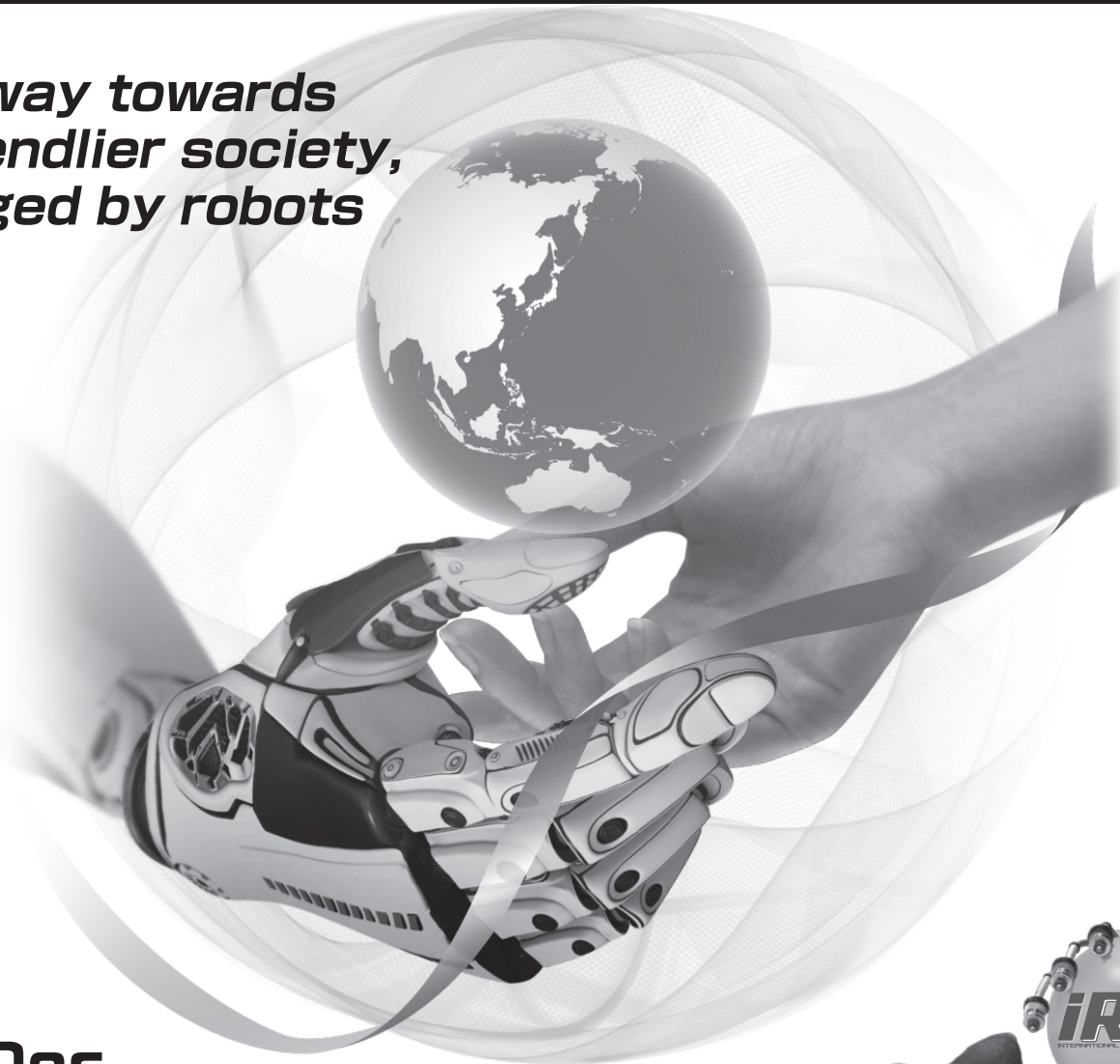


IREX[®] **2019**

INTERNATIONAL ROBOT EXHIBITION

Post Show Report

*The way towards
a friendlier society,
bridged by robots*



Date **Dec.**
18(Wed.)-21(Sat.), 2019

Opening hours: 10:00 to 17:00

Venue **Tokyo Big Sight**
Aomi Halls, West Halls, South Halls

Organizers Japan Robot Association (JARA)
THE NIKKAN KOGYO SHIMBUN



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One of the largest robot trade shows in the world

The newest robot technologies and products from Japan and around the world.



We are pleased to inform you that thanks to your supports, International Robot Exhibition 2019 (iREX 2019), held from 18th to 21st December, came to an end with great success.

The number of exhibitors this year was 637 and the number of booths was 3,060. This marks the largest number ever, breaking the record of previous iREX in 2017. As organizers, we would like to express our deep gratitude to all the exhibitors, related authorities, organizations and associations as this achievement would not be made if it were not for your warm supports.

The contents and the brief report on iREX2019 are shown in the following pages for your reference.

Thank you very much again, and we sincerely appreciate your continued supports.

Japan Robot Association (JARA)
THE NIKKAN KOGYO SHIMBUN, LTD.

Show Overview

■ Name

INTERNATIONAL ROBOT EXHIBITION 2019 (iREX 2019)

■ Theme

“The way towards a friendlier society, bridged by robots”

■ Purpose

The purpose of the exhibition is to gather and exhibit industrial/service robots and related equipment from around the globe under one roof, to help improve the technology to use robots and market development, and to contribute to the creation of new markets and promotion of industrial technology of robots.

■ Date / Time

Dec. 18 (Wed.) ~ 21 (Sat.), 2019 / 10:00~17:00

■ Venue

Tokyo Big Sight, Aomi Halls, West Halls, South Halls

■ Organized by;

Japan Robot Association (JARA)/ THE NIKKAN KOGYO SHIMBUN, LTD.

■ Supported by;

Ministry of Economy, Trade and Industry / Ministry of Health, Labour and Welfare / Ministry of Agriculture, Forestry and Fisheries / Ministry of Land, Infrastructure and Transport / Ministry of Internal Affairs and Communications / Ministry of Education, Culture, Sports, Science and Technology / Japan Chamber of Commerce / New Energy and Industrial Technology Development Organization (NEDO) / Japan External Trade Organization (JETRO) / NHK
(Random order)

■ Special Supported by;

The Society of Instrument and Control Engineers / Communications and Information Network Association of Japan / Manufacturing Science and Technology Center / All Japan Plastic Products Industrial Federation / The Association for Technical Aids / Japan Amusement Machine and Marketing Association / The Japan Machinery Federation / Japan Metal Stamping Association / Japan Clean Environment Promotion Organization / Japan Construction Equipment Manufacturers Association / Japan Construction Machinery and Construction Association / Japan Machine Tool Builders' Association / The Japan Society of Industrial Machinery Manufacturers / Japan Automobile Manufacturers Association / Japan Auto Parts Industries Association / The Japan Food Machinery Manufacturers' Association / Japan Forming Machinery Association / The Iron Steel Institute of Japan / Japan Electric Measuring Instruments Manufacturers' Association / The Japan Electrical Manufacturers' Association / Nippon Electric Control Equipment Industries Association / Japan Painting Contractors Association / Semiconductor Equipment Association of Japan / Japan Assistive Products Association / The Association of Care Goods Providers / The Japan Institute of Material Handling / Japan Fluid Power Association / Japan Belt Association / Japan Association of Corrosion Control / Japan Packaging Machinery Manufacturers Association / The Japan Welding Engineering Society / The Robotics Society of Japan / Micromachine Center / Robot Revolution Initiative
(Random order)

■ Admission

JPY1, 000 (Free admission for pre-registrants, invitation holders or under 16)

■Scale of Exhibition

Exhibitors	637 exhibitors (*612)
Booths	3,060 booths (*2,775)

(*Number of previous iREX in 2017)

- Overseas Exhibitors
95 exhibitors, 389 booths
- Exhibiting Countries: **16 countries and regions**
USA, Italy, Austria, Canada, South Korea, Singapore, Switzerland, Sweden, Thailand, China, Taiwan, Denmark, Germany, Norway, Monaco, Romania

■Number of Visitors

Date	Weather	Number of visitors (Number of previous iREX in 2017)
Dec. 18 (Wed.)	☀ / ☁	31,939 (29,613)
Dec. 19 (Thu.)	☁ / ☂	37,068 (34,531)
Dec. 20 (Fri.)	☀ / ☁	42,697 (41,035)
Dec. 21 (Sat.)	☁	29,429 (25,301)
Total		141,133 (130,480)

- Overseas Visitors :
64 countries, 7,308 visitors

■Concurrent Exhibitions:

- Parts Feeder Exhibition 2019
Organizers: Japan Parts Feeder Industrial Association/ THE NIKKAN KOGYO SHIMBUN, LTD.

■Special Exhibition Zone:

- The 8th Robot Awards Joint Exhibition
- Hands-on Projects (only on 21st December)
- World Robot Summit Trial Challenge 2019

Grand Opening / Ribbon Cutting Ceremony

Date : Dec. 18 (Wed.), 2019 9:30-10:00

Venue : Aomi Hall A, Tokyo Big Sight

Number of Participants : Approx. 200



Mr. Yoji Ueda



Mr. Yasuhiko Hashimoto



Mr. Haruhiro Imizu



〈Program〉

Guest Speech

Mr. Yoji Ueda

Deputy Director-General, Manufacturing Industries Bureau,
Ministry of Economy, Trade and Industry

Organizer Speech

Mr. Yasuhiko Hashimoto

Chairman, Japan Robot Association (JARA)

Organizer Speech

Mr. Haruhiro Imizu

President, THE NIKKAN KOGYO SHIMBUN, LTD.

List of Attendees of Ribbon Cutting Ceremony :

Mr. Yoji Ueda

Deputy Director-General, Manufacturing Industries Bureau,
Ministry of Economy, Trade and Industry

Mr. Yasuhiko Hashimoto

Chairman, Japan Robot Association (JARA)

Mr. Hiroshi Ogasawara

Chairman of International Robot Exhibition 2019 Working Committee

Mr. Hiroyuki Nagai

Chairman, Japan Parts Feeder Industrial Association

Mr. Haruhiro Imizu

President, THE NIKKAN KOGYO SHIMBUN, LTD.

Opening Reception

Date : Dec. 18 (Wed.), 2019 17:45 - 19:15

Venue : Reception Hall A , Conference Tower 1F, Tokyo Big Sight

Number of Participants : Approx. 600



Concurrent Events

iREX Robot Forum 2019 『Robots as human partners - in the changing workplaces』

Date Dec.18 (Wed.) **Time** 15:00~17:00 **Number of Participants** Approx. 900
Venue International Conference Room, Conference Tower 7F, Tokyo Big Sight
Organizers Japan Robot Association (JARA), THE NIKKAN KOGYO SHIMBUN
Simultaneous Interpretation

Panelist

Kawasaki Heavy Industries

Managing Executive Officer, General Manager, Robot Division

Mr. Yasuhiko Hashimoto

FANUC

Member of the Board Executive Managing Officer, General Manager,
ROBOT Business Division

Mr. Kiyonori Inaba

NACHI-FUJIKOSHI

Senior Corporate Officer, General Manager of IoT Business Headquarters,
In charge of Robot Division and Robot System

Mr. Akira Kunisaki

YASKAWA ELECTRIC

Corporate Vice President, General Manager, Robotics Division

Mr. Masahiro Ogawa

ABB

President, Robotics & Discrete Automation business,
Member of the Group Executive Committee of ABB Ltd, Switzerland

Mr. Sami Atiya

KUKA Deutschland CEO

Mr. Klaus König

DENSO

General Manager of Production Engineering Department, Production Innovation Center

Mr. Keisuke Kawano

PALTAC

Executive Officer General Manager of Research & Development Division

Mr. Masakazu Mikita

Sanmei Mechanical

Representative Director

Mr. Kazuo Kubota

Ministry of Economy, Trade and Industry

Director, Robotics Policy Office, Manufacturing Industries Bureau

Mr. Takahiro Ishii

Moderator

Journalist

Ms. Mariko Mikami



International Service Robot Forum 『Service robotics industry in Europe, Russia, and China』

Date Dec.18 (Wed.) **Time** 15:00~17:00 **Number of Participants** Approx. 400
Venue Main Stage, West Hall 4, Tokyo Big Sight
Organizers Japan Robot Association (JARA), THE NIKKAN KOGYO SHIMBUN
Simultaneous Interpretation

Director of Robotics, EUnited – European Engineering Industries Association

Mr. Patrick Schwarzkopf

Head of Sberbank Robotics Laboratory

Mr. Albert Yefimov

Executive President, China Robot Industry Alliance

Mr. Song Xiaogang

Regional Coordinator:Japan, Global NPO SprintRobotics

Dr. Michele Guarnieri

Robots are expected to play an active role in various fields. Experts from Europe, Russia, and China talked about the current situation of the service robotics industry in their country/area.



Mr. Patrick Schwarzkopf



Mr. Albert Yefimov



Mr. Song Xiaogang



Dr. Michele Guarnieri

The Robot Revolution and Industrial IoT International Symposium 2019 『Global tops Talk:Future Vision of Industrial IoT:Requirements and Approaches』

Date Dec.19 (Thu.) **Time** 13:00~17:45 **Number of Participants** Approx. 800
Venue Reception Hall A・B, Conference Tower 1F, Tokyo Big Sight
Organizers Ministry of Economy, Trade and Industry／Robot Revolution & Industrial IoT Initiative
Simultaneous Interpretation

Welcoming Remarks

Deputy Director-General, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry

Mr. Yoji Ueda

Speech1 “The path to the future vision of industrial IoT: the future of man and machine, and system approach”

Chairperson, Robot Revolution & Industrial IoT Initiative

Mr. Hideaki Omiya

Speech2 “New Strategic Developments in Germany and our bilateral Cooperation with Japan”

Deputy Director General, Federal Ministry for Economic Affairs and Energy

Mr. Markus Heß

Session1 “Future Vision in Globalized Community”

Keynote Speech1 “Robotics Innovation to Amplify People”

Vice President of Robotics, Toyota Research Institute Mr. Max Bajracharya

Keynote Speech2 “A new paradigm of human-machine collaboration”

Chairman of the Board of Trustees, acatech Prof. Dr. Henning Kagermann

Speech3 “Supporting human engineering activities by Digital Triplett”

Professor, The University of Tokyo Dr. Yasushi Umeda

Panel Discussion

Panelist

Vice President of Robotics, Toyota Research Institute Mr. Max Bajracharya

Chairman of the Board of Trustees, acatech Prof. Dr. Henning Kagermann

Professor, The University of Tokyo Dr. Yasuhi Umeda

Deputy Director General, Federal Ministry for Economic Affairs and Energy

Mr. Markus Heß

Moderator

Director, Manufacturing Industries Policy Office, Manufacturing Industries Bureau,

Ministry of Economy, Trade and Industry

Dr. Takeshi Nakano

Session2 “System approach in diverse perspectives”

Speech4 “IIC: Learning How to Build Industrial IoT Systems”

Chief Technical Officer, Industrial Internet Consortium

Mr. Stephen Mellor

Speech5 “Sustainable Research Strategies for Smart Production Technologies”

Chairman of Research Council, Plattform Industrie 4.0 / TU Darmstadt

Prof. Dr. Reiner Anderl

Speech6 “A System Approach for Establishing a Trusted Data Sharing Architecture”

Deputy Chairman of the Board, International Data Spaces Association /

Fraunhofer institute ISST

Prof. Dr. Boris Otto

Speech7 “Japan-Germany experts collaboration toward Industrial Revolution”

Chairman of International Standard AG, Robot Revolution & Industrial IoT Initiative /

The University of Tokyo

Dr. Fumihiko Kimura

Panel Discussion

Panelist

Chief Technical Officer, Industrial Internet Consortium

Mr. Stephen Mellor

Chairman of Research Council, Plattform Industrie 4.0 / TU Darmstadt

Dr. Reiner Anderl

Deputy Chairman of the Board, International Data Spaces Association /

Fraunhofer institute ISST

Dr. Boris Otto

Moderator

Chairman of International Standard AG, Robot Revolution & Industrial IoT Initiative /

The University of Tokyo

Dr. Fumihiko Kimura

Closing Remarks

Management Secretary, Robot Revolution & Industrial IoT Initiative

Mr. Michitaka Nakatomi

NEDO Robot AI Forum 2019

Date	Dec. 20 (Fri.)	Time	10:15~12:00	Number of Participants	Approx. 500
Venue	Main Stage, West Hall 4, Tokyo Big Sight				
Organizer	New Energy and Industrial Technology Development Organization (NEDO)				
Simultaneous Interpretation					

Opening Remarks

Executive Director, NEDO

Mr. Kiyoshi Imai

Invited Lecture

President, Association for Advancing Automation
Specially-Appointed Professor, Osaka University

Mr. Jeff Burnstein
Mr. Minoru Asada

NEDO Pitches "The Ideas for 2020 that Will Lead NEDO Forward"

NEDO Robot and Artificial Intelligence Technology Department

Mr. Akimichi Kanadani / Mr. Mitsuru Sendouda / Mr. Atsushi Motegi / Mr. Kenji Wasada

Closing Remarks

Director General, Robot and Artificial Intelligence Technology Department

Mr. Shuji Yumitori

Germany-Japan Expert Forum - Industrie 4.0 / Connected Industries

Date	Dec.20 (Fri.)	Time	13:00~15:30	Number of Participants	Approx. 150
Venue	Room 607/608, Conference Tower 6F, Tokyo Big Sight				
Organizers	Federal Ministry for Economic Affairs and Energy, Embassy of the Federal Republic of Germany Tokyo, German Chamber of Industry and Commerce in Japan, Germany Trade & Invest (GTAI)				
Simultaneous Interpretation					

Welcoming Remarks :

Deputy Director General, Federal Ministry for Economic Affairs and Energy

Mr. Markus Heß

13:10-13:20

Speech1 "Investing in Industrie 4.0 in Germany"

Germany Trade and Invest (GTAI)

Ms. Claudia Grüne

13:20-13:30

Speech2 "Cloud and Data Sovereignty: GAIA-X, International Data Spaces and International Interoperability"

CEO of International Data Spaces Association

Prof. Dr. Boris Otto

Session1 IIoT -IT Security in international context

13:40-14:00

Speech3 "Standardization Roadmap Industrial Security: New Challenges and Opportunities"

Plattform Industrie 4.0 / Head of Security for Embedded Systems,
Industry4.0, IoT, Siemens

Dr. Wolfgang Klasen

14:00-14:20

Speech4 "IIoT Security: The role of trustworthiness"

Industrial Security AG, RRI, Group Leader Engineer, Control System Engineering
Department, Omika Works, Hitachi

Mr. Tsutomu Yamada

Session2 IIoT - Standardization in international context

14:20-14:40

Speech5 "Standardization and B2B-Platforms Roadmap Industrie 4.0"

Plattform Industrie 4.0 / Senior Principal Key Expert Engineer, Siemens

Dr. Ulrich Löwen

14:40-15:00

Speech6 "Joint White Paper: Revitalizing Human-Machine Interaction for the Advancement of Society"

Chairman of International Standard AG, RRI / The Univ. of Tokyo

Prof. Fumihiko Kimura

Session3 Where to go from here? Discussion Panel on Future Cooperation of Industrie 4.0 / Connected Industries

15:00-15:20

Panelist

CEO of International Data Spaces Association

Prof. Dr. Boris Otto

Chairman of International Standard AG, RRI / The Univ. of Tokyo

Prof. Fumihiko Kimura

Plattform Industrie 4.0 / Senior Principal Key Expert Engineer, Siemens

Dr. Ulrich Löwen

Plattform Industrie 4.0 / Head of Security for Embedded Systems,

Industry4.0, IoT, Siemens

Dr. Wolfgang Klasen

Industrial Security AG, RRI, Group Leader Engineer, Control System Engineering
Department, Omika Works, Hitachi

Mr. Tsutomu Yamada

Moderator

Minister Counsellor for Economic and Scientific Affairs at the German Embassy

Ms. Susanne Welter

15:20

Closing Remarks

Deputy Director General, Federal Ministry for Economic Affairs and Energy

Mr. Markus Heß

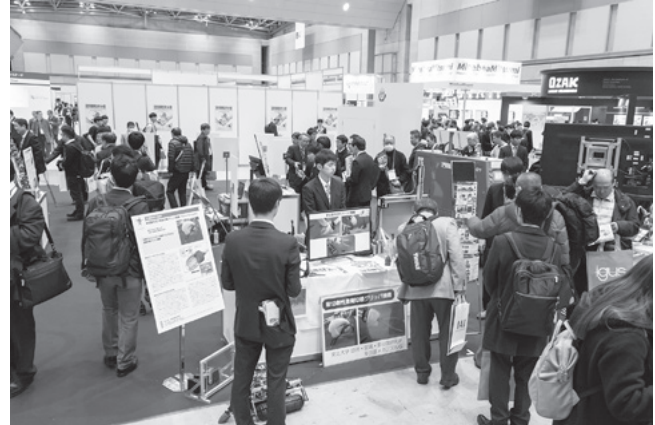
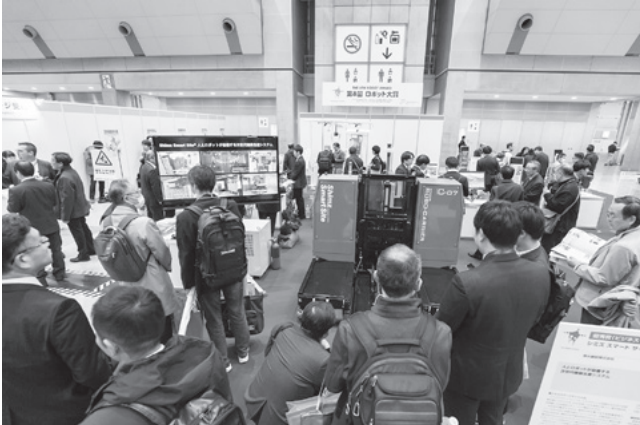
Special Exhibition Zone

THE 8TH ROBOT AWARD Joint Exhibition

Venue West Hall 4, Tokyo Big Sight

Organizers Ministry of Economy, Trade and Industry / Japan Machinery Federation

Joint Exhibition of the companies that won the 8th Robot Award

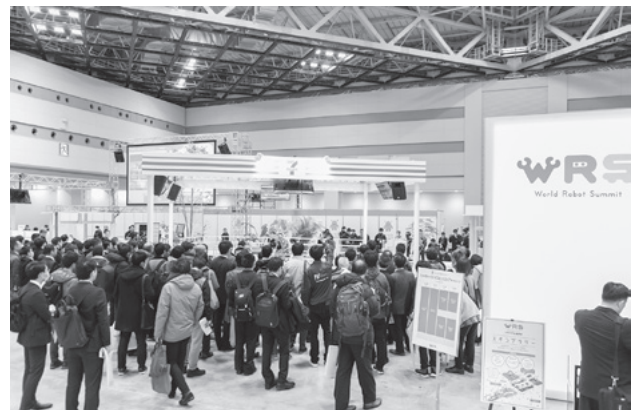


World Robot Summit Trial Challenge 2019

Venue South Hall 4, Tokyo Big Sight

Organizers Ministry of Economy, Trade and Industry /
New Energy and Industrial Technology Development Organization (NEDO)

Prior to WRS2020, some competitions trial has been held. The robots competed speed and correctness for assembling parts which are vary in size from small to large on Assembly Challenge. The participants competed robotics technology working with people in a store such as Stock and Disposal, Customer Interaction and Restroom Cleaning on Future Convenience Store Challenge.



Hands-on International Robot Exhibition

Venue Main Stage, West Hall 4 / South Seminar Room, Tokyo Big Sight

■ 『WATER ROBOTICS Zone』 『FOOD ROBOTICS Zone』 『DMM.make AKIBA Zone』

Supported by: ROBO la NIGHT, Matsuyama Industry, DMM.make AKIBA,

FUJITSU Knowledge Integration Base PLY, AFK laboratory, Mori robo, Ms. Mako Miyatake



Aomi Hall MAP

[illegible]

Aomi Hall B



Secretariat Room

Lounge



DAIHEN

FANUC

B-04

STAR SEIKI
EINS DIVISION

B-11

MEIKO
ELECTRONICS

B-17

NIKON

B-24

OMRON

B-16

BL
AUTOTEC

B-10

YOSHINOCAWA ELECTRIC
WIRE&CABLE

B-03

INXPECT

B-02

Shenzhen
Han's Motion
Technology

B-09

NIPPON
BEARING

B-15

SANKYO
SEISAKUSHO

B-23

Captain
Industries

B-22

WACOH-TECH

B-29

Yushin
Precision
Equipment

B-28

KEBA Japan

B-01

Asyrl

B-07

SERVO-ROBOT
JAPAN

B-13

HIROSE
ELECTRIC

B-21

KANEKO
CORD

B-26

METROL

B-27

Nihon Binary

B-25

DAIDO

B-06

DECSYS

B-12

Miki Pulley

B-20

KOSMEK

B-30

Kawasaki Heavy Industries

B-31

B-05

GENETEC

Lounge



B-19

ABB



Gourmet
Area

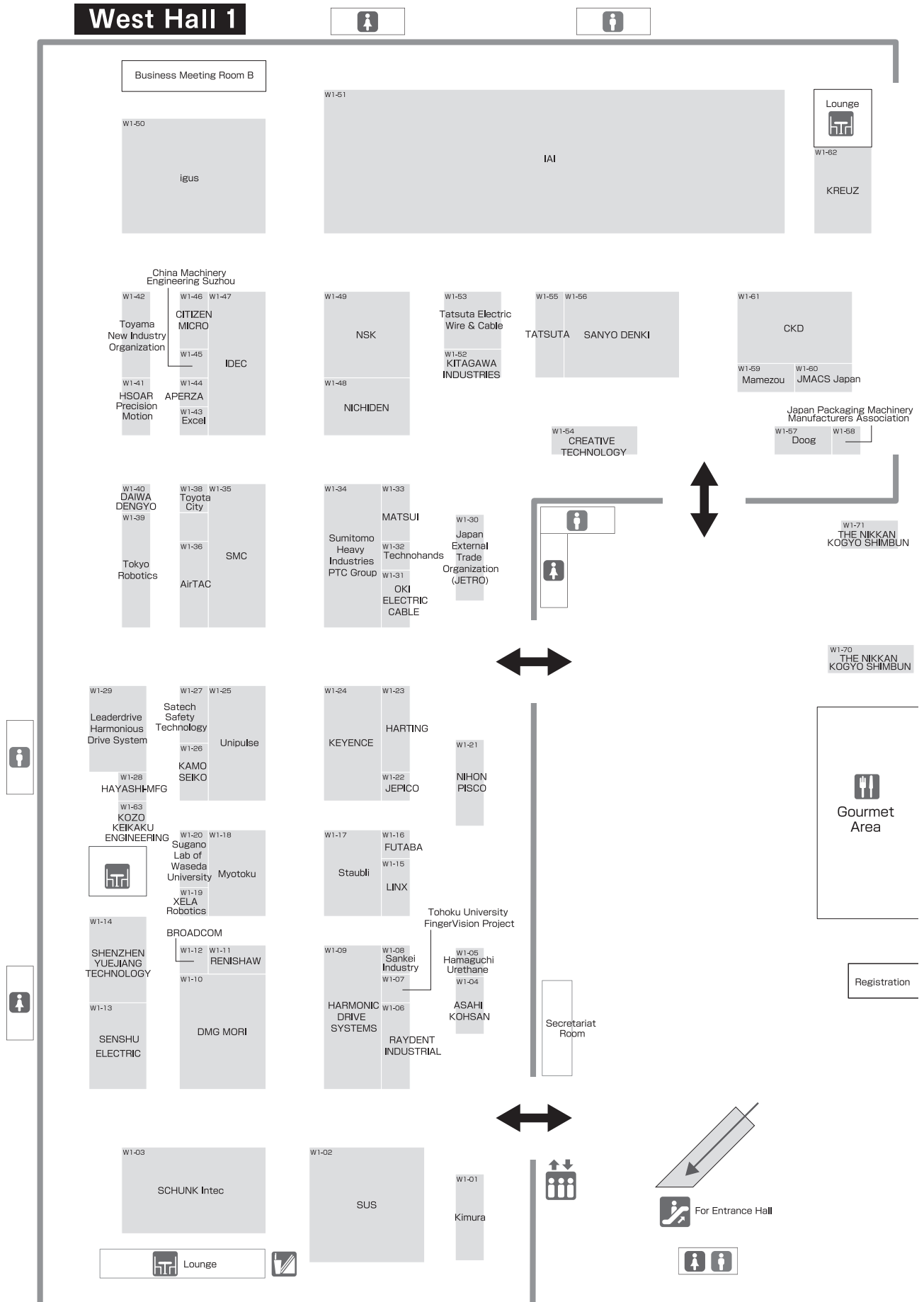


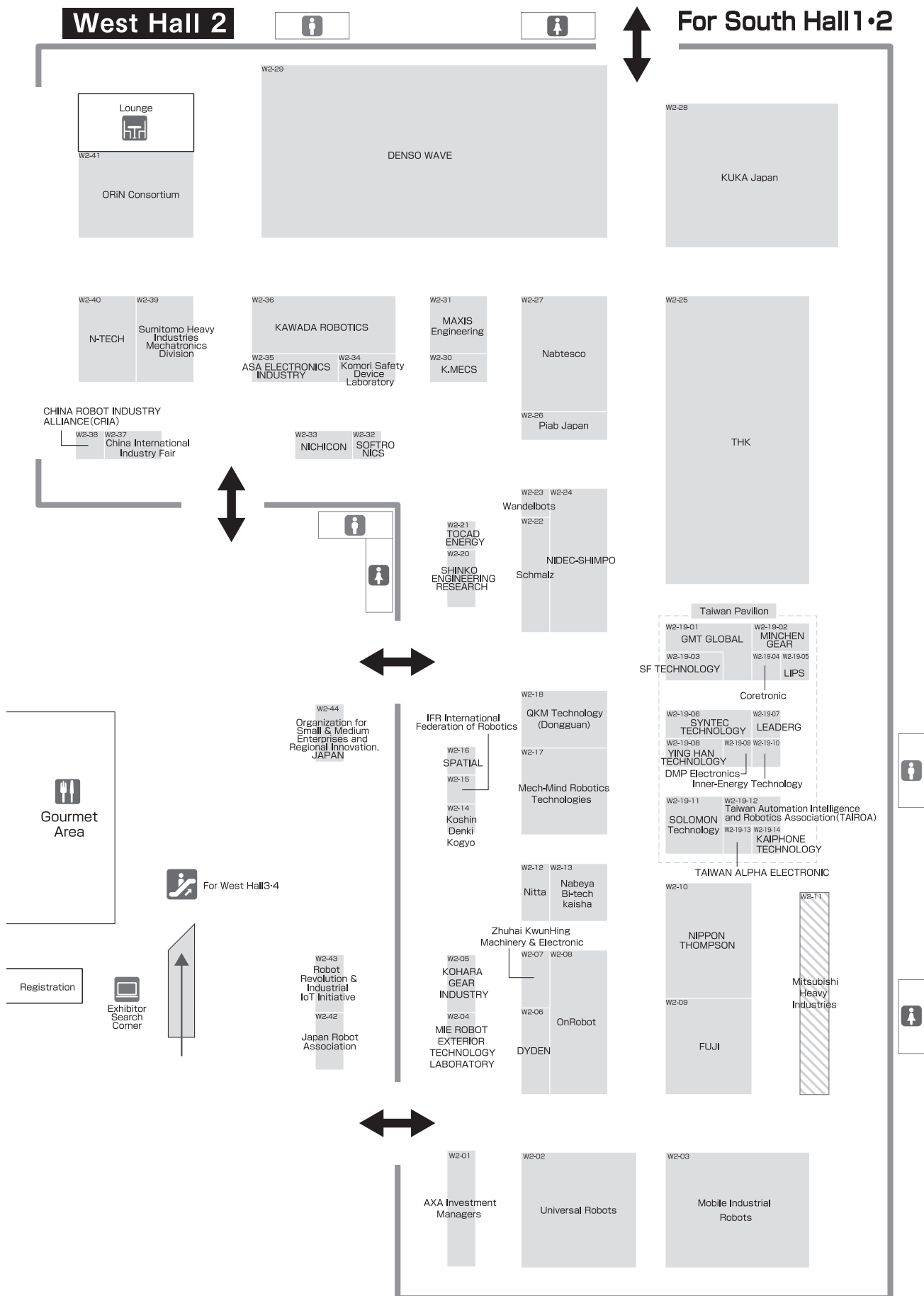
West Hall Map (Floor 1)

Industrial Robot Zone

Service Robot Zone

West Hall 1

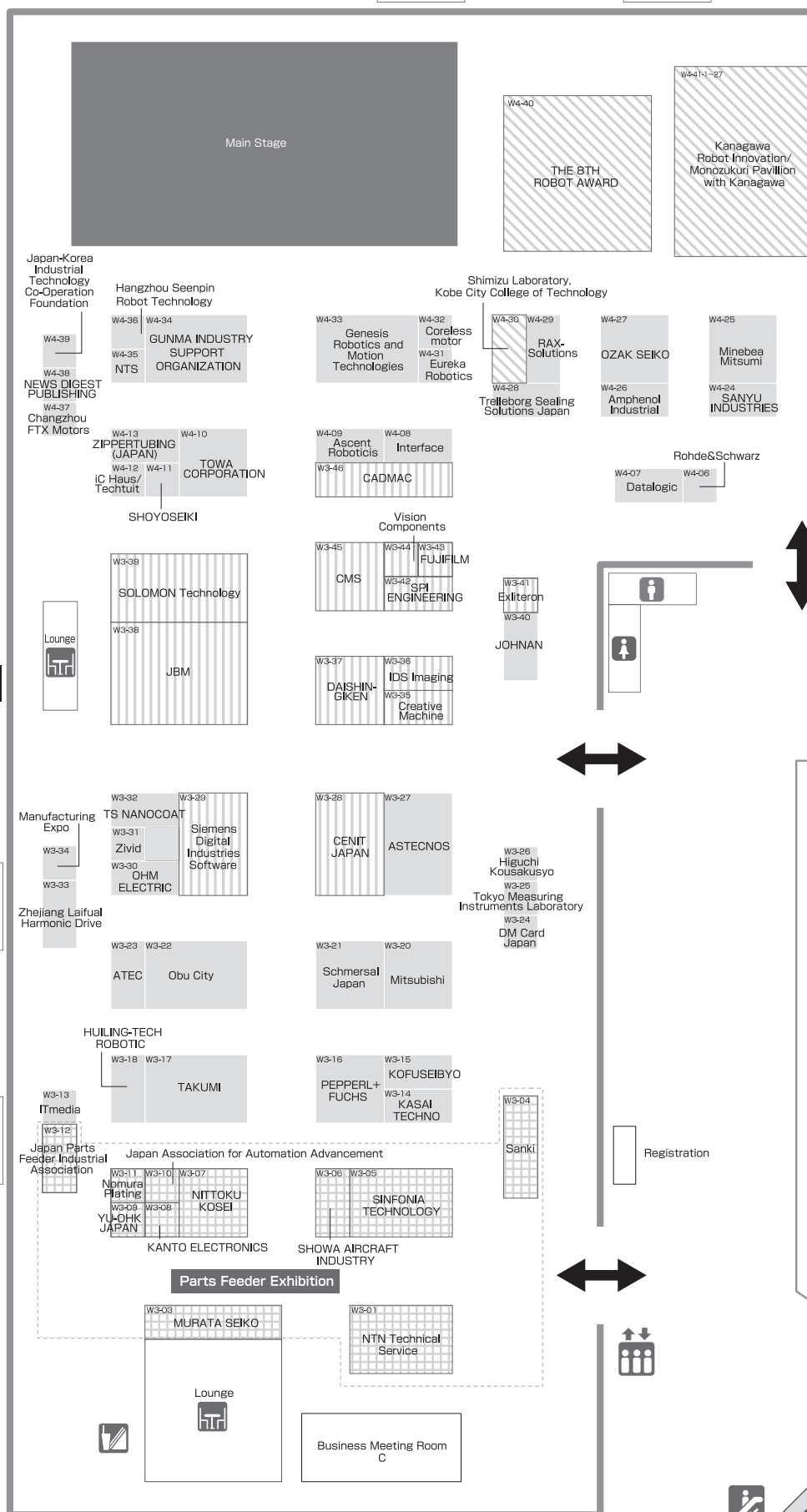




West Hall Map (Floor 4)

- Industrial Robot Zone
- Robot Simulation & Vision System Zone
- Service Robot Zone
- Parts Feeder Exhibition

West Hall3



West Hall 4

For South Hall 3•4

W4-1~27

Kanagawa Robot Innovation/
Monozukuri Pavilion with Kanagawa

West Seminar
Room

W4-01

Sumitomo Shoji
Machinex

W4-23

Gimatic
Japan

W4-21

Syrius
Robotics

Amorphology

W4-19

W4-18

Sagamihara
City

Sagamihara
Robot Business
Conference

W4-22

NABELL

W4-20

Rozetta

W4-17

E-T-A

Components

W4-15

W4-14

SANKI
MANUFACTURING

GUANGDONG
JATEN ROBOT& AUTOMATION

W4-05

FUJI
SEISAKUSHO

W4-04

TNK Sanwa
Precision

W4-03

Piezo

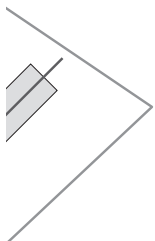
Sonic

W4-02

mitsubishi electric
tokki systems

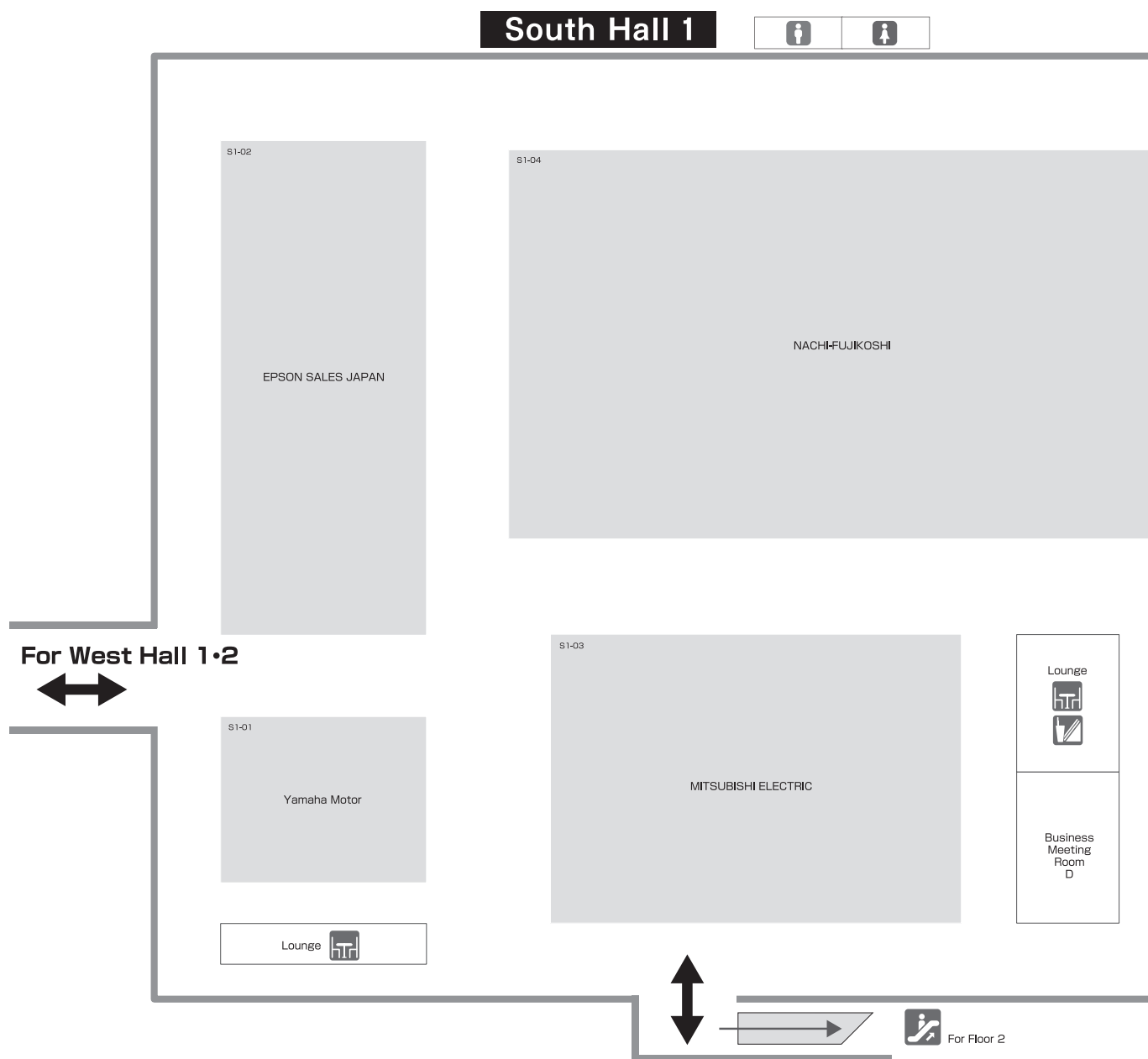


For West Hall 1•2



South Hall Map (Floor 1)


 Industrial Robot Zone



South Hall 2



 Gourmet Area

Lounge


S2-02

TOSHIBA
MACHINE

S2-03

YASKAWA ELECTRIC

S2-01

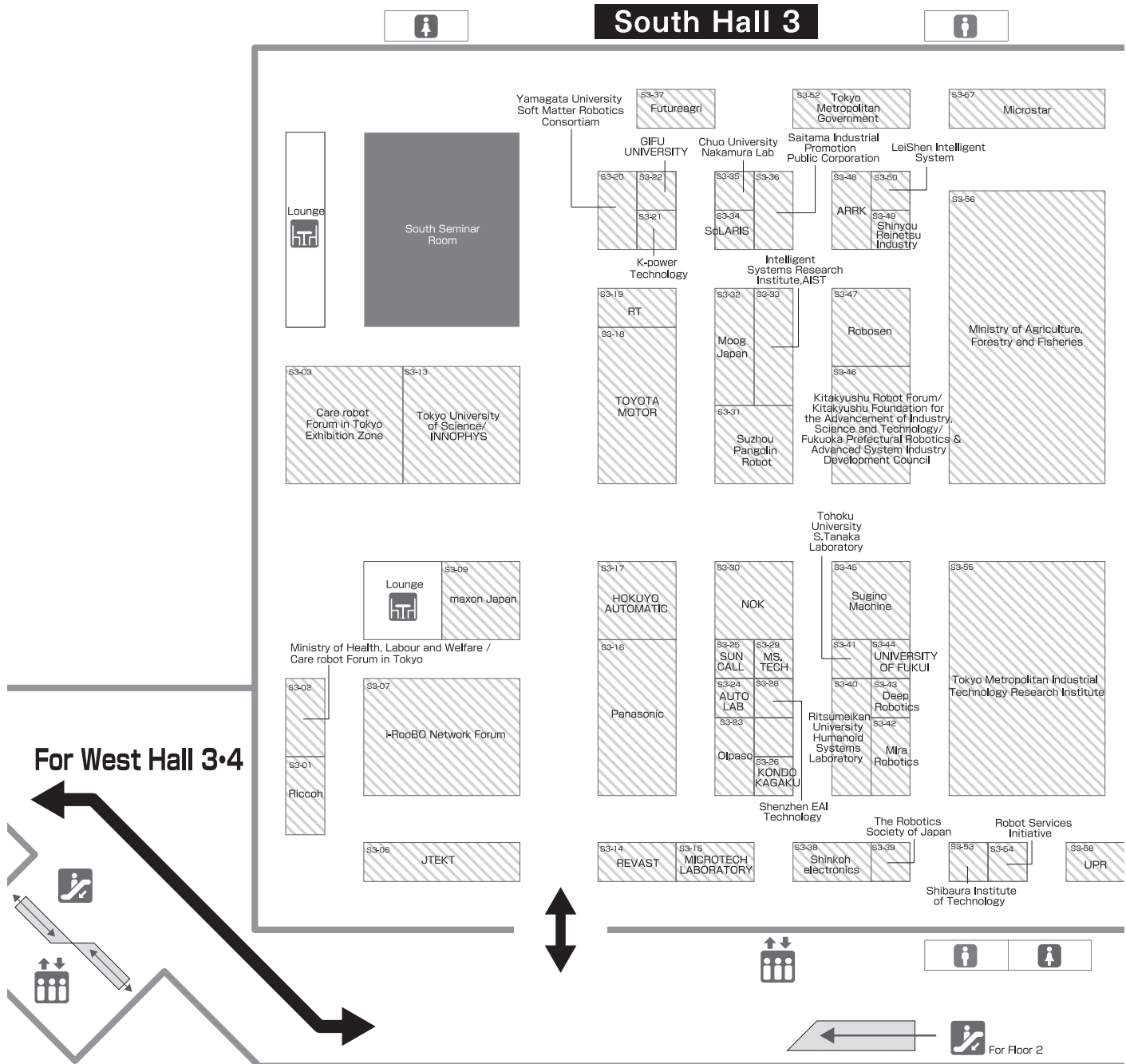
MUJIN



For Floor 2

South Hall Map (Floor 4)

 Service Robot Zone





South Hall 4



Lounge



Business Meeting Room
E

S4-07

New Energy and Industrial Technology
Development Organization
(NEDO)

S4-24

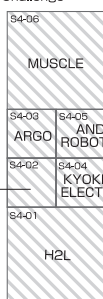
World Robot Summit Trial Competition



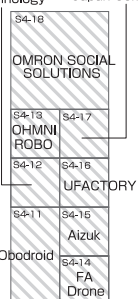
Organizer

Ministry of Economy, Trade and Industry /
New Energy and Industrial Technology
Development Organization

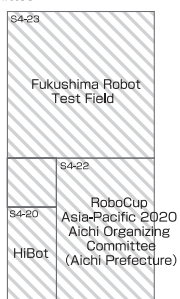
Japan Innovation
Challenge



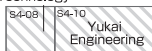
CYS Model
Technology



RoboMaster
Japan Committee



Next
Technology



For Floor 2

List of Exhibitors

※co-exhibitor

B-19	Aomi	ABB	S4-23	South	※Space Entertainment Laboratory	W2-42	West	Japan Robot Association	B-12	Aomi	Miki Pulley
B-08	Aomi	Aichi Sangyo	S4-23	South	※SpaceOne	W4-39	West	Japan-Korea Industrial Technology Co-Operation Foundation	W4-25	West	MinebeaMitsumi
B-08	Aomi	※Magswitch Technology	W1-16	West	FUTABA	W3-38	West	JBM Engineering	S3-56	South	Ministry of Agriculture , Forestry and Fisheries
W1-36	West	AirTAC	S3-37	South	Fututreagri	W1-22	West	JEPICO	S3-56	South	※Institute for Rural Engineering, NARO
S4-15	South	Aizuk	W4-33	West	Genesis Robotics and Motion Technologies	W1-60	West	JMACS Japan	S3-56	South	※Institute of Agricultural Machinery, NARO
A-69	Aomi	Amazon Web Services	B-05	Aomi	GENETEC	S3-06	South	JTEKT	S3-56	South	※Nileworks
W4-19	West	Amorphology	A-42	Aomi	Germany Trade & Invest (GTAI)	W2-30	West	K.MECS	S3-56	South	※OPTiM
W4-26	West	Amphenol Industrial	S3-22	South	GIFU UNIVERSITY	A-11	Aomi	KADO	S3-56	South	※Panasonic
S4-05	South	ANDROBOTICS	W4-23	West	Gimatic Japan	A-33	Aomi	Kakamigahara-city	S3-56	South	※Power Assist International
W1-44	West	Aperza	W4-15	West	GUANGDONG JATEN ROBOT& AUTOMATION	A-33	Aomi	※Central Japan robot system integrator cooperative association	S3-56	South	※Ritsumeikan University - Osada Farm Machinery
S4-03	South	ARGO	W4-34	West	GUNMA INDUSTRY SUPPORT ORGANIZATION	A-33	Aomi	※FIT	S3-56	South	※SANYO KIKI
S3-48	South	ARRK	W4-34	West	※Nihon Shoryoku Kikai	A-33	Aomi	※NIKKO AUTOME	S3-56	South	※SHIBUYA SEIKI
W3-27	West	ASA ELECTRONICS INDUSTRY	W4-34	West	※Ohmichi	W1-26	West	KAMO SEIKO	S3-56	South	※The Japan Research Institute
W1-04	West	ASAHI KOHSAN	W4-34	West	※Sanko Industrial Automation	B-21	Aomi	KANEKO CORD	S3-56	South	※Ueyama shuraku agricultural Consortium
W4-09	West	Ascent Robotics	W4-34	West	※System Seiko	A-34	Aomi	KantoSeiki	S3-56	South	※Utsunomiya University
W3-27	West	ASTECNOS	W4-34	West	※Takano	A-46	Aomi	Kantum Electronics	S3-02	South	Ministry of Health, Labour and Welfare/Care robot Forum in Tokyo
B-01	Aomi	Asyrl	W4-34	West	※Ueno Technica	A-46	Aomi	※ITOCHU MACHINE TECHNOS	S3-42	South	Mira Robotics
W3-23	West	ATEC	S4-01	South	H2L	W3-14	West	KASAI TECHNO	W3-20	West	Mitsubishi
S3-24	South	AUTOLAB	W1-05	West	Hamaguchi Urethane	W2-36	West	KAWADA ROBOTICS	S1-03	South	MITSUBISHI ELECTRIC
A-59	Aomi	AXA INVESTMENT MANAGERS JAPAN	W4-36	West	Hangzhou Seenpin Robot Technology	B-30	Aomi	Kawasaki Heavy Industries	W4-02	West	MITSUBISHI ELECTRIC TOKKI SYSTEMS
W2-01	West	AXA INVESTMENT MANAGERS JAPAN	W1-09	West	HARMONIC DRIVE SYSTEMS	B-28	Aomi	KEBA Japan	W2-11	West	Mitsubishi Heavy Industries
B-14	Aomi	B&PLUS	A-35	Aomi	Harmotec	W1-24	West	KEYENCE	A-18	Aomi	MITSUBISHIELECTRIC SYSTEM & SERVICE
W4-16	West	Bit Trade One	W1-23	West	HARTING	W1-01	West	Kimura	A-13	Aomi	Mitsuiwa
B-16	Aomi	BL AUTOTEC	W1-28	West	HAYASHI-MFG	W1-52	West	KITAGAWA INDUSTRIES	A-13	Aomi	※BYNAS
A-54	Aomi	Bot3	A-01	Aomi	HCI	S3-46	South	Kitakyushu Robot Forum/ Kitakyushu Foundation for the Advancement of Industry, Science and Technology	A-49	Aomi	Mitutoyo
W1-12	West	BROADCOM	A-01	Aomi	※AIT	S3-46	South	※Center for Socio—Robotic Synthesis, Kyushu Institute of Technology	W2-03	West	Mobile Industrial Robots
A-10	Aomi	BYNAS	A-01	Aomi	※COEI SYSTEM	S3-46	South	※City of Kitakyushu	S3-32	South	Moog Japan
W3-46	West	CADMAC	A-01	Aomi	※Yuden	S3-46	South	※Shibata Tomohiro Labo., Kyushu Institute of Technology	A-57	Aomi	MORITA&COMPANY
B-23	Aomi	Captain Industries	S4-20	South	HiBot	S3-46	South	※SHINNIPPON NONDESTRUCTIVEINSPECTION	S3-29	South	MS.TECH
S3-03	South	Care robot Forum in Tokyo Exhibition Zone	W3-26	West	Higuchi Kousakusyo	S3-46	South	W2-05	S2-01	South	MUJIN
W3-28	West	CENIT JAPAN	B-13	Aomi	HIROSE ELECTRIC	S3-46	South	W2-05	S4-06	South	MUSCLE
W4-37	West	Changzhou FTX Motors	A-19	Aomi	※Energia Communications	W3-15	West	W2-05	W1-18	West	Myotoku
W2-37	West	China International Industry Fair	A-19	Aomi	※Heiwa Joho System	W2-05	West	W2-05	W4-22	West	NABELL
W2-37	West	※Shanghai Robot Industry Association	A-19	Aomi	※Hi-Elecom	W2-34	West	W2-05	W2-27	West	Nabeya Bi-tech Kaisha
W1-45	West	China Machinery Engineering Suzhou	A-19	Aomi	※HIROTEC	S3-26	South	W2-05	S1-04	South	Nabtesco
W2-38	West	CHINA ROBOT INDUSTRY ALLIANCE	A-19	Aomi	※ICHIKAWA	A-26	Aomi	W2-05	S4-07	South	NACHI-FUJIKOSHI
A-45	Aomi	Chitose Robotics	A-19	Aomi	※Interface	A-47-10	Aomi	W2-05	W4-38	West	New Energy and Industrial Technology Development Organization
S3-35	South	Chuo University Nakamura Lab	A-19	Aomi	※KEYLEX	A-47-01	Aomi	W2-05	S4-08	South	NEWS DIGEST PUBLISHING
W1-46	West	CITIZENMICRO	A-19	Aomi	※NIITECH	A-47-11	Aomi	W2-05	W2-33	West	Next Technology
W1-61	West	CKD	A-19	Aomi	※Office FA.com	A-47-12	Aomi	W2-05	W1-48	West	NICHICON
W1-61	West	※CKD NIKKI DENSO	A-31	Aomi	HIWIN	A-47-04	Aomi	W2-05	W2-24	West	NIDEC-SHIMPO
W3-45	West	CMS	S3-17	South	HOKUYO AUTOMATIC	A-47-04	Aomi	W2-05	B-27	Aomi	Nihon Binary
W4-32	West	Coreless motor	W1-41	West	HSOAR Precision Motion	A-47-07	Aomi	W2-05	W1-21	West	NIHON PISCO
W1-54	West	CREATIVE TECHNOLOGY	W3-18	West	HUILING-TECH ROBOTIC	A-47-07	Aomi	W2-05	B-17	Aomi	NIKON
W3-35	West	CreativeMachine	W4-12	West	iC Haus/ Techtuit	A-47-03	Aomi	W2-05	B-09	Aomi	NIPPON BEARING
S4-12	South	CYS Model Technology	W4-12	West	※iC Haus	A-47-09	Aomi	W2-05	W2-10	West	NIPPON THOMPSON
B-25	Aomi	DAIDO	W1-47	West	IDEC	A-47-02	Aomi	W2-05	W2-12	West	Nitta
B-18	Aomi	DAIHEN	W1-47	West	※IDEC FACTORY SOLUTIONS	A-47-08	Aomi	W2-05	S3-30	South	NOK
W3-37	West	DAISHIN-GIKEN	W3-36	West	IDS Imaging	A-47-06	Aomi	W2-05	S3-30	South	※NIPPON MEKTRON
W1-40	West	DAIWA DENGYO	W2-15	West	IFR International Federation of Robotics	W2-14	West	W2-05	W1-49	West	NSK
W4-07	West	Datalogic	W1-50	West	igus	B-20	Aomi	W2-05	W2-40	West	N-TECH
B-06	Aomi	DECSYS	S3-33	South	INNOPHYS	W1-63	West	W2-05	W4-35	West	NTS
S3-43	South	DeepRobotics	W4-08	West	Interface	S3-21	South	W2-05	S4-11	South	Obodroid
W2-29	West	DENSO WAVE	B-03	Aomi	INXPECT	W1-62	West	W2-05	W3-22	West	Obu City
W3-24	West	DM Card Japan	S3-07	South	i-RooBo Network Forum	W2-28	West	W2-05	A-51	Aomi	OGURA CLUTCH
W1-10	West	DMG MORI	S3-07	South	※AIDOR - Osaka City Government	S4-04	South	W2-05	W3-30	West	OHM ELECTRIC
W1-57	West	Doog	S3-07	South	※KURABO	W1-29	West	W2-05	S4-13	South	OHMNIROBO
W2-06	West	DYDEN	S3-07	South	※ToyoRiki	S3-50	South	W2-05	W1-31	West	OKI ELECTRIC CABLE
S1-02	South	EPSON SALES JAPAN	S3-07	South	※Vstone	A-52	Aomi	W2-05	S3-23	South	Olpass
S1-02	South	※SEIKO EPSON	W3-13	West	Itmedia	A-24	Aomi	W2-05	B-24	Aomi	OMRON
W4-17	West	E-T-A Components	A-53	Aomi	Japan Aviation Electronics Industry	W1-15	West	W2-05	S4-18	South	OMRON SOCIAL SOLUTIONS
W4-31	West	Eureka Robotics	A-08	Aomi	JAPAN CERTIFICATION	W1-59	West	W2-05	W2-08	West	OnRobot
A-32	Aomi	EXAWIZARDS	A-08	Aomi	※The Institute of Global Safety Promotion	W3-34	West	W2-05	A-56	Aomi	ORIENTAL MOTOR
W1-43	West	Excel	W1-30	West	Japan External Trade Organization(JETRO)	W1-33	West	W2-05	W2-41	West	ORIN Consortium
W3-41	West	Exliron	A-02	Aomi	Japan Factory Automation & Robot System Integrater Association	W2-31	West	W2-05	W4-27	West	OZAK SEIKO
S4-14	South	FADrone	S4-02	South	Japan Innovation Challenge	S3-09	South	W2-05	S3-16	South	Panasonic
B-31	Aomi	FANUC	W1-58	South	Japan Packaging Machinery Manufacturers Association	B-11	Aomi	W2-05	A-64	Aomi	Parts Supply Center
W2-09	West	FUJI	A-03	Aomi	Japan Robot Association	B-26	Aomi	W2-05	W3-16	West	※Xiamen Wain Electrical
W4-05	West	FUJI SEISAKUSHO				S3-57	South	W2-05	W2-26	West	PEPPERL+FUCHS
W3-43	West	FUJIFILM				S3-15	South	W2-05	W4-03	West	Piab Japan
S3-46	South	Fukuoka Prefectural Robotics & Advanced System Industry Development Council				W2-04	West	W2-05	W2-18	West	Piezo Sonic
S3-46	South	※SEIKO ELECTRIC						W2-05	A-61	Aomi	QKM Technology (Dongguan)
S3-46	South	※TAKUMI						W2-05	A-36	Aomi	QRS
S3-46	South	※tmsuk						W2-05	W1-06	West	Rapyuta Robotics
S4-23	South	Fukushima Robot Test Field						W2-05	W1-11	West	RAYDENT INDUSTRIAL
S4-23	South	※EXT ENGINEER						W2-05			RENISHAW
S4-23	South	※FaBo						W2-05			
S4-23	South	※IGMA						W2-05			
S4-23	South	※Japan Atomic Energy Agency						W2-05			
S4-23	South	※Prodrone						W2-05			

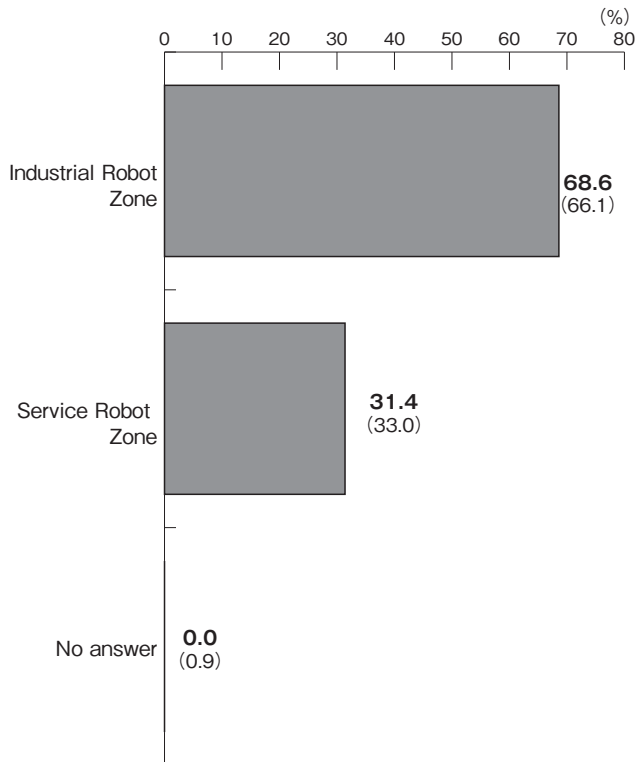
S3-14	South	REVAEST	A-06	Aomi	SQUSE	A-27	Aomi	TRANSCEND	Kanagawa Robot Innovation/ Monodzukuri Pavillion with Kanagawa		
S3-01	South	Riccooh	B-04	Aomi	STAR SEIKI EINS DIVISION	W4-28	West	Trelleborg Sealing Solutions Japan			
S3-40	South	Ritsumeikan University Humanoid Systems Laboratory	W1-17	West	Staubli	A-63	Aomi	TRI ENGINEERING	W4-41-10	West	A・R・P
S3-40	South	※KYB-YS	S3-45	South	Sugino Machine	W3-32	West	TS NANOCOAT	W4-41-03	West	Aoyama Precision Industry
S4-22	South	※Mori Industries	W2-39	West	Sumitomo Heavy Industries Mechatronics Division	A-09	Aomi	TSUKUBA ENGINEERING	W4-41-22	West	Atsugi City
		RoboCup Asia-Pacific 2020 Aichi Organizing Committee	W1-34	West	Sumitomo Heavy Industries PTC Group	A-14	Aomi	UENOTECHNICA	W4-41-22	West	※Atsugi City Robot Industrial Promotion Council
S4-17	South	RoboMaster Japan Committee				S4-16	South	UFACTORY	W4-41-25	West	ATSUMO (Atsugi Monodukuri Brand Prp)
S3-47	South	Robosen	W4-01	West	Sumitomo Shoji Machinex	W1-25	West	※ROBOTEC Universal Robots	W4-41-20	West	Columbus-seiki
W2-43	West	Robot Revolution & Industrial IoT Initiative (RRI)	S3-25	South	SUNCALL	W2-02	West	UNIVERSITY OF FUKUI	W4-41-05	West	Computer Institute of Japan
			S3-25	South	※Finggal Link	S3-44	South	※THE WAKASA WAN	W4-41-05	West	※ASAI ENGINEERING
S3-54	South	Robot Services Initiative	W1-02	West	SUS	S3-44	South	ENERGY RESEARCH CENTER	W4-41-27	West	DOUBLE Research and Development
W4-06	West	Rohde&Schwarz	S3-31	South	Suzhou Pangolin Robot	A-44	Aomi	University of Tsukuba	W4-41-17	West	iXs
W4-20	West	Rozetta	S3-31	South	※Pangolin Robot Japan	B-22	Aomi	WACOH-TECH	W4-41-13	West	Kanagawa Institute of Industrial Science and Technology
S3-19	South	RT	A-15	Aomi	Suzuko Corporation	W2-23	West	Wandelbots	W4-41-12	West	Kanagawa Prefectural Council for Promoting Business and Industrial Establishment
W4-18	West	Sagamihara City	W4-21	West	SyriusRobotics	S4-24	South	World Robot Summit	W4-41-09	West	Kanagawa Prefectural Government
W4-16	West	Sagamihara Robot Business Conference	A-60	Aomi	SYVEC Corporation	W1-19	West	XELA Robotics	W4-41-14	West	KAWASAKI BUSINESS
			A-50	Aomi	TACC	S3-20	South	Yamagata University Soft Matter Robotics Consortiam	W4-41-11	West	INCUBATION CENTER KAWASAKI ROBOT FESTIVAL
W4-16	West	※Aichi Sangyo	W2-19-12	West	Taiwan Automation Intelligence and Robotics Association (TAIROA)	S1-01	South	YAMAHA MOTOR	W4-41-24	West	KeioUniversity Haptics research Center
W4-16	West	※Board Planning	W2-19-04	West	※Coretronic	S4-10	South	Yukai Engineering	W4-41-21	West	KOWATECH
W4-16	West	※F-Design	W2-19-09	West	※DMP Electronics	B-29	Aomi	Yushin Precision Equipment	W4-41-08	West	MEMO Technos
W4-16	West	※Media Robo Tech	W2-19-01	West	※GMT GLOBAL	A-29	Aomi	YUTAKA ELECTRONICS	W4-41-15	West	OGAWA YUKI
W4-16	West	※MEMO Technos	W2-19-10	West	※Inner-Energy Technology	W3-33	West	Zhejiang Laifual Harmonic Drive	W4-41-04	West	PAIONIA FURYOKUKI
W4-16	West	※OOSAWA INDUSTRY	W2-19-14	West	※KAIPHONE TECHNOLOGY	W2-07	West	Zhuhai KwunHing Machinery & Electronic	W4-41-23	West	robotyuenchi
W4-16	West	※Stella Robot Technology	W2-19-07	West	※LEADERG	W4-13	West	ZIPPETUBING(JAPAN)	W4-41-18	West	SAGAMI CHEMICAL METAL
S3-36	South	Saitama Industrial Promotion Public Corporation	W2-19-05	West	※LIPS	W3-31	West	Zivid	W4-41-16	West	TeleBusiness
			W2-19-02	West	※MINCHEN GEAR	W3-31	West	※Micro-Technica	W4-41-01	West	The Fujisawa Chamber of Commerce & Industry
A-44	Aomi	Saitama University	W2-19-03	West	※SF TECHNOLOGY	W3-31	West		W4-41-01	West	※Amoeba Energy
A-20	Aomi	SAMPE Japan	W2-19-11	West	※Solomon Technology	W3-31	West		W4-41-01	West	※Moldtec
A-20	Aomi	※ACM	W2-19-06	West	※SYNTEC TECHNOLOGY	W3-31	West		W4-41-01	West	※Nikko-Kenma
A-20	Aomi	※Econology Brain	W2-19-13	West	※TAIWAN ALPHA ELECTRONIC	W3-31	West		W4-41-01	West	※SAIMA CORPORATION
A-20	Aomi	※GRAPHITE DESIGN	W2-19-08	West	※YING HAN TECHNOLOGY	W3-31	West		W4-41-01	West	※TAKAI SEIKI
A-20	Aomi	※HANYUDA	A-04	Aomi	TAKAMARU ENGINEERS	W3-31	West		W4-41-26	West	VECTOR
A-20	Aomi	※Shinhokoku Steel	W3-17	West	TAKUMI	W3-31	West		W4-41-07	West	Yokohama Denshi
A-20	Aomi	※SUNWA TRADING	A-62	Aomi	TAMAGAWA SEIKI	W3-31	West		W4-41-02	West	Yokohama Factory
A-20	Aomi	※TISM	W1-55	West	TATSUTA	W3-31	West				
A-20	Aomi	※TOKYO R&D Composite Industry	W1-53	West	Tatsuta Electric Wire & Cable						
W1-08	West	Sankei Industry	W1-53	West	※CHUGOKU ELECTRIC WIRE CABLE						
W4-14	West	SANKEI MANUFACTURING	W1-53	West	※Tatsuta Tachii Electric Cable						
B-15	Aomi	SANKYO SEISAKUSHO									
A-37	Aomi	Sanmatsu									
A-23	Aomi	Sanmei Mechanical	W1-53	West	Team Cross FA						
W1-56	West	SANYO DENKI	A-07	Aomi	※FA Products						
W4-24	West	SANYU INDUSTRIES	A-07	Aomi	※Japan SupportSystem						
W1-27	West	Satech Safety Technology	A-07	Aomi	※Office FA.com						
W2-22	West	Schmalz	A-07	Aomi	※Robotcom						
W3-21	West	Schmersal Japan	A-40	Aomi	Techman Robot						
W1-03	West	SCHUNK Intec	W1-32	West	Technohands						
A-38	Aomi	Seibu Electric & Machinery	W4-40	West	THE 8TH ROBOT AWARD						
W1-13	West	SENSHU ELECTRIC	A-65	Aomi	The Japan Institute of Material Handling						
W1-13	West	※NBS									
B-07	Aomi	SERVO-ROBOT JAPAN	W1-70.71	West	THE NIKKAN KOGYO SHIMBUN						
A-58	Aomi	Shanghai Jiuxie Machinery	S3-39	South	The Robotics Society of Japan						
S3-28	South	Shenzhen EAI Technology	W2-25	West	THK						
B-02	Aomi	Shenzhen Han's Motion Technology	W4-04	West	TNK Sanwa Precision						
W1-14	West	SHENZHEN YUEJIANG TECHNOLOGY	A-55	Aomi	TOBII TECHNOLOGY						
			W2-21	West	TODAD ENERGY						
W1-14	West	※ECOGUARD MACHINE PROTECTION	W1-07	West	Tohoku University FingerVision Project						
W1-14	West	※JIANGSU HAUTO NC TECHNOLOGY	S3-41	South	Tohoku University S.Tanaka Laboratory						
S3-53	South	Shibaura Institute of Technology	S4-19	South	Tohoku University Tadokoro Konyo Tadakuma Laboratory						
W4-30	West	Shimizu Laboratory,Kobe City College of Technology	A-12	Aomi	TOKIWA						
A-43	Aomi	Shinano Kenshi	A-12	Aomi	※TOKIWA System Technologies						
W2-20	West	SHINKO ENGINEERING RESEARCH	W3-25	West	Tokyo Measuring Instruments Laboratory						
S3-38	South	Shinkoh electronics	S3-55	South	Tokyo Metropolitan Industrial Technology Research Institute						
S3-49	South	Shinyou Reinetsu Industry	S3-52	South	Tokyo Robot Collection / Tokyo Metropolitan Government						
W4-11	West	SHOYOSEIKI	W1-39	West	Tokyo Robotics						
W3-29	West	Siemens Digital Industries Software	S3-13	South	Tokyo University of Science						
A-16	Aomi	SINTOKOGIO	A-41	Aomi	TOPY INDUSTRIES						
W2-44	West	Small and Medium-sized Organization Overseas Expansion Consultation Corner	S2-02	South	TOSHIBA MACHINE						
			W4-10	West	TOWA CORPORATION						
W1-35	West	SMC	W1-42	West	Toyama New Industry Organization						
A-25	Aomi	SMFL Rental	W1-42	West	※KOIZUMI						
W2-32	West	SOFTRONICS	W1-42	West	※OYABE SEIKI						
S3-34	South	SoLARIS	W1-42	West	※TOYAMA ROBOT RESEARCH MEETING						
S3-34	South	※Chuo University Nakamura Lab.	W1-42	West	※UNION TECHNO						
A-28	Aomi	SOLIDWORKS JAPAN	W1-38	West	Toyota City						
W3-39	West	SOLOMON Technology	S3-18	South	TOYOTA MOTOR						
W2-16	West	SPATIAL									
W3-42	West	SPI ENGINEERING									

Visitor Statistics

*Parentheses are of 2017

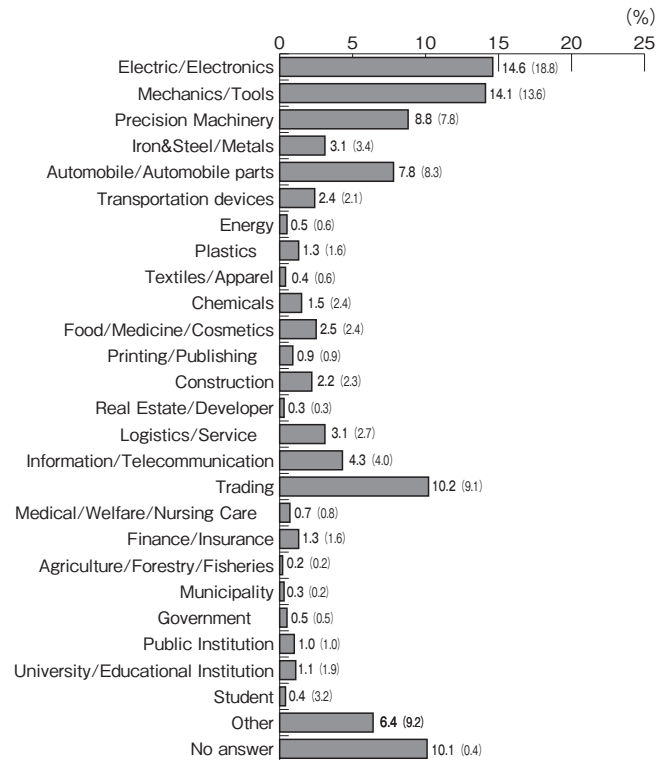
Q.1

Which robot Zone are you interested in?



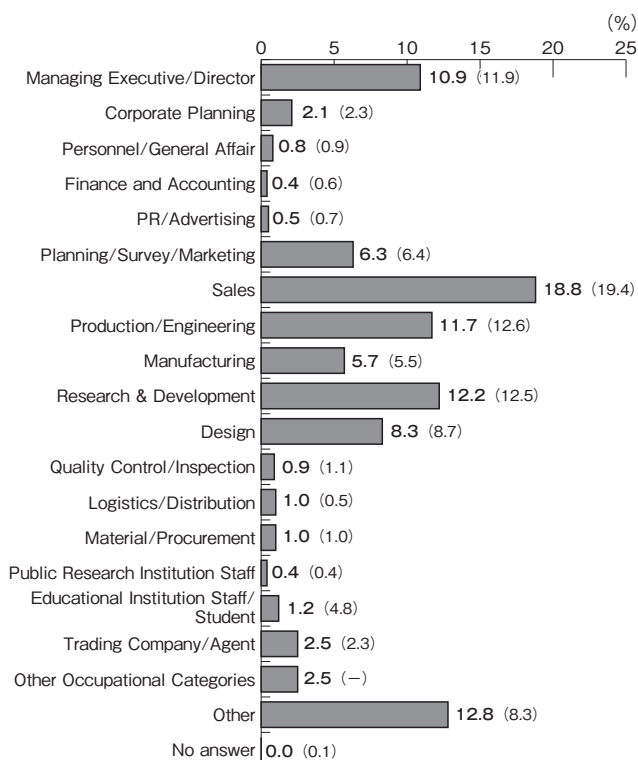
Q.2

Which industry are you involved in?



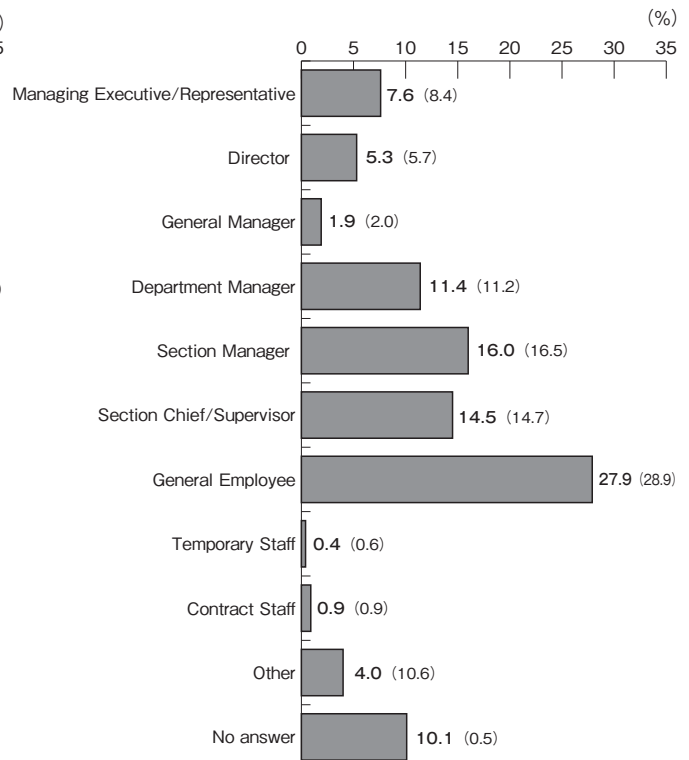
Q.3

What is your occupation?



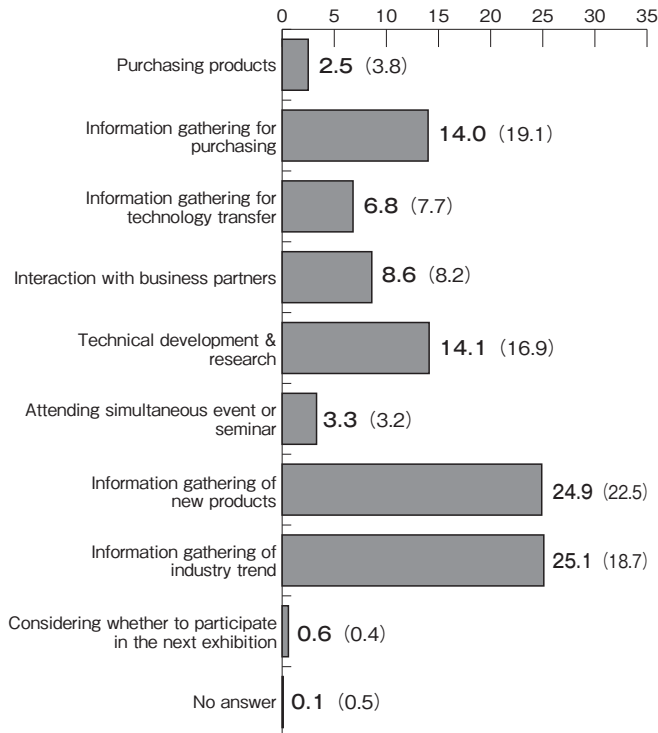
Q.4

What is your title?



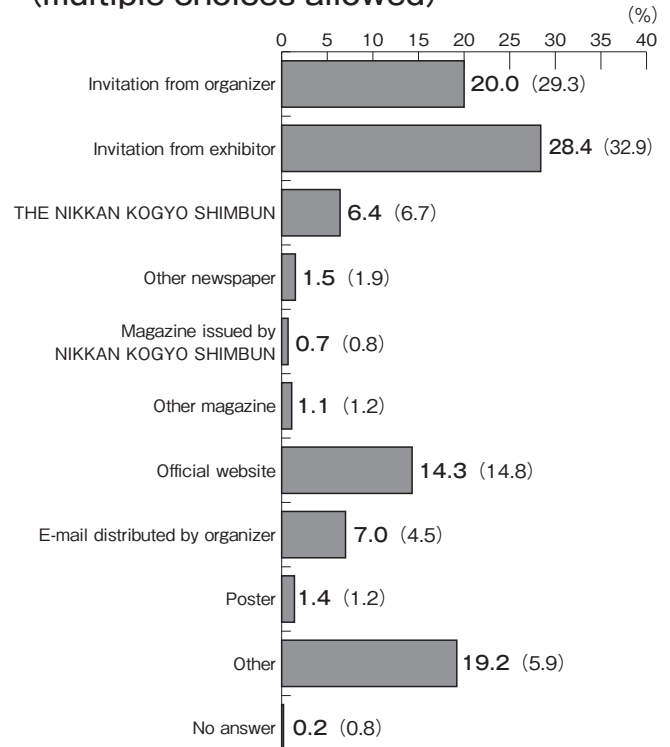
Q.5

What is your purpose of the visit to this exhibition? (multiple choices allowed) (%)



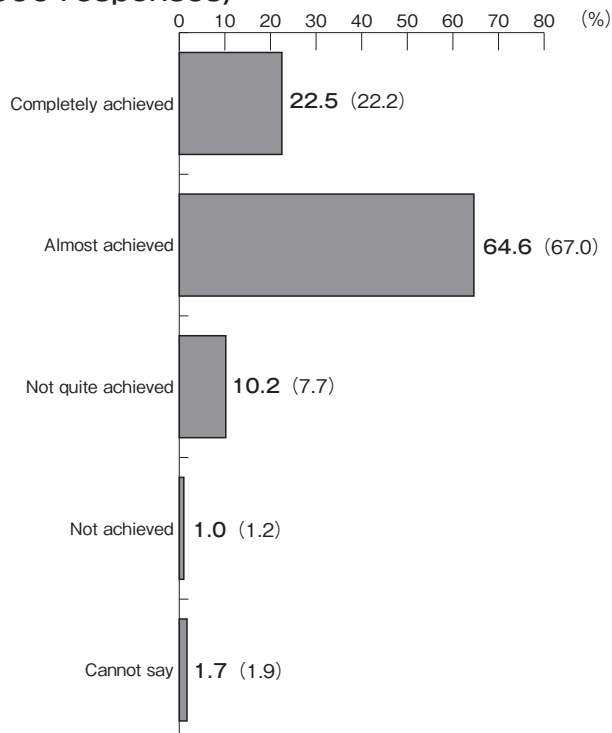
Q.6

How did you know this exhibition? (multiple choices allowed)



Q.7

Were you able to achieve your purpose of visit? (600 responses)



Major Public Relations

Transport Advertising



Shinagawa Station (JR), AD Vision
(Dec. 9-15, 2019)



YURIKAMOME, AD Vision
(Nov. 25-Dec. 15, 2019)



JR Yamanote Line /
Tokyo Metro all lines, AD Vision
(Dec. 9-15, 2019)

WEB Banner Advertising

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[Yahoo] Asahi Shimbun Digital
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MarkLines etc.

Press Presentation

Nov. 19 (Tue.), 2019
@Tokyo Prince Hotel



Major Media Visits Media Visits 216

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ARD German TV Network
Bloomberg
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european pressphoto agency
Fuji Television
Financial Times
Global Press
Ihlas News Agency
KSPN
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Nikkei Shimbun
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[Newspapers]

NIKKAN KOGYO SHIMBUN
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FNN-news.com
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etc.

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2019 IREX Day! Dec. 20th, 2019

11

2019国際ロボット展

IREX[®] Day!

2019 INTERNATIONAL ROBOT EXHIBITION

DAY 3 12/20 金 December, 2019

業界トレンド

Industry trends

産業用ロボット

Industrial robots

導入広がる協働ロボット

Deploying Collaborative Robots in More and More Areas

人への代わりとする産業用ロボットと人との共同作業を行う産業用ロボットは必要とする場が増えて、導入のしやすさから導入への期待が高まっている。こうしたニーズに応えるようロボット企業は協働ロボットや、旧ロボットの活用したアプリケーション(両端)の開発などを行い、両端での作業や柔軟な作業を容易に人々の作業の負担を減らしている。人々の作業の負担や作業が可能な協働ロボットは、工場だけでなく、あらゆる環境で活用することになる。

レイトアウト変えずに自動化へ

協働ロボットは人との接触を防止し自衛目的とする安全機能から搭載し、稼働でなくともなく、

ITオペレーションにも対応できる。一方、安全への配慮から従来の産業用ロボットと比べ稼働速度が遅く、「生産性の低下を懸念するユーザーもいる」(メーカー側)との指摘がある。

可搬重量は14~35kgにも対応し、直交な産業用ロボットの品名と区別する必要がある。安全機能の不備な協働ロボットの稼働を止めた生産現場の仕組に相対する協働ロボットの導入にも注意を払う。

(中ページ23)

Achieving automation without changing workspace layouts

Collaborative robots incorporate safety features to immediately stop when sensing contact with humans. As such, they can be installed in small spaces without fencing. However, they operate slower than industrial robots in the interest of safety. One manufacturing company executive noted that "users are concerned about low productivity."

FANUC offers a wide assortment of collaborative robots with load capacities of 4 to 35 kilograms. By leveraging the robot's force-sense deployment feature, the company is making strides in proposing solutions using collaborative robots to help reduce the size of production facilities.

(Continued on next page)

協働ロボットは人との接触を防止し、安全なワークスペースを維持し(アーク)
FANUC provides safety-sensing products to help create new collaborative robots.

Kawasaki
Powering your potential

Simple and friendly
—ロボットをもっと身近に、もっとシンプルに—

人への代わりとする産業用ロボットと人との共同作業を行う産業用ロボットは必要とする場が増えて、導入のしやすさから導入への期待が高まっている。

こうしたニーズに応えるようロボット企業は協働ロボットや、旧ロボットの活用したアプリケーション(両端)の開発などを行い、両端での作業や柔軟な作業を容易に人々の作業の負担を減らしている。

人々の作業の負担や作業が可能な協働ロボットは、工場だけでなく、あらゆる環境で活用することになる。

協働ロボットは人との接触を防止し、安全なワークスペースを維持し(アーク)
FANUC provides safety-sensing products to help create new collaborative robots.

川崎重工業株式会社

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2019 IREX Daily Dec.19(Mon), 2019

11

2019国際ロボット展

®

Integrate! EX

INTERNATIONAL ROBOT EXHIBITION

DAY 2 12/19(木) December, 19TH

今回、両ホールに新設された「ロボットシステムインテグレーション」は、従来の露店形式の国際ロボット展を継承するデジタルインテグレーションから、その領域を超えて、最先端ロボット工場の中に併設する会場構成となっている。また、日本のロボット産業の発展を促すために、アジア・オセアニアの国々を招きとぎとする企業を生まれていく。会場ではこうした世界的なモビリティ産業の発展に欠かせない4つの重要な注目点があり、

The Robot System Integrator Zone has been newly set up in Aichi Hall. Some companies are going beyond system integration for solving working challenges and building optimal systems, and aiming to establish state-of-the-art factories. Some are planning to take the leap to become solution providers based on their unique robot control technologies. We recommend visitors to attention to these key proposals that will be vital for building manufacturing and logistics systems in the future.

両2ホール W2-25

The key aspect of their solution is implementing the digital tech technology created after thoroughly simulating optimization of the production lines and processes in virtual reality. They hope to maximize the effect as a minimum investment by enhancing AI and digital mapping technology, which are easy to collect real data. The ambient environment has several goals, which according to Grow is to distribute innovative production lines that are resistant to external changes around the world and grow the system integrator sector into a source of longer-tenure jobs. In January 2021, consortium member ROBOTCON and FACOM will open its new factory in Maharashtra, India for Production Protection. The total spend is in mass producing packaged robot systems and is also running projects in Vietnam and Myanmar.

スマートファクトリーの未来を導く開拓者たち

Pioneers of the future of smart factories

コンソーシアムでデジタルツインを実践

Consortium that implements Digital Twin Technology

Team Cross FA

「日本ではまだデジタルファクトリーエンジニアリングを広く広くに活用できる人は、工場マネージャーと一貫した経営者によるコンソーシアム Team Cross があり、その中でデジタルツイン、集約化されたデータ、高度な技術、新技術開発によるスマートファクトリーとしてを創る」とこの連合体で発言している。また、なかには、先進的なデジタルファクトリーをモデルとして構築したシミュレーションを現実世界で行い、その成果の活用で新製品のデジタル化、技術の改良など、

フルスケールを全面的にデジタル化マップを構築と、最も小規模な規模から始めることもできる。目指すのは「高度化して集約化されたモノづくり」を世界に展開し、システム・インテグレーションを得意分野と位置づけ、さらに、大規模な工場への活用は、コンソーシアムのなかでプラットフォーム・エコノミーの構築を期待して打ちける新工場となる。また、このシステム・エコノミーのプロジェクトが加速している。

"We are on a mission to spread connected engineering, which was invented in Japan," says Shinya Arima, who heads Team Cross FA, a consortium that works together to assist with factory identification processes. Arima is representative director of Facom (Tokyo, Japan), one of the consortium's organizers.

Team Cross FA is a public-private, cross-industry factory identification. Their comprehensive services include group design, manufacturing optimization, linking on-site and process-oriented logistics, real-time of robots, image processing and integration of control

Team Cross FAでデジタルツインを実践する
Team Cross FA works to realize digital twin technology.

新製品をデジタル化し、工場とデータセンター間の連携を
新製品、包括的な製造工程と工場、工場間の

中小企業のロボット産業参入を支援!!

<https://www.iri-tokyo.jp/>

即座に技 研

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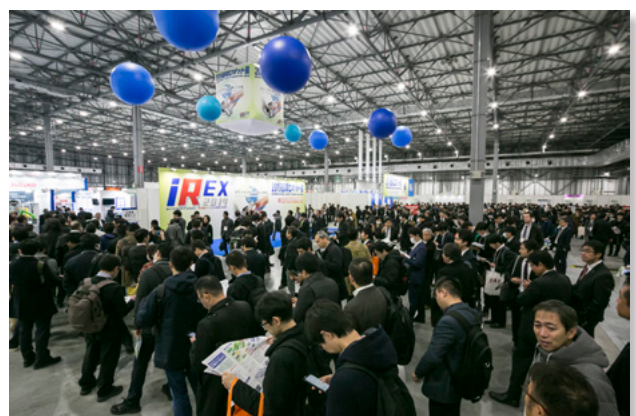
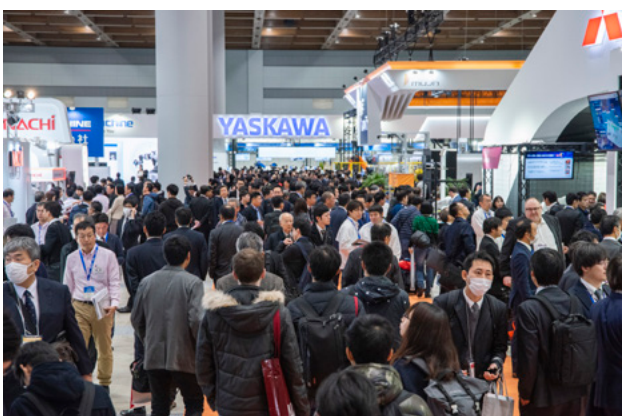
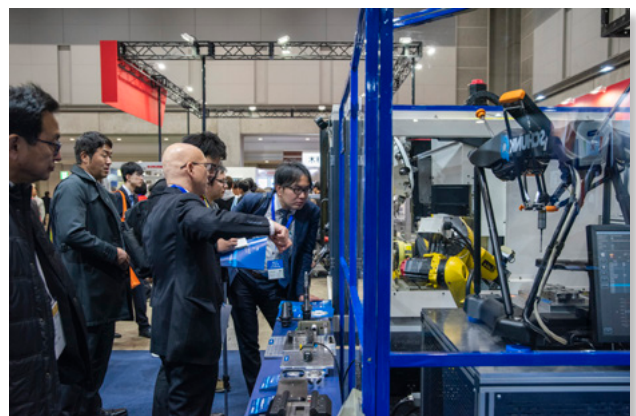
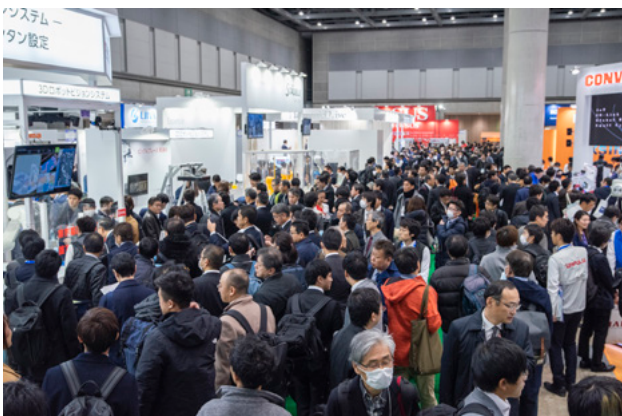
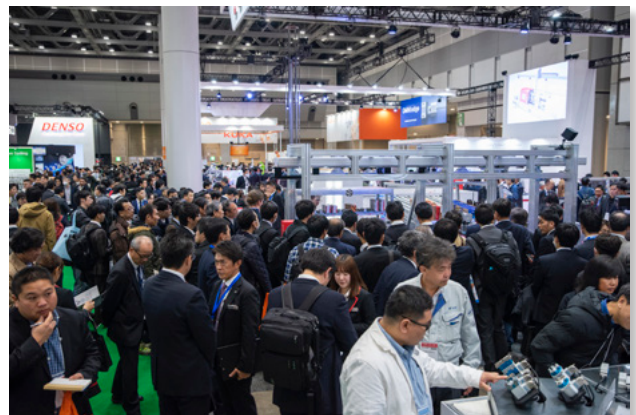
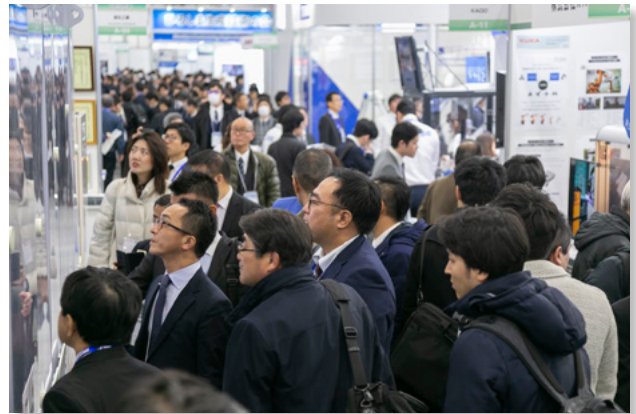
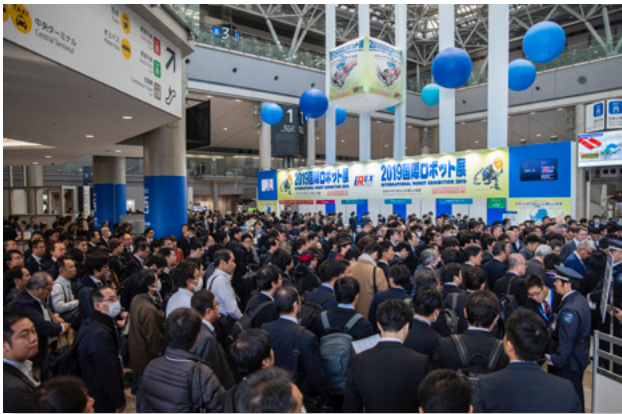
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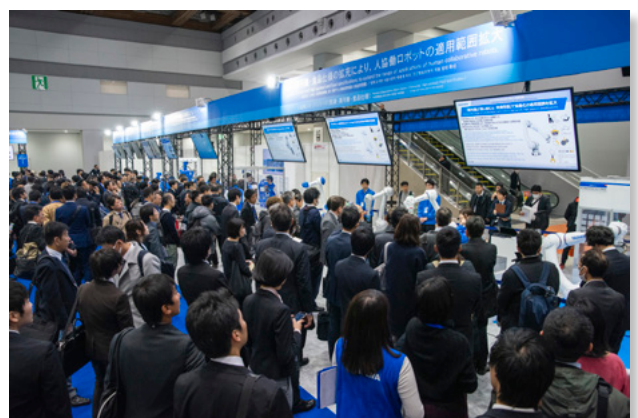
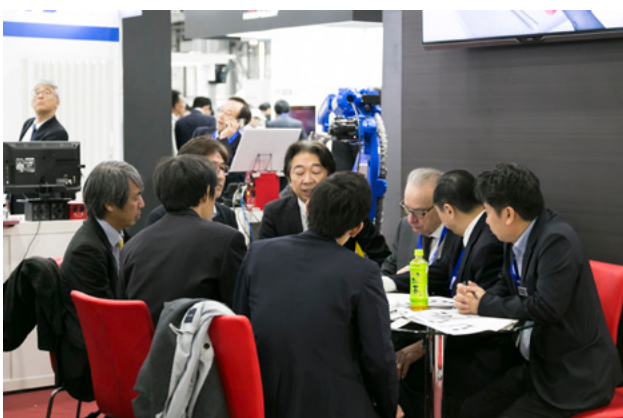
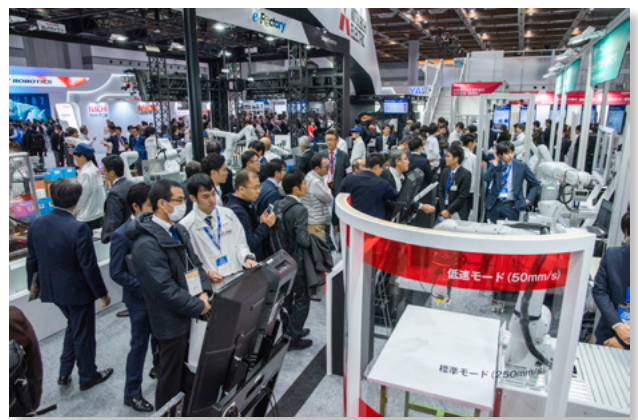
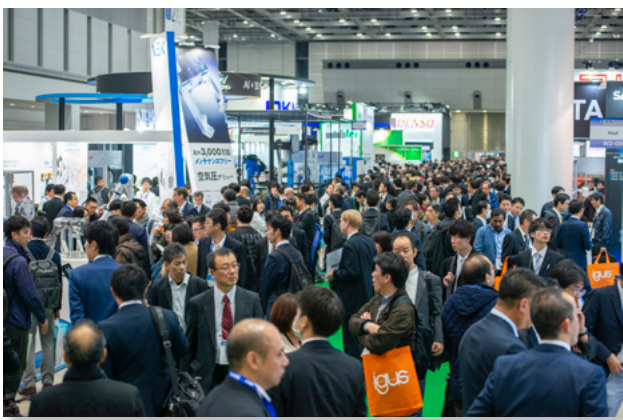
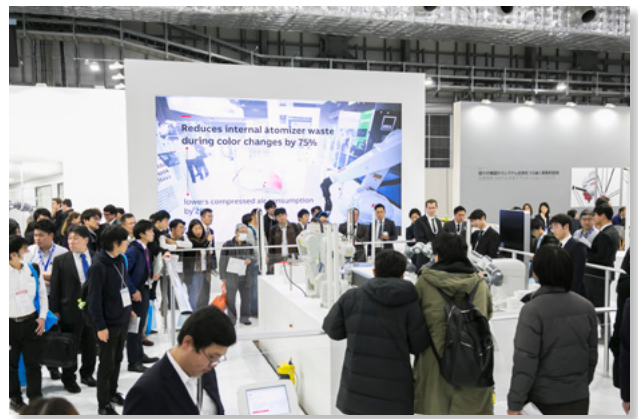
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■ Photographs





Next Show Schedule

iREX2021

(INTERNATIONAL ROBOT EXHIBITION 2021)

- Early December, 2021
- Tokyo Big Sight East Halls

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