



# CEATEC<sup>®</sup>

TOWARD SOCIETY 5.0

# 2023

## Exhibition Report

Organizer

**JEITA** Japan Electronics and Information  
Technology Industries Association

Co-sponsors

**CIAJ** Communications and Information Network  
Association of Japan,



Software Association of Japan

# CEATEC 2023 Topics

## Innovators Gathering

CEATEC 2023 is an event where you can “see” exhibits, “listen” to conferences, “feel” and “think” about the future society, and “move” toward co-creation. CEATEC is a comprehensive exhibition of digital innovation, so CEATEC is a place for innovators to co-create. CEATEC was successfully held for four days at Makuhari Messe, as well as via online.

## Opening Reception

On Monday, October 16, CEATEC Opening reception was held at the Palace Hotel Tokyo (Marunouchi, Chiyoda-ku, Tokyo). Prime Minister Fumio Kishida delivered a congratulatory speech. Prime Minister Kishida, and approximately 700 participants, including government and embassy officials, executives from exhibitors.

## CEATEC AWARD 2023

The three ministerial awards of the CEATEC AWARD were announced at the opening reception. The ministers of the Ministry of Internal Affairs and Communications, the Ministry of Economy, Trade and Industry, and The Digital Agency. The three ministers of the Ministry of Internal Affairs and Communications, the Ministry of Economy, Trade and Industry, and the Digital Agency, who participated in the opening reception, communicated directly with the award winners and presented them with certificates and plaques. The CEATEC AWARD 2023 also presented five category awards, including the newly established global category.

## Conference

CEATEC conference held at the Makuhari Messe for the first time in four years. Frontrunners and key persons from industry, academia, government, and the private sector had panel discussions. And, special stage in the exhibition hall was also featured for electronic component-related projects and the theme for the next generation.

## New Pavilion in Partners Park

The Digital Garden City Nation Concept is to realize a “spiritually fulfilling life” and a “sustainable environment, society, and economy”. CEATEC 2023 set up the Digital Garden City Nation Concept pavilion. In addition to the pavilion, there were a variety of other pavilions in Partners Park. The event was a great success, and the results of the co-creation were widely communicated.

## For the next generation

The “Future- Hub” stage spotlights students who are the future of the industry. In the stage, many programs introducing basic knowledge of technology and interactive talk sessions between students and top leaders. In addition, the sessions for students and business persons with other exhibiting companies, as well as information on human resource development and support.

## Five Challenges for Next Generation

Supporting human resources who will lead the Next Generation of society.

●Future-Hub

Realizing the Next Generation of Society  
- Digital Garden City

●Partners Park

Supporting the Next Generation with Technology  
- Devices

●Key device area  
●Tech-Hub

Supporting startups and university research institutions that hold the key to the Next Generation

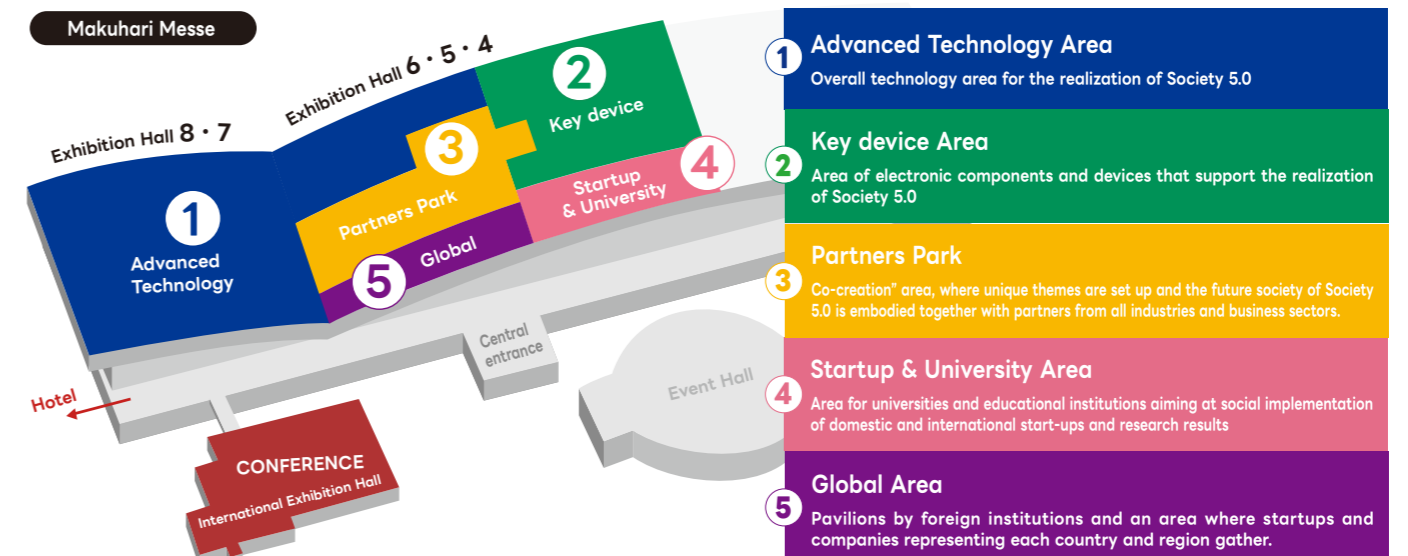
●Startup & University Area  
●Pitch stage

Connecting to the Next Generation  
- Sustainable exhibition that takes the global environment into consideration

## Approaches for the environmental-friendly in CEATEC 2023

- Reusable system panels were used for the lounges, reception booths, and special stages set up at CEATEC.
- The venue map was downloadable as a PDF file from the CEATEC website instead of being distributed on paper.
- FSC-certified paper was used for printed materials, such as the invitation card, and biomass-derived resin was used for the envelopes.
- Badge cases were collected (about 0.2 tons in total (for about 27,000 visitors)) and recycled.

- Green power was used for the lounge and reception area in the exhibition hall, and natural energy such as wind and solar power was used. (The amount of electricity used in the exhibition halls was reduced by 15,000 kWh.)
- In order to reduce electricity consumption in the exhibition hall, some escalators and air-conditioning systems were adjusted during the exhibition.



## Exhibitors Profile

Number of Exhibitors  
**684**  
Exhibitors & Organizations

Startup & University and Research Organizations  
**153**  
Exhibitors & Organizations

Number of Overseas Exhibitors  
**21** Countries Regions  
**195** Exhibitors & Organizations

## Satisfaction with CEATEC 2023 (overall rating)

**80.6%** of exhibitors are **satisfied**

## CONFERENCE / Special Events Profile

Number of Speakers  
**386**

Total of  
**33,675**  
Listeners

Number of CONFERENCE  
**216**

## PRESS Profile

### Domestic and foreign media personnel

**643**

Online articles  
**4,590**

Video news (posted on Youtube)  
**839**

TV coverage in Japan  
**42** programs

Overseas TV coverage  
**14** programs

Newspaper / Magazine articles  
**176** article

## Visitors Profile

Number of Visitors  
**89,047**



Electronic Components / Devices  
**8,200+**

Information processing and service  
**3,900+**

Students  
**6,400+**

Manufacturing, machinery, precision equipment  
**10,000+**

Information and Communication Equipment  
**4,600+**

Automotive / Transportation equipment  
**2,800+**

## Exhibition Outline

### Official Name

CEATEC 2023  
Combined Exhibition of Advanced Technologies

### Exhibition Purpose

Aiming to realize Society 5.0, which balances economic development with solutions to social issues, bringing together technology, information, and people from all industries and business sectors to envision the future through “co-creation” .

### Dates

Tuesday, October 17 to Friday, October 20, 2023; 10:00am to 5:00pm

### Venue

Makuhari Messe (2-1 Nakase, Mihama-ku, Chiba, Chiba Prefecture)

### Admission

Free of charge (All visitors are required to register in advance)

### Organizer

Japan Electronics and Information Technology Industries Association (JEITA)

### Co-sponsors

Communications and Information Network Association of Japan (CIAJ),  
and Software Association of Japan (SAJ)

### Supported by

Ministry of Internal Affairs and Communications,  
Ministry of Economy, Trade and Industry,  
Ministry of Land, Infrastructure, Transport and Tourism,  
Digital Agency

(the order of establishment)

Japan External Trade Organization (JETRO),  
New Energy and Industrial Technology Development Organization (NEDO),  
National Institute of Advanced Industrial Science and Technology (AIST),  
National Institute of Information and Communications Technology (NICT),  
Information-technology Promotion Agency (IPA),  
Organization for Small & Medium Enterprises and Regional Innovation,  
Japan (SME Support, Japan)  
Chiba Prefecture, Chiba City  
Japan Broadcasting Corporation (NHK),  
Japan Commercial Broadcasters Association (JBA)  
Japan Business Federation (Keidanren),  
The Japan Chamber of Commerce and Industry,  
The Tokyo Chamber of Commerce and Industry

(list in no particular order)

### Management

CEATEC Management Office (Japan Electronics Show Association (JESA))

## Index

02 ..... Topics	08 ..... Venue Map
04 ..... Exhibition Outline	12 .... Exhibitor List
05 ..... CEATEC AWARD	13 .... 2023 Results



# CEATEC<sup>®</sup> AWARD

The CEATEC AWARD 2023 review board panel of judges has selected the CEATEC AWARD 2023 to be implemented with the goal of realizing Society 5.0, which will contribute to the creation and development of new value and markets while invigorating related industries.

### CEATEC AWARD 2023 Review Panel of Judges

#### Academic Societies (in no particular order)

Information Processing Society of Japan  
The Institute of Electronics, Information and Communication Engineers  
The Institute of Image Information and Television Engineers  
The Institute of Electrical Engineers of Japan

#### Research Institute and Media Related (in no particular order)

MM Research Institute, Inc. / The Nikkan Kogyo Shimbun, Ltd.  
Nikkei Business Publications, Inc. / ITmedia Inc. / Techno-core Corporation

### Minister for Internal Affairs and Communications Award

#### Secure Space Management Solution

Booth No **A001**

**Toshiba Corporation**

With public spaces facing a growing threat from terrorism, there is demand for new screening technologies that can detect hidden hazards without compromising convenience. The Toshiba Group has developed a walk-through inspection system that visualizes and detects hazardous materials concealed in clothing in less than one second. It benefits from proprietary integration and scanning technologies for automotive millimeter-wave radar ICs and draws on military radar and semiconductor technologies cultivated over many years. It can be deployed in a variety of public spaces to enhance community safety, security and sustainability.



### Minister of Economy, Trade and Industry Award

#### Sustainable PCB by metal inkjet printing technology

Booth No **S083**

**Elephantech Inc.**

Elephantech Inc.—a Japanese startup whose mission is to “create a sustainable world through the power of new manufacturing” —is the first manufacturer in the world to successfully mass produce electronic circuit boards using environmentally friendly metal inkjet printing. Compared to the conventional subtractive manufacturing method, this proprietary pure additive method is a sustainable solution since it cuts copper use by 70%, CO2 emissions by 75%, and water use by 95%.



### The Minister of Digital Agency Award

#### “Xacti LIVE”, the world’ s smallest-class imaging device and video communication service, innovates the way we LIVE.

Booth No **A141**

**Xacti Corporation**

Xacti LIVE—a wearable device & service for supplying a live video feed—is a solution for realizing 5G/6G live business sharing with POV video anywhere, anytime. Realistic video and audio captured at the scene using this small, lightweight device (weighing less than 30 grams) realizes compelling and smooth remote support from multiple locations.



# CEATEC<sup>®</sup> AWARD Category Award

## Advanced Technology Category

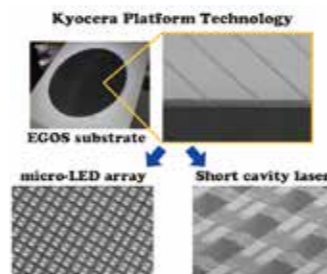
### Grand Prix

#### New micro-LED/micro-Laser Fabrication Method and Original Substrate

Booth No **A004** KYOCERA Corporation

KYOCERA Corporation has developed a proprietary substrate (EGOS) exclusively for fabricating very small light sources (micro-LEDs) and a revolutionary new process for manufacturing high-quality devices at low cost by using this substrate. A total of 340 micro-LEDs, fabricated from an area of this substrate with ultra-low defects, are simultaneously mounted on a circuit board to create an array. This EGOS substrate can also be used in the manufacture of lasers that are very challenging to fabricate: demonstrating this is the world's first 100 μm ultrashort cavity laser on a Si substrate\*, capable of continuously oscillating at room temperature.

\*A world-first for GaN-based edge-emitting lasers with a cavity of 100 μm or less formed on a Si substrates (Sept. 2022 Kyocera survey).

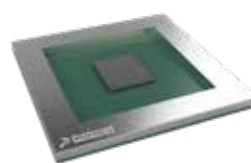


### Semi Grand Prix(2 item)

#### Energy-efficient AI processor MN-Core™ series

Booth No **A121** Preferred Networks, Inc.

Preferred Networks developed the MN-Core™ series of AI processors, which accelerate AI learning and achieve the world's highest level of computing performance per unit of power consumption, in collaboration with Kobe University. The company is working to develop and accelerate innovative technologies that apply deep learning in materials exploration and robotics, with the first large-scale cluster MN-3 using MN-Core becoming operational in June 2020. A successor, MN-Core 2, which is even more compact and powerful, has since been developed and is currently being mass-produced.



#### Visualizing Taste: The Dining Table of the Future -Taste judgment and information processing by AI analysis from images of vegetables, fruits, tea leaves, etc. taken by smartphones, etc.-

Booth No **A055** MAKUTA AMENITY CO.,LTD

The "deliciousness" of vegetables, etc., is instantly analyzed from images taken with a smartphone, etc., and "visualized" in numerical and other formats. Since the analysis is performed by AI on the cloud, this DX technology can be used worldwide as long as there is connectivity. This is the world's first analysis system using visible light without the use of specialized equipment. Anyone can easily use the system by downloading a dedicated app to a smartphone or other device. The results are displayed on an easy-to-understand, user-friendly screen, with ample consideration given to the UI.



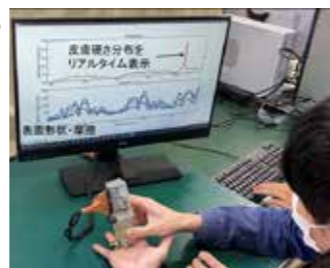
## Device Category

### Grand Prix

#### Multiphysics Nano-Tactile Sensing to Visualize the Delicate Sensation of Fingertips

Booth No **S081** Kagawa University JST-CREST

This tactile sensing system represents a completely new field of technology in which the touch sensations derived from a human hand are quantified and visualized. The key is pairing a unique high-resolution tactile sensor with deep learning (AI). High-quality tactile data is acquired by the sensor and memorized by AI. Once tactile characteristics are thus stored, the system can identify objects with greater sensitivity and accuracy than is possible with fingertips—even objects that are difficult for humans to distinguish. This technology is expected to find applications in various fields, such as the very early detection of malignant tumors in patients or abnormal wear in sliding mechanical components.



### Semi Grand Prix

#### Perovskite solar cells integrated with glass building materials

Booth No **A128** Panasonic Group

Panasonic's perovskite solar cells are integrated with glass building materials and are capable of controlling the level of transparency. They are therefore anticipated to be widely used in places where silicon solar cells cannot be easily adopted, such as in windows and walls, by virtue of their design and appearance. In addition, Panasonic's perovskite solar cells offer the world's highest power generation efficiency (17.9%) in a practical size (>800cm<sup>2</sup>).



## Co-Creation Category

### Grand Prix

#### Realization of on-site DX by utilizing the digital twin platform CONNECTIA at the construction stage

Booth No **P005** OBAYASHI CORPORATION

CONNECTIA is a design collaboration tool for the civil engineering and construction industries and is intended for use by on-site foremen (prime/subcontractors). Based on 3D models, it enhances efficiency in planning, enables visual simulations, and facilitates the sharing of results. Unlike BIM/CIM software or dedicated 3D-modeling software, it is an intuitive tool that provides a game-like interface so that people who do not normally use 3D tools can formulate construction plans and share information.



### Semi Grand Prix

#### A-SPEC ~Let's think about restrooms together.~

Booth No **P011** LIXIL Corporation

A-SPEC is a cloud service that automatically designs public restroom spaces. Anyone can easily design a user-friendly restroom space anytime, anywhere. A-SPEC's unique AI, which takes into account difficult rules and considerations related to space planning, automatically designs space layouts according to the conditions. It also provides a system that allows users to compare automatically designed plans and check their usability, and to work together with architectural designers and related parties to come up with better spatial designs.



## Startup Category

### Grand Prix

#### Compact and high-performance portable Doppler Lidar to support an Air-Mobility society

Booth No **S107** Metro Weather Co., Ltd.

MetroWeather's mission is to "take charge" of the world's winds. By continuing to provide optimum solutions—monitoring and analyzing wind in any location and under any conditions—the company aims to become a world leader in wind infrastructure. It has developed a high-performance Doppler lidar that analyzes minute movements of particles in the atmosphere to measure wind direction and speed at locations more than ten kilometers away. They aim to realize a world in which air mobility is not vulnerable to the wind, and aircraft can operate safely and stably.



### Semi Grand Prix

#### TL-SENSING™ - High-speed detection of subtle "heat" . Visualize "heat" and identify anomalies in 0.01 sec. -

Booth No **S109** TopoLogic Inc.,

TL-SENSING™ is a heat flux sensor made using a new topological material. It detects microscopic heat in 0.01 second, has several hundred times higher thermal conductivity than existing sensors, and boasts high freedom of shape due to its 1/100 thin film structure. It can be applied to a wide range of devices and services such as abnormality detection and failure prediction for batteries and power semiconductor components, chemical sensors and gas sensors combined with reaction catalysts and optical absorption films, thermal management in factories and production sites, and human body monitoring.



## Global Category

### Grand Prix

#### ARC SYSTEM

Booth No **S010** R2C2 Limited (Hong Kong)

The R2C2 platform is a universal robot coordination platform that allows automated inspection and patrol missions to be monitored, controlled and assigned to robot fleets formed by robots from different manufacturers. The R2C2 ARC device is equipped with an AI computer, cameras, and other sensors. The R2C2 ARC device is equipped with an AI computer, cameras, and other sensors to enhance the robot's inspection and navigation capabilities, bringing autonomy and inspection capabilities to conventional robots.



### Semi Grand Prix

#### Cardiomo – AI-based wearable solution for a long-term and remote heart monitoring

Booth No **G009** Cardiomo (Ukraine)

Cardiomo is an AI-based wearable solution for remote patient monitoring and diagnosis, enabling smart, continuous, real-time and cost-effective monitoring outside the hospital. The Cardiomo solution consists of a wearable patch and a cloud-based analytics platform that provides early detection of arrhythmias with little involvement of healthcare professionals, establishing a stronger relationship between patients and healthcare professionals and improving patient outcomes. The solution also prevents cardiac complications through a connected care model, reduces healthcare costs by reducing hospital admissions, and frees up critical hospital resources for emergency and advanced care.



## Venue Map

### Advanced Technology Area

Overall technology area for the realization of Society 5.0

### Key device area

Area of electronic components and devices that support the realization of Society 5.0

### Partners Park

Co-creation" area, where unique themes are set up and the future society of Society 5.0 is embodied together with partners from all industries and business sectors.

### Startup & University Area

Area for universities and educational institutions aiming at social implementation of domestic and international start-ups and research results

### Global Area

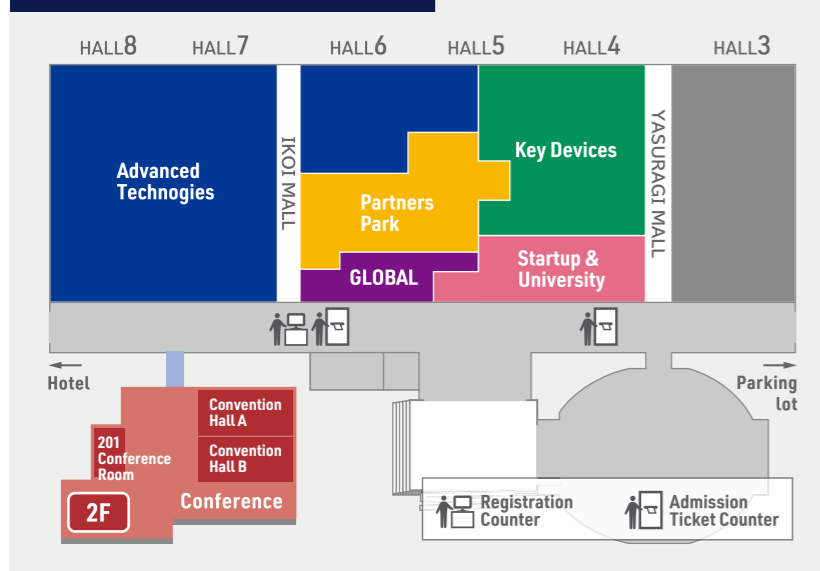
Pavilions by foreign institutions and an area where startups and companies representing each country and region gather.

### Conference

Lectures and panel discussions by industry leaders and experts

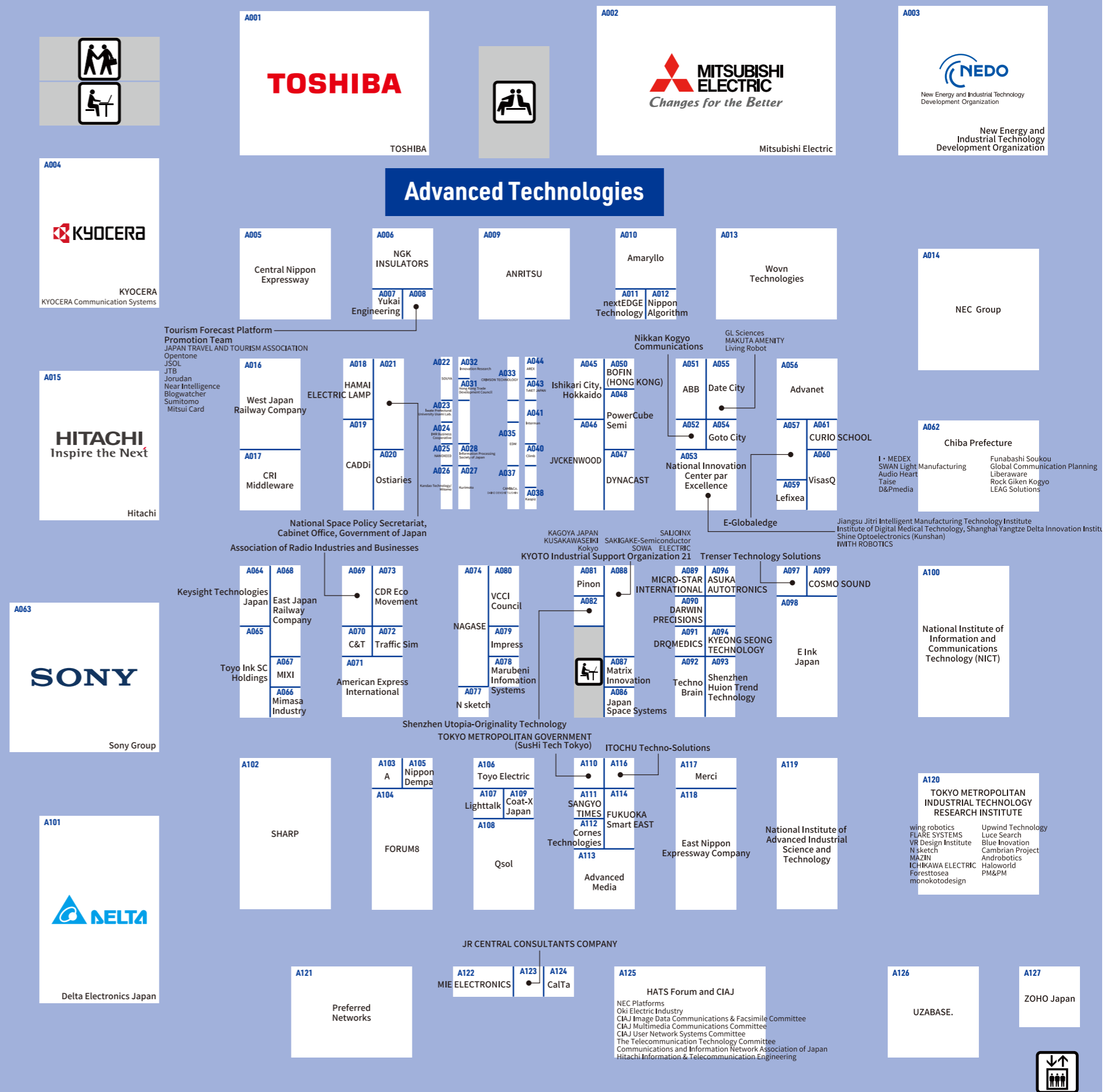


## CEATEC 2023 AREA MAP



## HALL8

## HALL7







## Results -Exhibitors-

### Results -Exhibitors-

Number of Exhibitors

**684** Exhibitors & Organizations

New Exhibitors

**305**  
Exhibitors & Organizations

Start up & Universities and  
Research Organizations

**153**  
Exhibitors & Organizations



Area	Number of Exhibitors			Number of Booths
	Japan	Overseas	Total	
Advanced Technology	181	56	237	639
Key device	47	43	90	221
Partners Park	128	5	133	168
Startup & University	131	22	153	162
Global	0	68	68	56
Online	2	1	3	0
<b>Total</b>	<b>489</b>	<b>195</b>	<b>684</b>	<b>1,246</b>



**North America**  
( 2 countries/regions: 33 Companies & Organizations )  
USA (23), Canada (10)

**Europe**  
( 8 countries/regions: 40 Companies & Organizations )  
Italy (1), Ukraine (13), Switzerland (1), Denmark (2), Germany (2), Finland (7), France (13), Norway (1)

**Asia ( 8 countries/regions: 111 Companies & Organizations )**  
India (2), Korea (12), Cambodia (1), Singapore (3), Taiwan (42), China (45), Hong Kong (5), Vietnam (1)

Number of Overseas Exhibitors

**21** Countries Regions  
**195** Companies & Organizations

**Middle East**  
( 2 countries/regions: 9 Companies & Organizations )  
Israel (1), UAE (8)

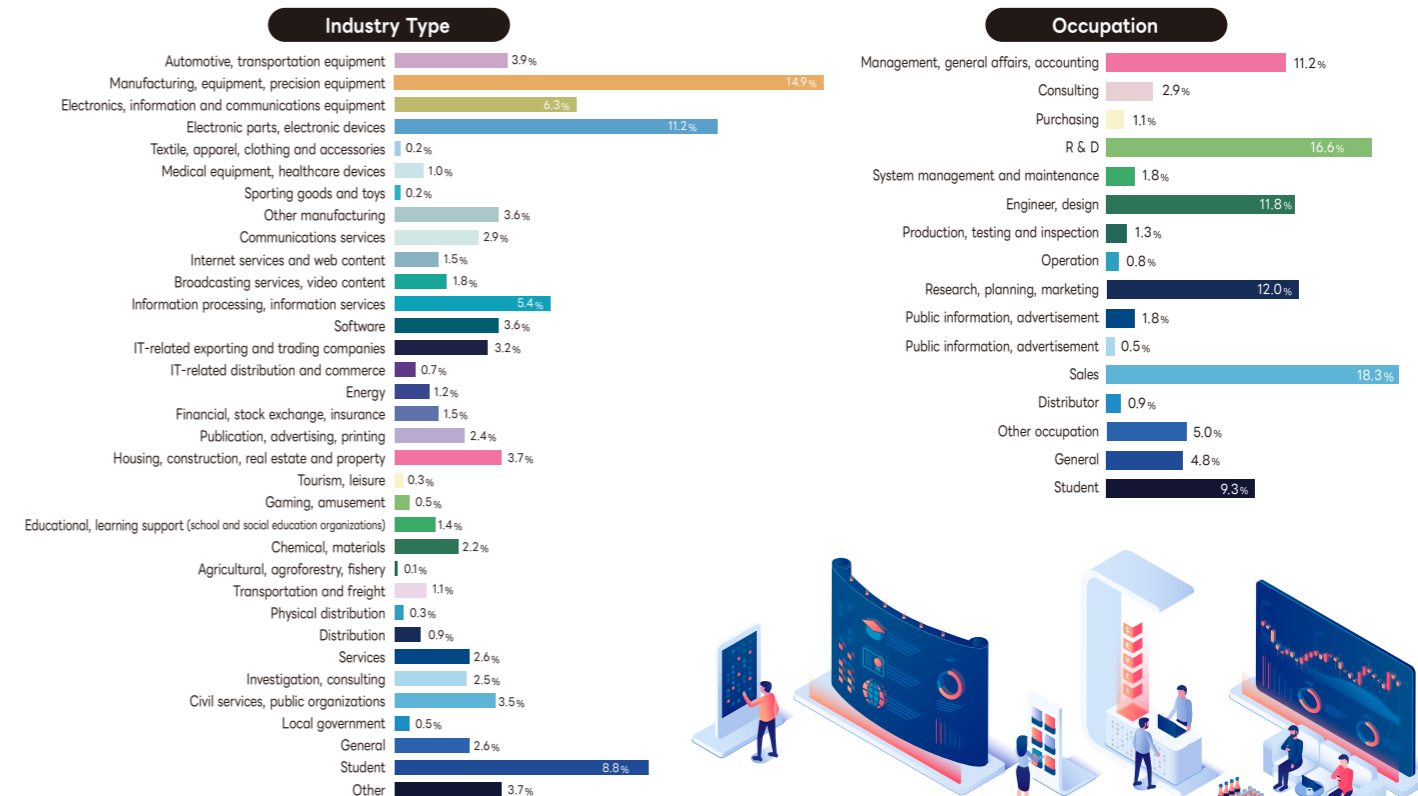
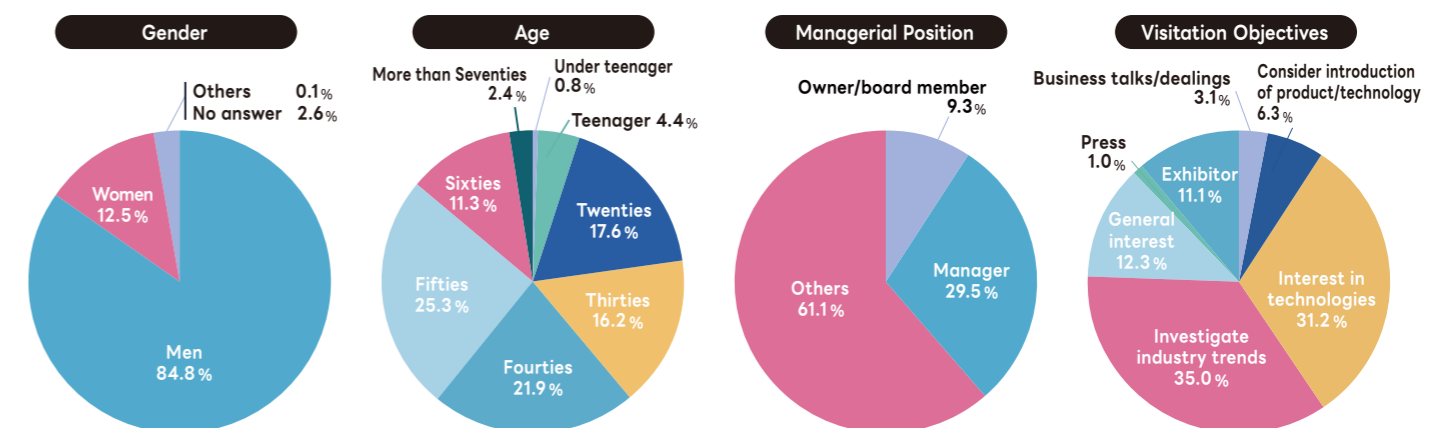
**Oceania**  
( 1 countries/regions: 2 Companies & Organizations )  
Australia (2)

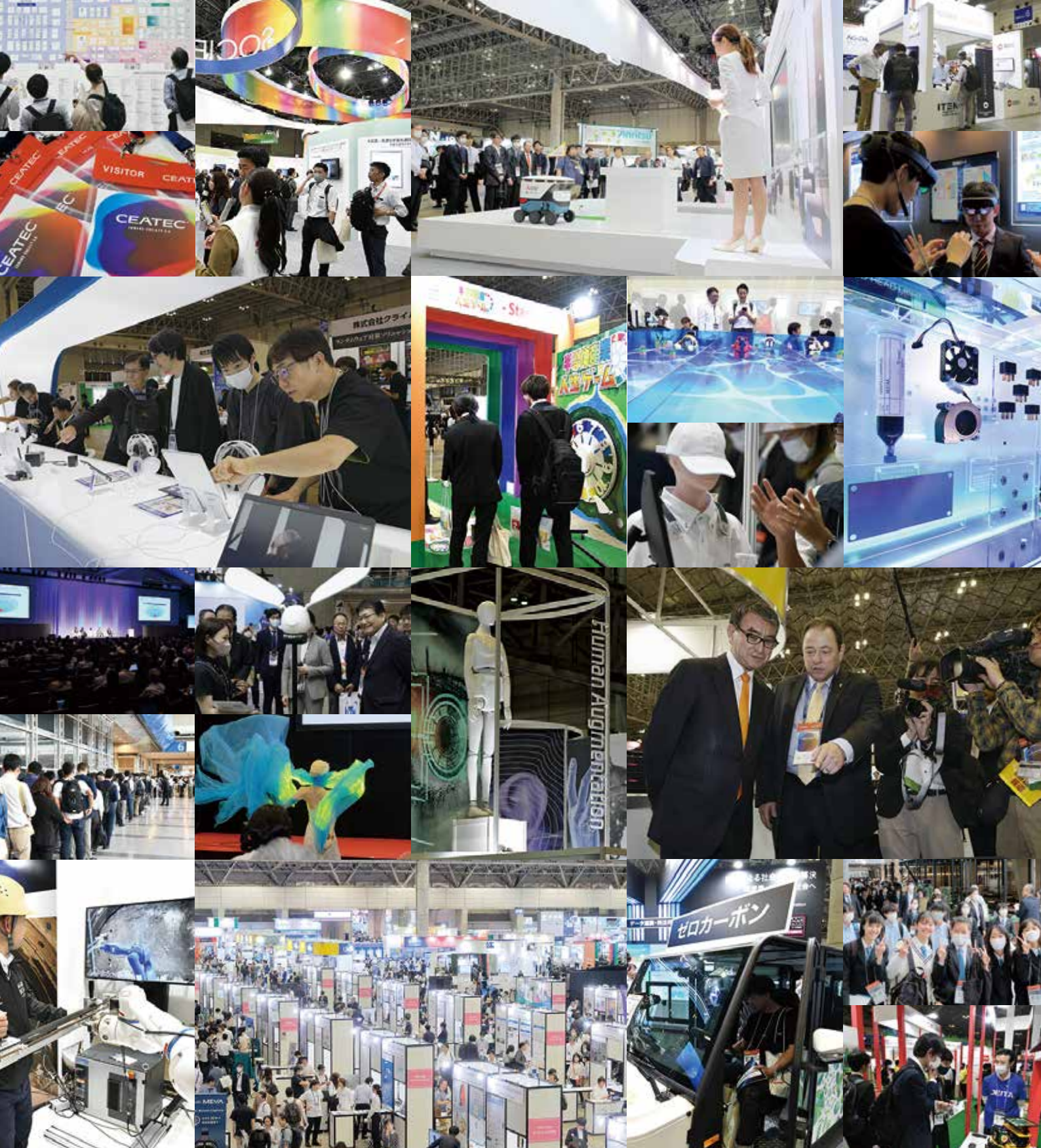
## Number of Visitors

### CEATEC 2023 Visitor Breakdown

	Oct. 17 (Tue.)	Oct. 18 (Wed.)	Oct. 19 (Thu.)	Oct. 20 (Fri.)	Total
Domestic visitors	15,684	16,346	18,761	21,748	72,539
Overseas visitors	211	219	252	292	974
subtotal	15,895	16,565	19,013	22,040	73,513
Press	428	74	73	68	643
Exhibit related	4,182	3,662	3,580	3,467	14,891
<b>Total</b>	<b>20,505</b>	<b>20,301</b>	<b>22,666</b>	<b>25,575</b>	<b>89,047</b>

### Visitor Attributes \*Note: The total composition ratio (percentage) may not be 100% due to the figures being rounded off.





## Organizer

**JEITA** Japan Electronics and Information Technology Industries Association

### Co-sponsors

**CIAJ** Communications and Information Network Association of Japan,


Software Association of Japan

## Contact Us

CEATEC Management Office  
(Japan Electronics Show Association (JESA))