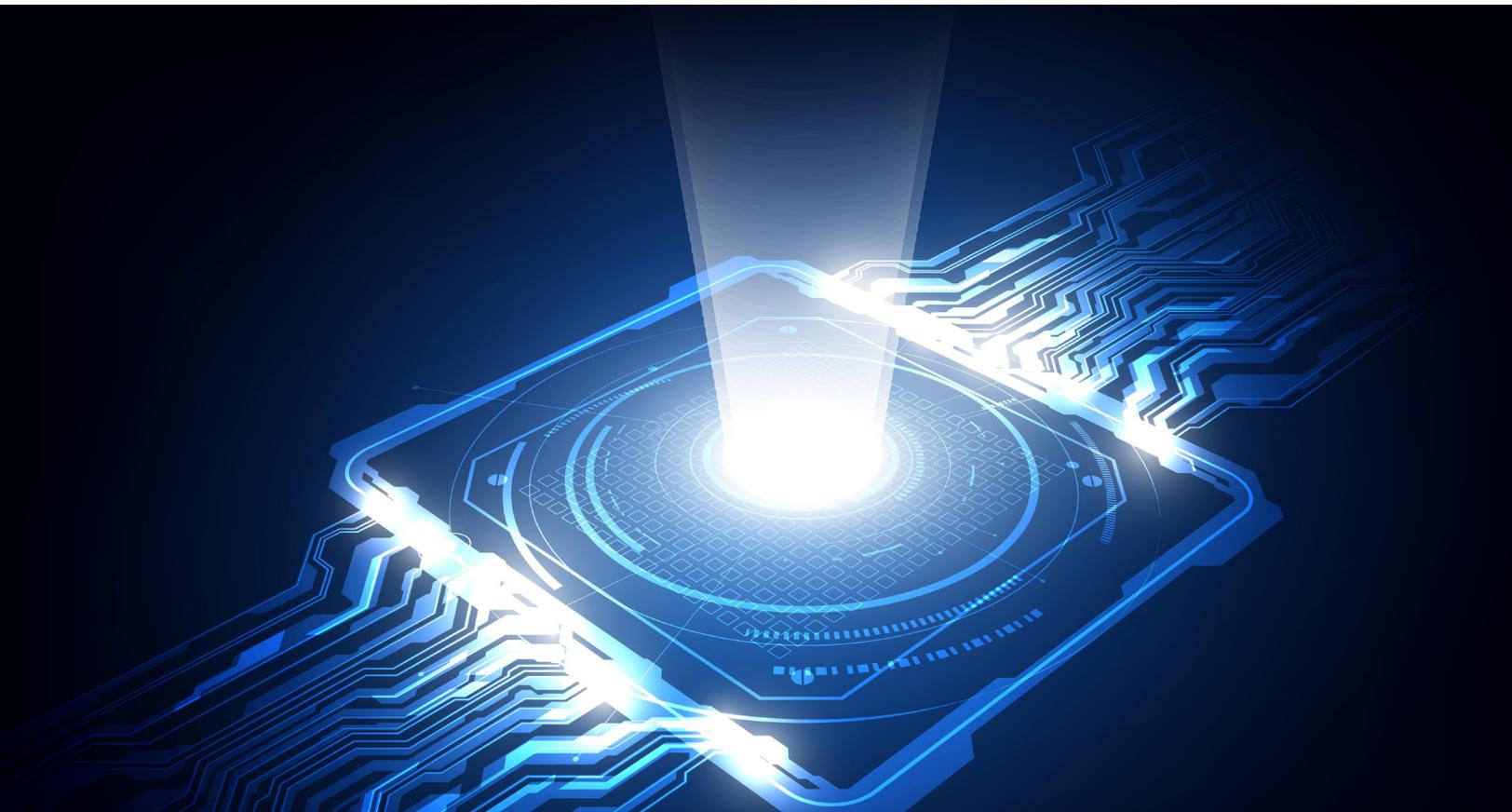
Potential Upgrading Trajectories

The opportunities for scalability for the country can be considered for two areas:

- The Mobile Convergence Segments
 - Opportunity to address for the Philippines, mainly based on IC Design as a service industry (high volume, growing segment, but highly competitive)
- The Industrial Segments (including Automotive, Medical, Telecommunications, etc.)
 - Strong opportunity for the Philippines, based on an innovation-centric approach and application-driven activities (low volume, high mix, growing segment). Also a target for IC design as a service industry.
- In terms of capability, the Philippines should emphasize talent development on analog and build a more robust foundation for IC design services (also addressing the Mix Signal segment). The development of the local industry should also rely on a more structured go-to-market strategy and support (e.g., business development).
- Curriculum should be developed to be aligned with strategic directions and industries' local needs ((e.g., IoT, industrial industrial segments

enabling technologies, applications and cross-disciplinary activities such as acoustics and microelectronics, smart agriculture, etc.)

- Develop a local “champion” on IC design service
 - Developing a local champion and promoting the Philippines to Fabless/IDM as a suitable location to locate IC design team, are the two keys to increase overall performance of the local ecosystem to reach a critical mass.
 - Create “Innovation Centers”/clusters that would serve as centers of excellence in terms of technology development, with the capability to create synergies and launch collaborative programs
 - Create a common facility dedicated to IC design technology development in the country
 - Attract IP houses on IC design subsector to set up activities in the country
 - Further develop emerging R&D activities linked to microelectronics at the University of the Philippines
- Develop activities of original design manufacturer (ODM)/OEM to trigger additional IC design needs
 - Focus on “Niche Module ODM”
 - Extend PIIC’s role to become a technology development center
 - Increasing consumption of automotive electronic components
 - Automotive segment for semiconductor vendors is expected to be a big revenue source. Global automotive semiconductor revenue is expected to hit US\$60 billion in 2022, with Asia Pacific leading with 41% growth.
 - Artificial Intelligence (AI) chip domination
 - AI chips are the heart of AI technology chain and are central to the processing of AI algorithms. AI chip market is expected to account for over 12% of the total AI market by 2022, with a CAGR of 54%.
 - Attract fabless companies or IDM to set up satellite design centers in the country





The First Philippine Industrial Park

The First Philippine Industrial Park (FPIP) is one of the fastest-growing premium industrial parks in the country today.

Established in 1996, FPIP is a 500+ hectare area designated as a special economic zone (SEZ) strategically located in the thriving industrial CALABARZON area south of Manila. Considered the most prime investment location in the country today, it is host to a growing number of global leaders in diverse sectors such as aerospace, automotive, consumer goods, electronics, medical devices, and office equipment, among others. FPIP's growth over the years is highest among comparable industrial parks. Ongoing expansions will result in FPIP managing over 1,000 hectares by 2019.

FPIP offers locators with industry-leading infrastructure, facilities, park management, utilities with the highest reliability, and best-in-class customer management. Alongside special incentives in the form of tax holidays and lower tax rates, the unique FPIP experience assures locators ease of doing business. Assured of the safety, security, and consistency of a first-world manufacturing environment, FPIP locators have peace of mind that enables them to focus on increasing their competitiveness in the global marketplace.

FPIP and its locator-partners have created over 65,000 jobs to date, transforming the host communities of Sto. Tomas and Tanauan in Batangas into a thriving industrial hub. FPIP also supports the local educational and health systems, and contributes significantly to local infrastructure development to help improve overall living conditions and uplift the lives of residents in the area.

Options to Optimize Your Business

Industrial Land

FPIP's prime-grade, site-developed lots in various sizes are ideal for light and medium industries as well as manufacturing operations. Strategic location, efficient layout, and access to supporting facilities and services enable hassle-free building of medium to large-scale facilities.

Ready-Built Factories

Tailor-fit facilities, which are provided from design to construction, are available to locators with unique business requirements such as assembly, contract manufacturing, and support.

Commercial

Inside FPIP is the Oasis Commercial Center, a PEZA-registered IT & Facilities enterprise, primed for commercial lease requirements and Business Continuity Planning needs of business process outsourcing (BPO) companies. The building offers office and retail spaces, commercial stores, shops, banks, a sports facility, among others.

Benchmark for Park Development and Management

FPIP ensures continuous improvement of park operations – covering strict monitoring of security, emergency services and traffic management, among others.

Power Supply

A dedicated Meralco 115-kilovolt substation built inside the park is available for the exclusive use of FPIP and its locators. It is connected to three separate circuits in Canlubang, Los Baños, and Makiling-Banahaw (Mak-Ban), in the adjacent province of Laguna. With these in place, locators are assured of reliable and stable power supply. FPIP's underground power distribution grid system further enhances this stable power supply by minimizing the risk of power failure during inclement weather.

Water

FPIP provides industrial water to its locators from the 15 deep wells and above-ground reservoirs strategically located within the Park. FPIP also has a modern wastewater treatment and centralized sewerage collection and treatment facility for the secondary treatment of industrial wastewater. A centralized distribution system backed up by a full-scale generator system ensures uninterrupted 24/7 water supply to locators.



Infrastructure

FPIP offers a wide concrete road system with 6-lane, 40-meter right-of-way (ROW) main roads and 23-meter ROW secondary roads. The Park's thoroughfares are enhanced by wide sidewalks, appropriate street lighting, directional signages, pedestrian and bicycle lanes, planting strips, and an underground tunnel. An extensive modern underground drainage system ensures a flood-free environment, while a First-To-Stop, First-To-Go rule and other traffic measures are strictly enforced throughout the Park to ensure free-flowing traffic and maximum road safety for all visitors.

Telecommunications

FPIP's best-in-class underground telecommunications cables and multiple partnerships guarantee reliable high-speed, high-volume communication services.

Environment and Community

FPIP works closely with locators and the local government to enforce the strictest environment standards for the use of water, and protection of

air, land and vegetation in and around the Park. Key initiatives throughout the year include river clean-up, protection of the watershed through tree planting, and preservation of indigenous, and endangered plant and tree species across the Park.

The Department of Environment and Natural Resources recognized FPIP in 2018 and 2019 for its leading environmental technology and campaigns.

Technical-Vocational School Partnership

FPIP is in partnership with First School and the Father Pierre Tritz Institute-ERDA Tech to provide high-quality education followed by gainful and meaningful employment.

A Growing Variety of Commercial Facilities

Hotels

- Sto. Tomas Suites
 - 40-room business hotel with all the luxury conveniences
- Microtel Inns & Suites
 - 78 rooms plus meeting facilities





Restaurants

- Minori Tei
 - Authentic Japanese Food
- Millie's
 - All-day continental and local dining

Upholding World-Class Standards

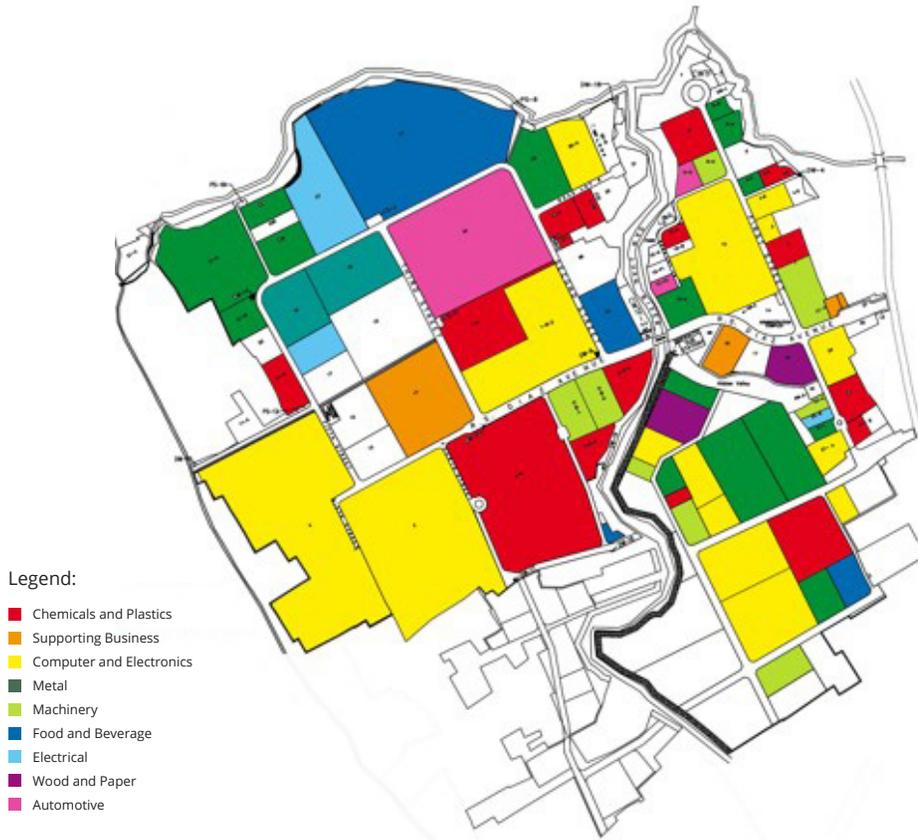
FPIP is a multi-awarded, ISO-certified, PEZA Hall of Fame Awardee and is the only real estate player with Silver Investors in People certification.

Integrated Management System (IMS) certified company

- Certified by Certification International (CI):
 - Recertification (2015)
 - ISO 9001:2008, ISO 14001:2004, and OHSAS 18001:2007
- Investors in People (IIP) Certification (2016)
 - From the IIP Quality Centre in the Philippines

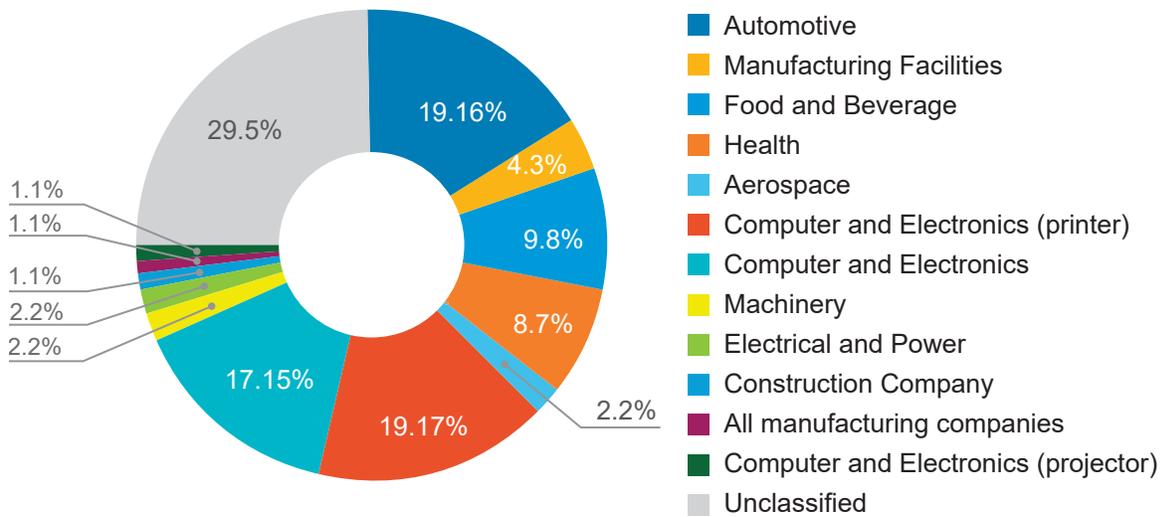


Locator Profiling



Source:

By Locator Count



Source:

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