

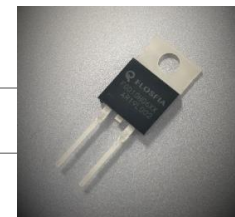


Corporate Profile

The pioneer of GaO™ power device with world-record performance SEMI ecology™

April 2, 2021

FLOSFIA Inc.



Trade Name	FLOSFIA INC.
Head Office	1-29 Goryo-Ohara, Nishikyo-ku, Kyoto
Business	(1) Development and manufacture of next-generation semiconductor materials “gallium oxide” (GaO™) devices (2) Development and manufacture of new electronic materials and industrial materials produced by MIST DRY™ method
Establishment	March 31, 2011
Capital	4,208 million yen (including capital reverse)
Management Officers	<p>President: Toshimi Hitora [CEO] Director: Fujio Okui [COO] Director: Takashi Shinohe [CTO] Director: Chinami Majima [CFO] Outside Director: Yasuo Nishiguchi (Part-Time) Outside Director: Naonori Kurokawa (Part-Time) Outside Director: Satoshi Yamaguchi (Part-Time) Full-Time Auditor: Kazuyuki Nishida Outside Auditor: Hideki Tsuji (part-time) Outside Auditor: Tatsuo Mori (part-time)</p>
Shareholders (excluding individual investors)	<p>Brother Industries, Yaskawa Electric, Mitsubishi Heavy Industries, DENSO, SPARX Asset Management (Mirai Creation Fund), JSR, SBI investment (Mitsui Kinzoku-SBI Material Innovation Fund), Fujimi Inc.</p> <p>University of Tokyo Edge Capital, Nissay Capital, Miyako Capital, Energy Environmental Investment, Eight Roads Ventures, Kyoto University Innovation Capital, etc.</p>
Number of Employees	[57]



Toshimi Hitora
President and CEO



Fujio Okui
COO



Takashi Shinohe
CTO

Japan Venture Award 2019, Semiconductor of the Year 2020, and more

▼ November, 2011 IBTEC (Intel & UC Berkeley)
First Finalist as Japanese company



▼ August, 2017
[University venture award]
Prize-winning



▼ June, 2018 METI [J-Startup]
Nomination



▼ March, 2017 JEITA [2nd Venture Award]
Prize-winning



▼ April, 2019
[Intellectual property Award]



▼ January, 2019
[Japan Venture Awards 2019]
METI Prize-winning



▼ April, 2017 MUFG 「Rise Up Festa」
Prize-winning



▼ June, 2020
Electric Device Industry News
[Semiconductor of the Year]
Grand prix-winning



**FLOSFIA Commercialized Innovative
“Gallium Oxide Power Device” Fastest in the World**

1. Power Device Market Expansion
2. GaO™ Power Device Key Advantages
3. GaO™ Power Device Business Model
4. GaO™ Power Device Growth Strategy
5. Film-Deposition Synthesis Technology Platform

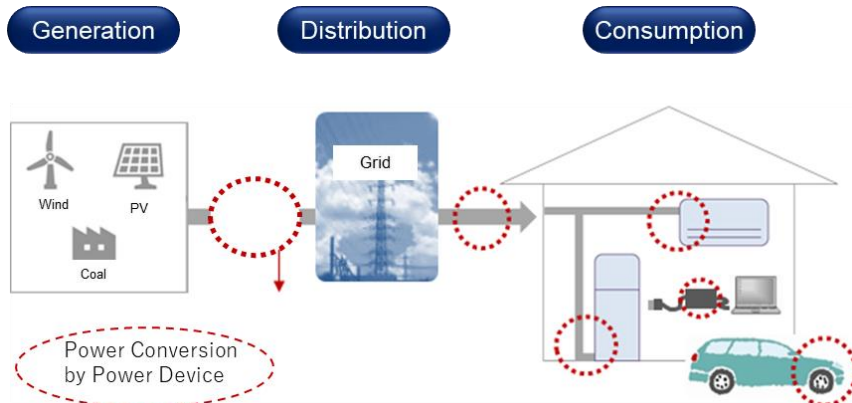


Power Device is a Key Solution to Connect Digital Technology and Environmental Management

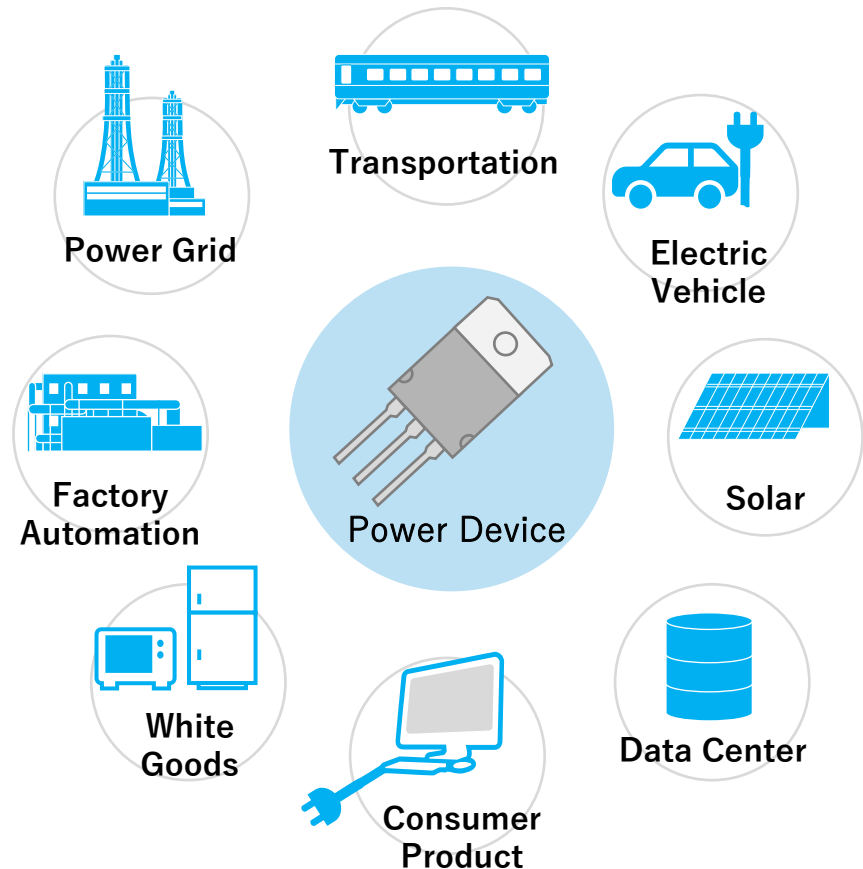
What is a Power Device?

- Key solution to manage electricity in “Smarter Way” at Industry 5.0 / CASE / IoT
- Cover wide-range voltages from Ultra High to Ultra Low across various industries

Power-Flow



Power Device in Everywhere & Every Application



Power Devices Satisfying Three Requirements are Expected: High Functionality, Energy Saving, and Low Cost

Environmental management is a key issue for the SDGs

More than 10% of total power generation is lost when conversion.

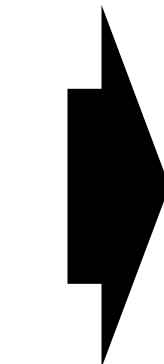
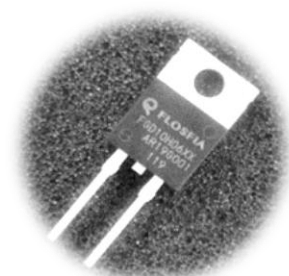
Needs for improved conversion efficiency and increased loss suppression.

CASE and IoT-based packaging for higher functionality and lower costs

Demand for low-loss and compact of power supplies and inverters increases.

Need for sufficient supply of high-performance and low-cost power devices to support the rapid growth of the market

SEMI ecology™



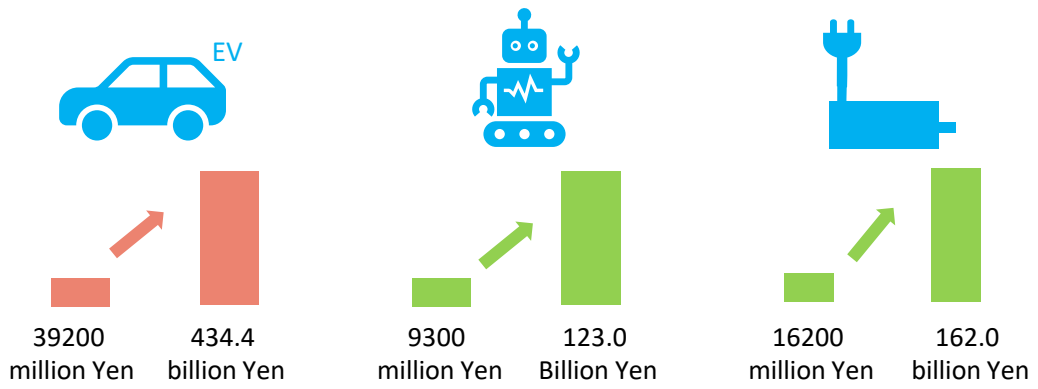
Solution

High Performance

Energy Saving

Low Cost

New market launch toward 2030



Source: Our estimates for the electric vehicle market.

Our estimates for the industrial, consumer, and information and communications equipment areas are based on Fuji Economy's "Current Status and Future of the market for the Next-Generation Power Device and Power Electric-Related Equipment Market" in 2018 edition.

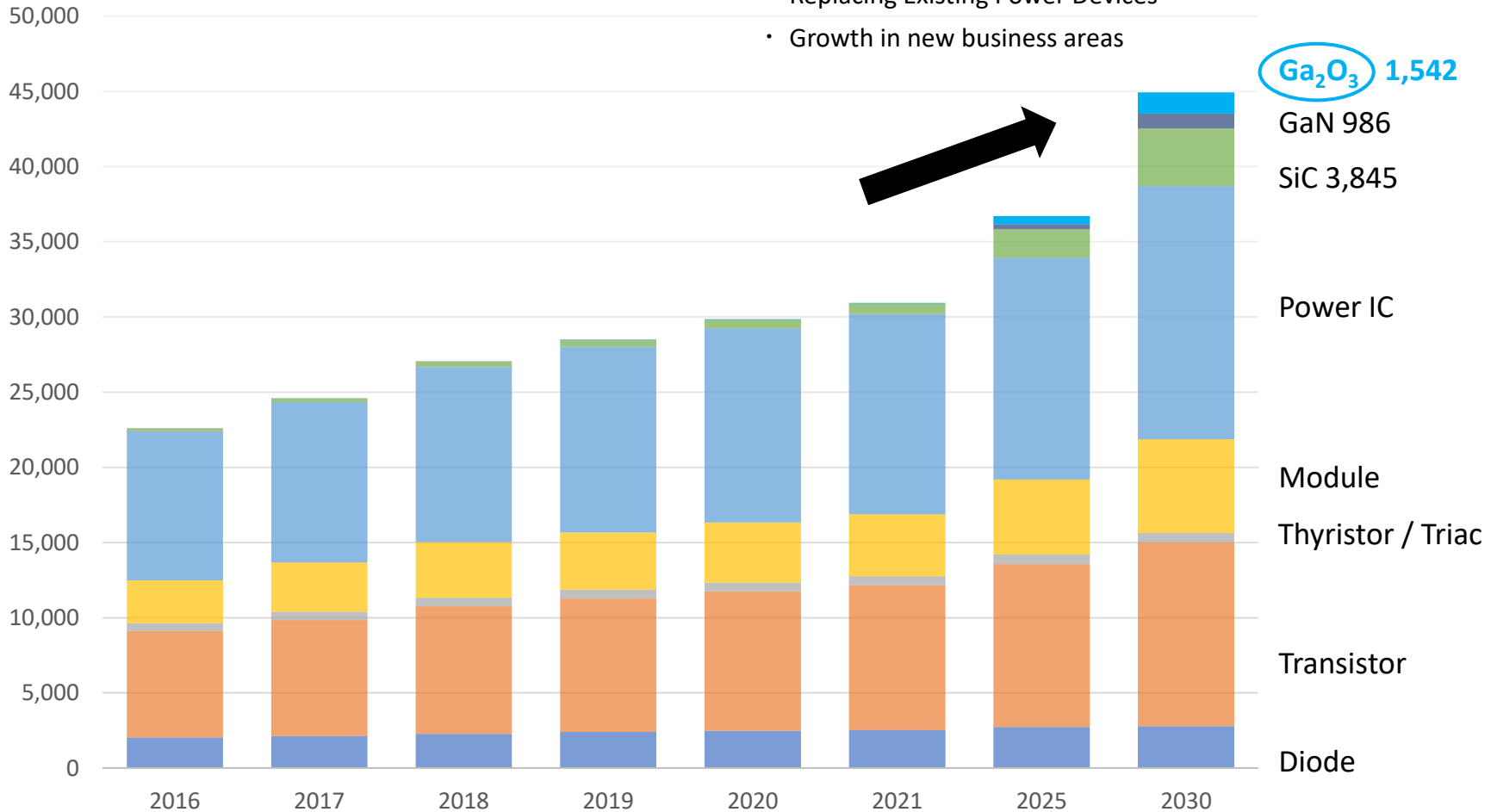
Growing Power Device Markets and **Growing Expectations for GaO™ Power Devices**

[Global Market Size Projection]

[Million USD]




Rise of gallium oxide power devices

- Replacing Existing Power Devices
- Growth in new business areas



Source: Fuji Economy "Current status and future of the market for Next-Generation Power Devices and Power Electronics-Related equipment" in 2018 edition.

Achieve Ultra-Low Loss and Low Cost with Original Approach Using Corundum-Type Gallium Oxide

	Existing material Si	SiC	State-of-the-arts material α -Ga ₂ O ₃
Material			 FLOSFIA
Loss	<p>High loss</p> <p>Bandgap: 1.1eV</p> <p>Baluga figure of merit ($\epsilon\mu E_c^3$): 1</p>	<p>Low-loss</p> <p>Bandgap: 3.3eV</p> <p>Baluga figure of merit: 340</p>	<p>Ultralow loss</p> <p>Bandgap: 5.3eV</p> <p>Baluga figure of merit: 6,726 (estimated)</p> <p>Advantages of Material Properties</p> <p>Higher value Low loss!</p>
Cost	<p>Low cost</p> <p>Si exponential comparison: 1</p>	<p>High cost</p> <p>Si exponential comparison: 10</p>	<p>Low cost</p> <p>Si exponential comparison: 1 or less</p> <p>Know-how advantage</p> <p>Reducing costs through original approach!</p>
Technology & Business Stage	<p>Monopolize the market</p> <p>Mature process technology</p>	<p>No progress of market introduction due to high cost</p>	<p>Only FLOSFIA can manufacture single crystals</p> <ul style="list-style-type: none"> - Exclusive protection of GaO™ - [170+] granted and [550+] pending patents

World's First Mass Production of Gallium Oxide Power Device



New material found by Kyoto University

**"α-gallium Ga₂O₃
(gallium oxide)"**



Large Implementation Hurdle but Low Attention

"No proof data on semiconductor characteristics"

"No device verification data"

"p-type semiconductors are difficult to achieve."

"Thermal conductivity is poor and difficult to use."



All Clear !

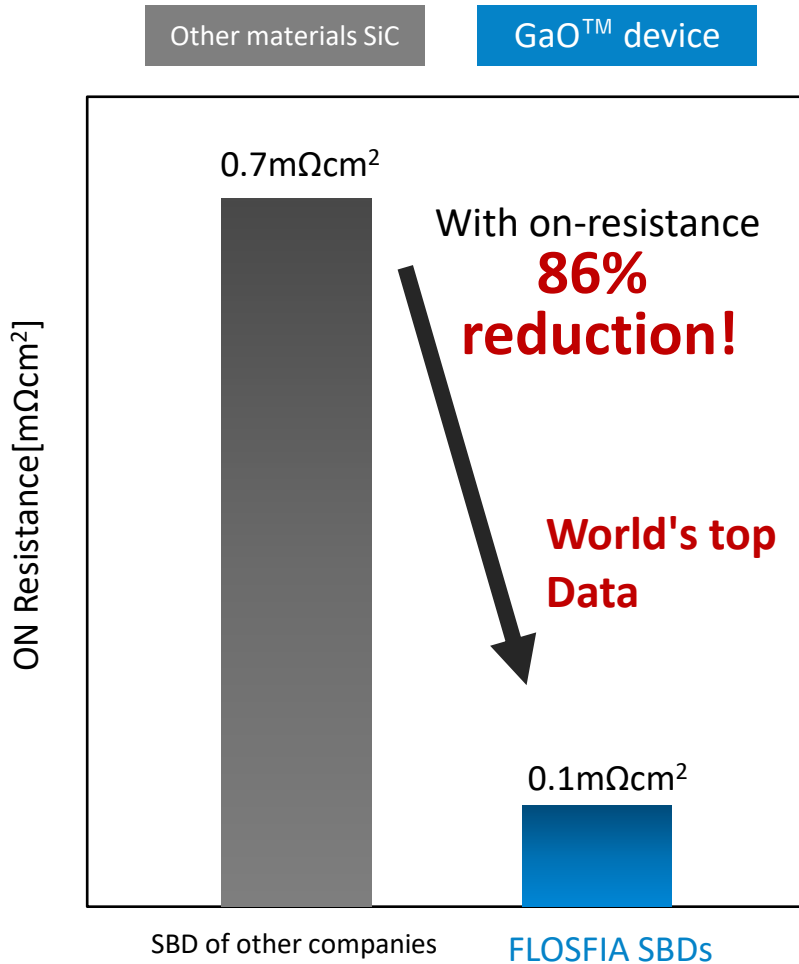


**For the first time in the world
corundum-type Gallium Oxide
Power Device**

- Utilize sapphire substrate commoditized in use in LEDs
- Discovery and utilization of new p-type semiconductors for breakthrough

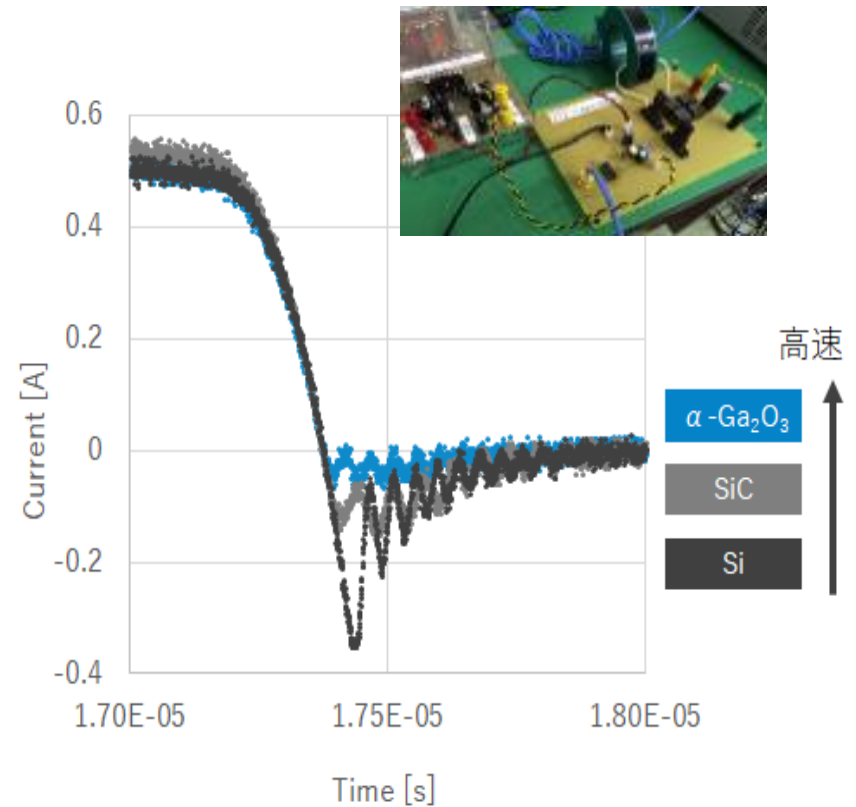
Achieve "Ultra-Low Loss" at Product Level

Low - temperature resistance



High frequency property

Fast switching confirmed!



Semi-Fabless Model for Vertical Business Launch with Optimal Investment

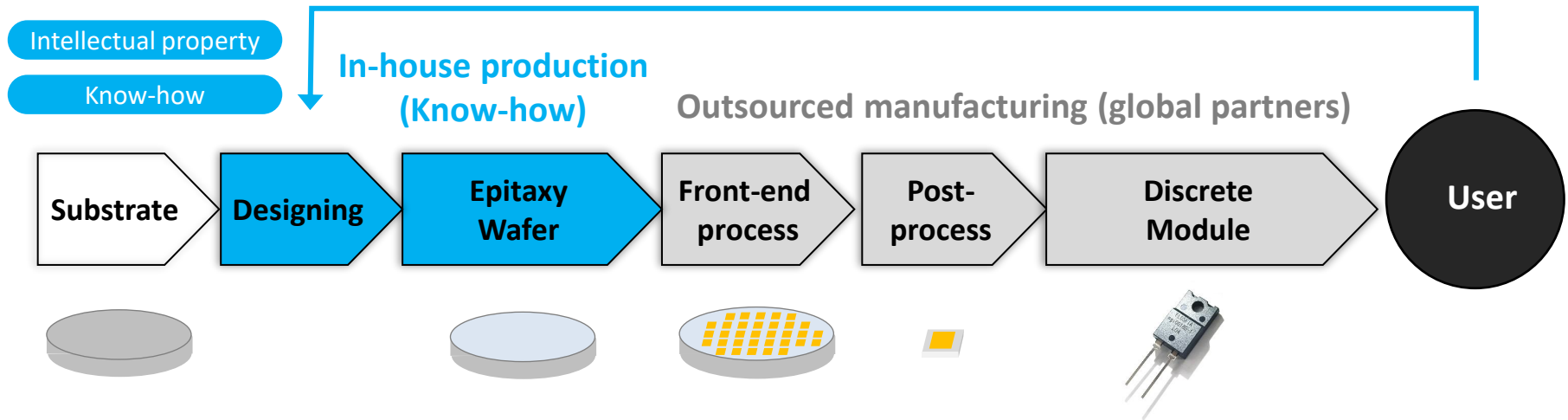


Semi-Fabless

Key Strength

- Focus on Core Technology
- Fully utilize external experienced partners
- High Flexibility against market needs and demand fluctuation

Feedback of user needs to own platform



Powerful IP Portfolio to Support Unique Business Model and Prevent New Entry

Focus on acquiring IP(intellectual property)

- **Over 550 patent applications**
- About 170 patents have already been granted

Point 1

Strong basic patents (material patents) obtained

Point 2

Patents reinforced by a wide range of peripheral patents

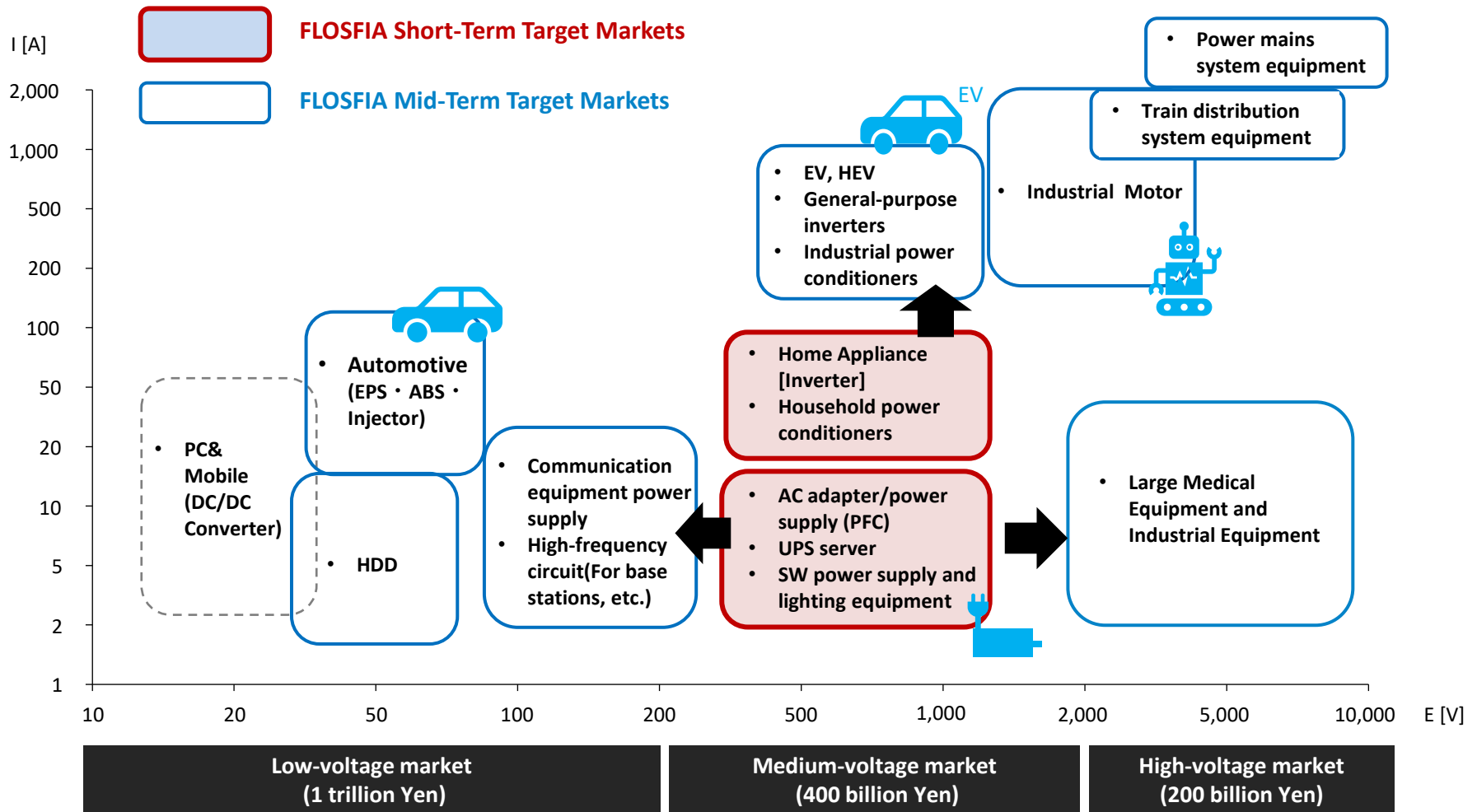
Point 3

Worldwide patent portfolio

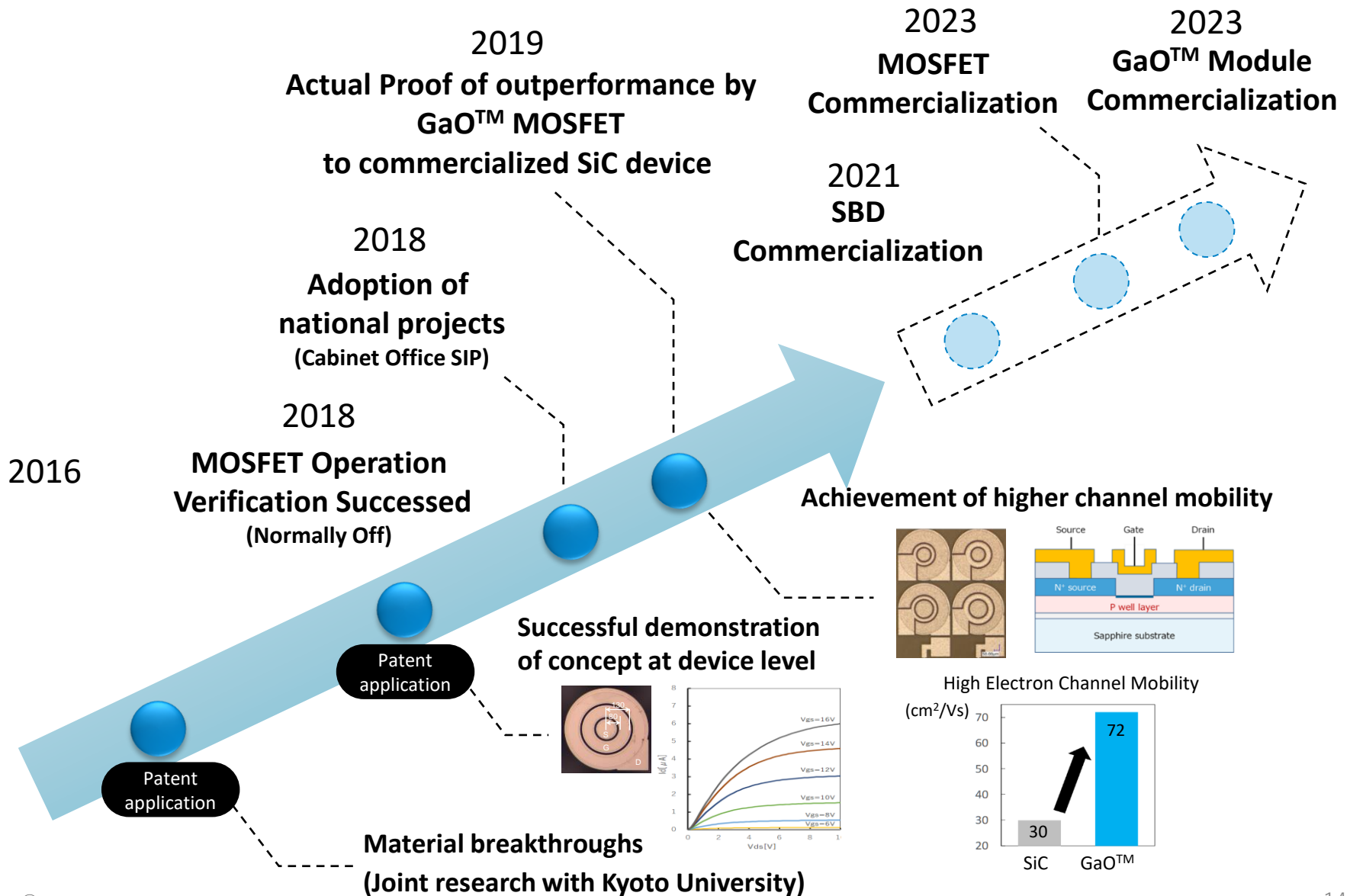


Received the Minister of Economy, Trade and Industry Award as an excellent company actively using intellectual property right system

Business Expansion from Medium-Voltage Market to High-Voltage & Low Voltage and Establish World Standard!

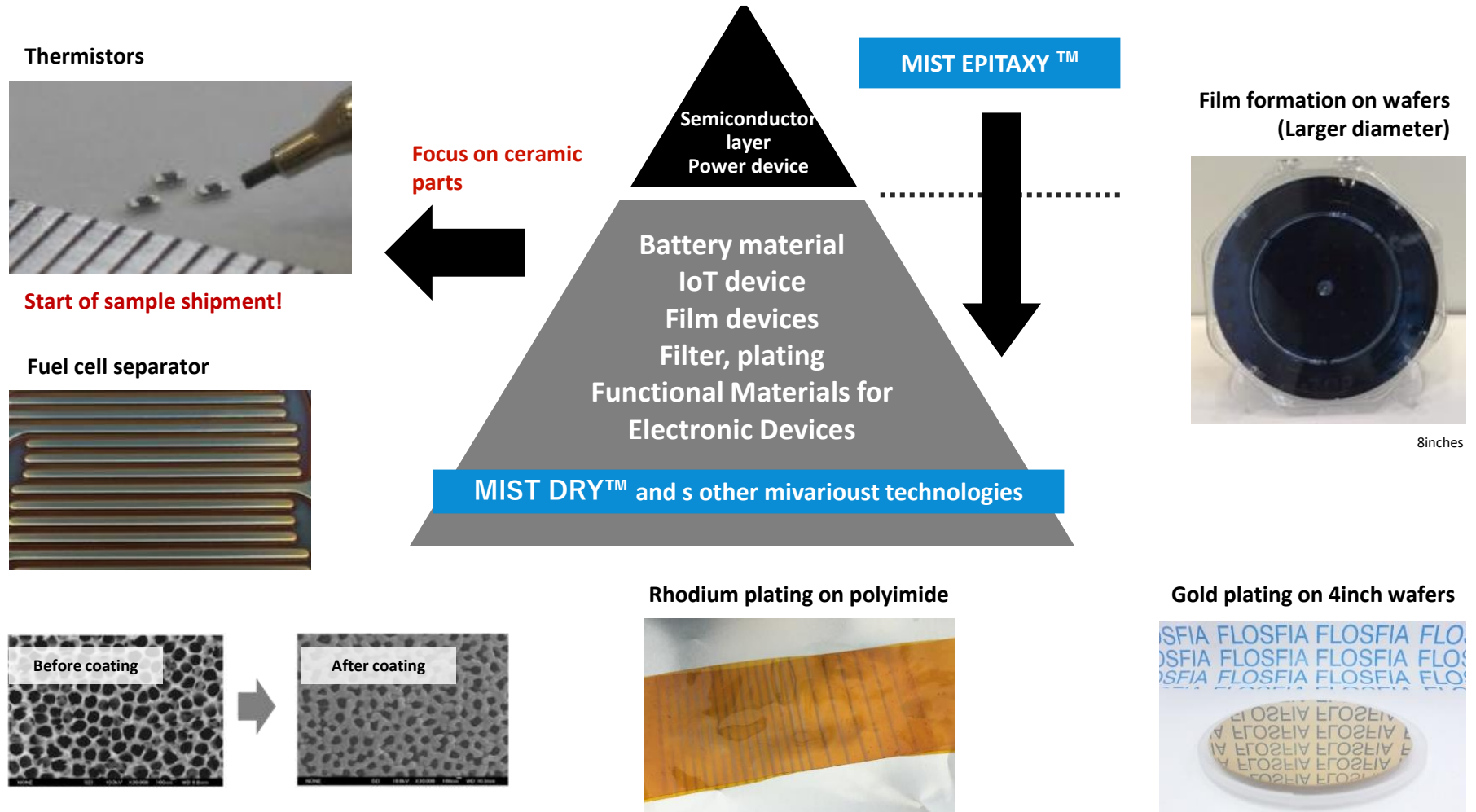


Development of Transistor (MOSFET) as Next Pipeline for Steady Progress



Building Unique Platform Utilizing MIST Technologies

Platform for Film Deposition Synthesis Technology
by using MIST DRY™ method



Utilizing the flow of knowledge and know-how, Contributing to Human Development



Companies gathered flow from various kinds of sophia,
I would like to further refine this sophia and flow it to contribute to the
progress of humans.

We have named this type of shape we aim at '**FLOSFIA**' ..etc....

Thank you for being utilized in the world and being connected with the
world, learn and grow in it, and as a existence that will well satisfy the
community and society.

We hope that it will connect again.