

GISHW活動と国際標準化に向けた動き



Global Initiative for Safety, Health & Well-being @EXPO2025 and Beyond



Global Initiative for Safety, Health & Well-being at EXPO2025 and Beyond
Executive Committee, Chairperson



Global Coalition for Safety and Health at Work
Task Group on Vision Zero at the Enterprise Level, Member



IEC/SC121A/WG3(制御機器・制御システム)
Expert Member



日本認証株式会社
代表取締役会長



IDEC株式会社 名誉顧問
Chief Safety, Health and Well-being Officer



日時: 2024年9月9日



(一社)セーフティグローバル推進機構 (IGSAP)
理事(兼)エグゼクティブ委員会委員長
藤田 俊弘 (工学博士)

内容

1) 日本が目指す新しい時代の安全・安心・ウェルビーイングと生産性向上の考え方

- 1980年代からの世界の安全国際標準潮流について
- 2015年日本発提唱の協調安全とポジティブ安全とは？

国際標準の潮流
&
協調安全の提唱

2) 国際的な仲間づくりと海外機関と連携推進

- SIAS2024フィンランド国際会議での協調安全の浸透
- Vision Zero Summit Japan 2022の成功による国際連携ネットワークの拡大

国際的仲間づくり
&
世界連携の重要性

3) 日本が安全・安心・ウェルビーイングと生産性向上のリーダー国となるビジョン

- 国際会議と国際展示会の日本定期開催による国際標準化リーダーシップ
- EXPO2025での2000人の海外専門家との世界初イベントによるトリガー
- 経済産業省・日本規格協会・工業会 & 国際機関・海外有識者との連携継続

EXPO2025活用の
アクションと
ビジョン

安全の考え方の20年周期での変化と 日本から提唱している協調安全（ロボットをライオンで示す）

1970

1980

1990

2000

2010

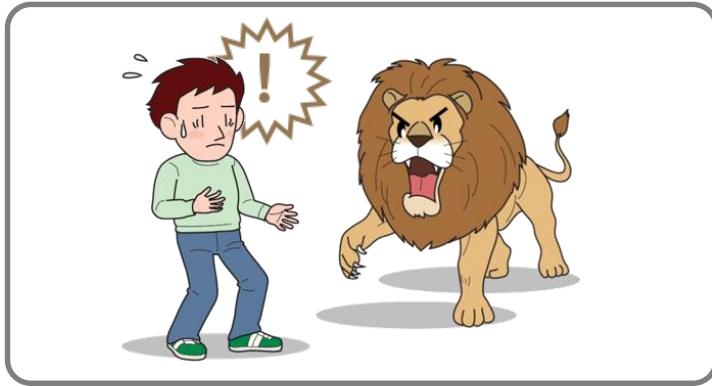
2020

2030

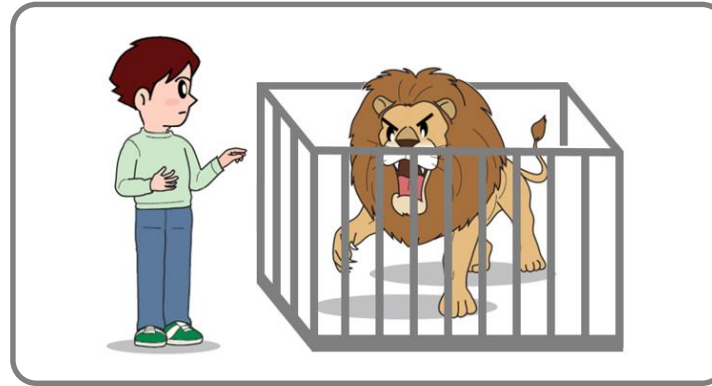
Caution!

Safety

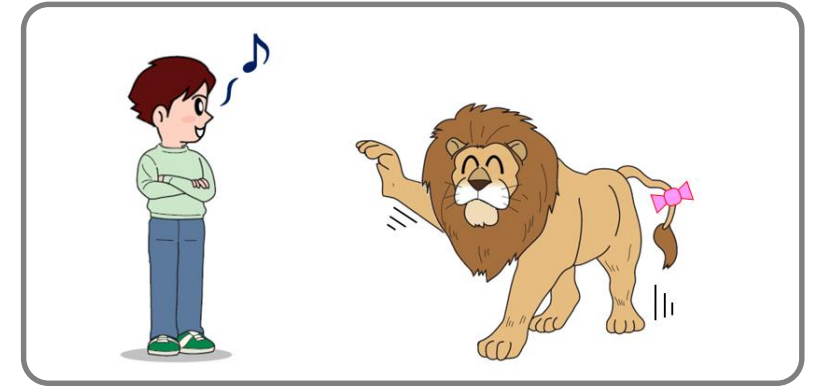
Safety + Well-being



Safety 0.0



Safety 1.0



Safety 2.0

安全の考え方の20年周期での変化と 日本から提唱している協調安全（ロボットをライオンで示す）

1970

1980

1990

2000

2010

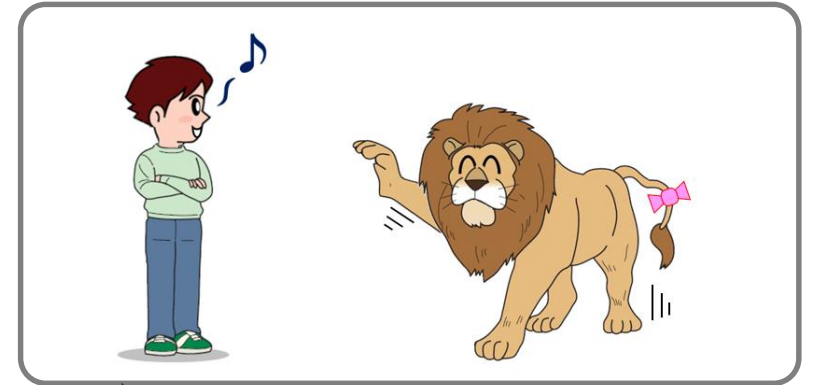
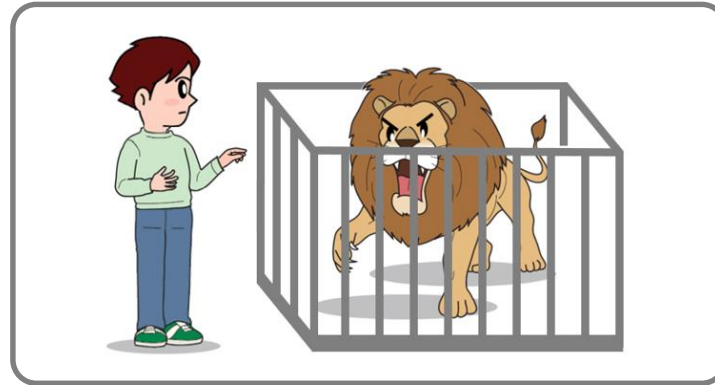
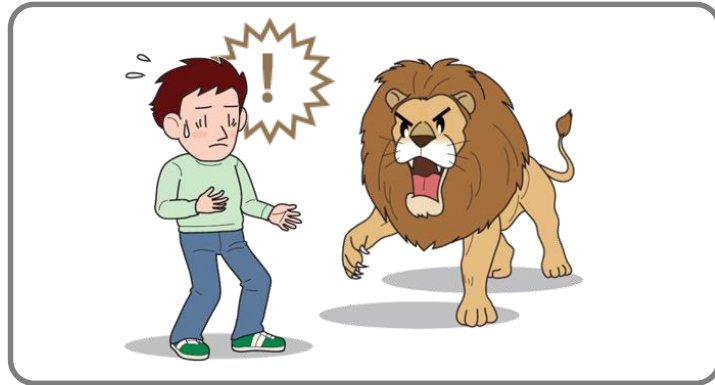
2020

2030

Caution!

Safety

Safety + Well-being



Safety 0.0

Safety 1.0

Safety 2.0

欧州主導

日本提唱・主導



安全の考え方の20年周期での変化と 日本から提唱している協調安全（ロボットをライオンで示す）

1970

1980

1990

2000

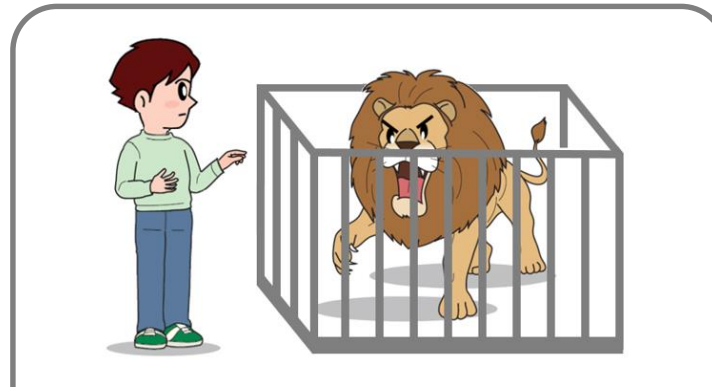
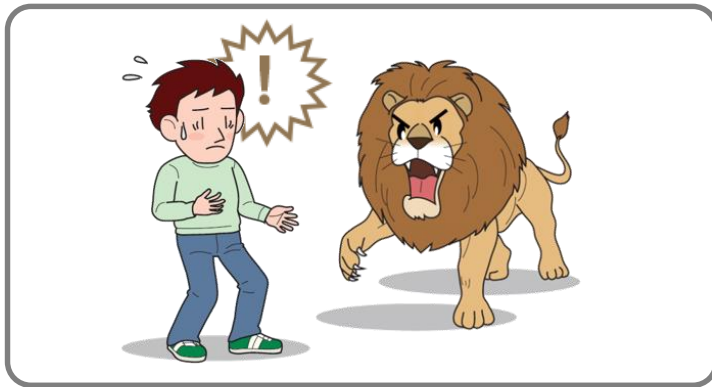
2010

2020

2030

Caution!

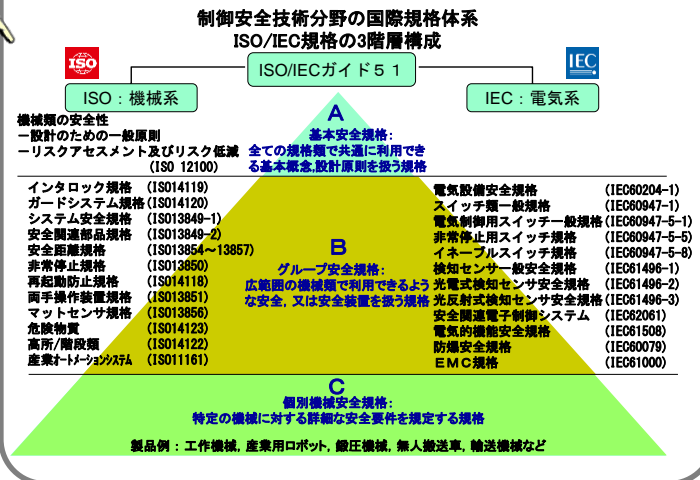
Safety



Safety 0.0

Safety 1.0

欧州標準の黒船来航



安全の考え方の20年周期での変化と 日本から提唱している協調安全（ロボットをライオンで示す）

1970

1980

1990

2000

2010

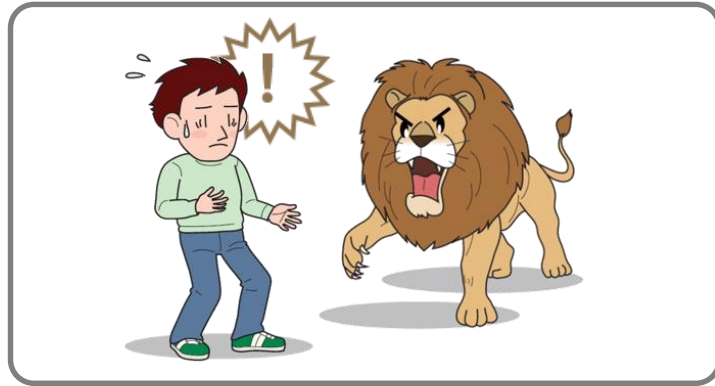
2020

2030

Caution!

Safety

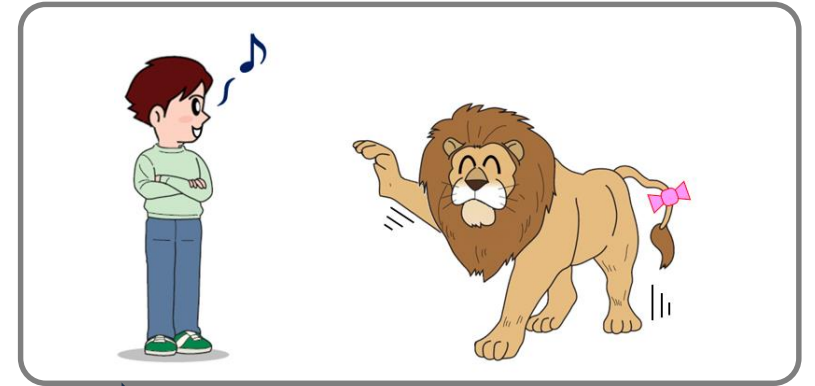
Safety + Well-being



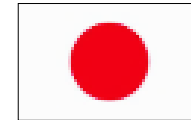
Safety 0.0



Safety 1.0



Safety 2.0



2020年に日本発IEC白書
"Safety in the Future"発行。



IEC ACOSから日本提唱の国際規格「IEC GUIDE 127」が日本主導で2025年に発行予定。



安全の考え方の20年周期での変化と 日本から提唱している協調安全（ロボットをライオンで示す）

1970

1980

1990

2000

2010

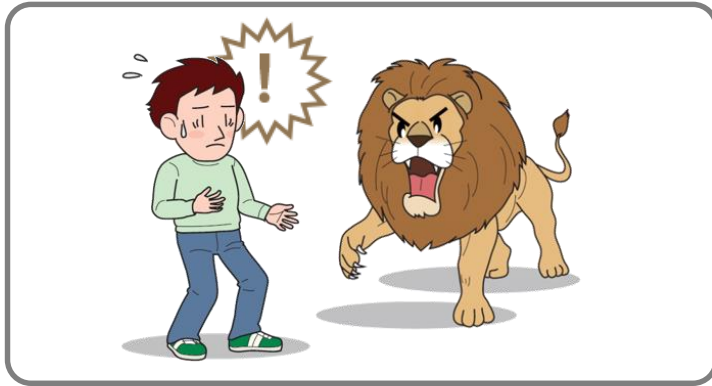
2020

2030

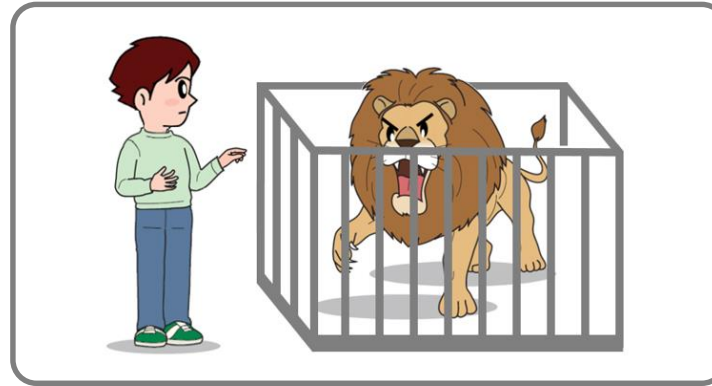
Caution!

Safety

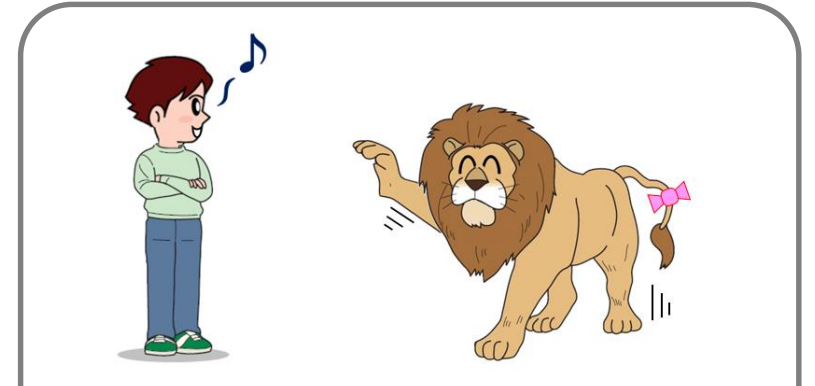
Safety + Well-being



Safety 0.0

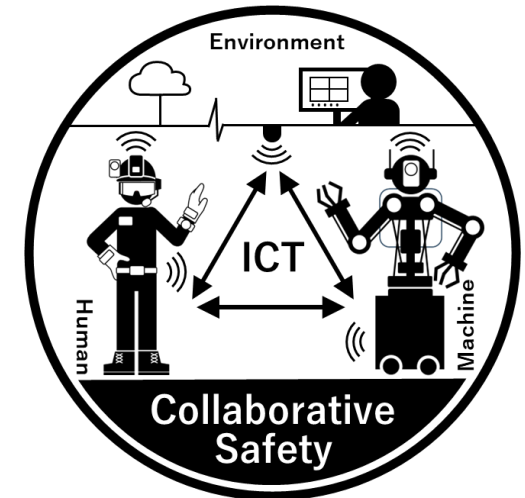


Safety 1.0

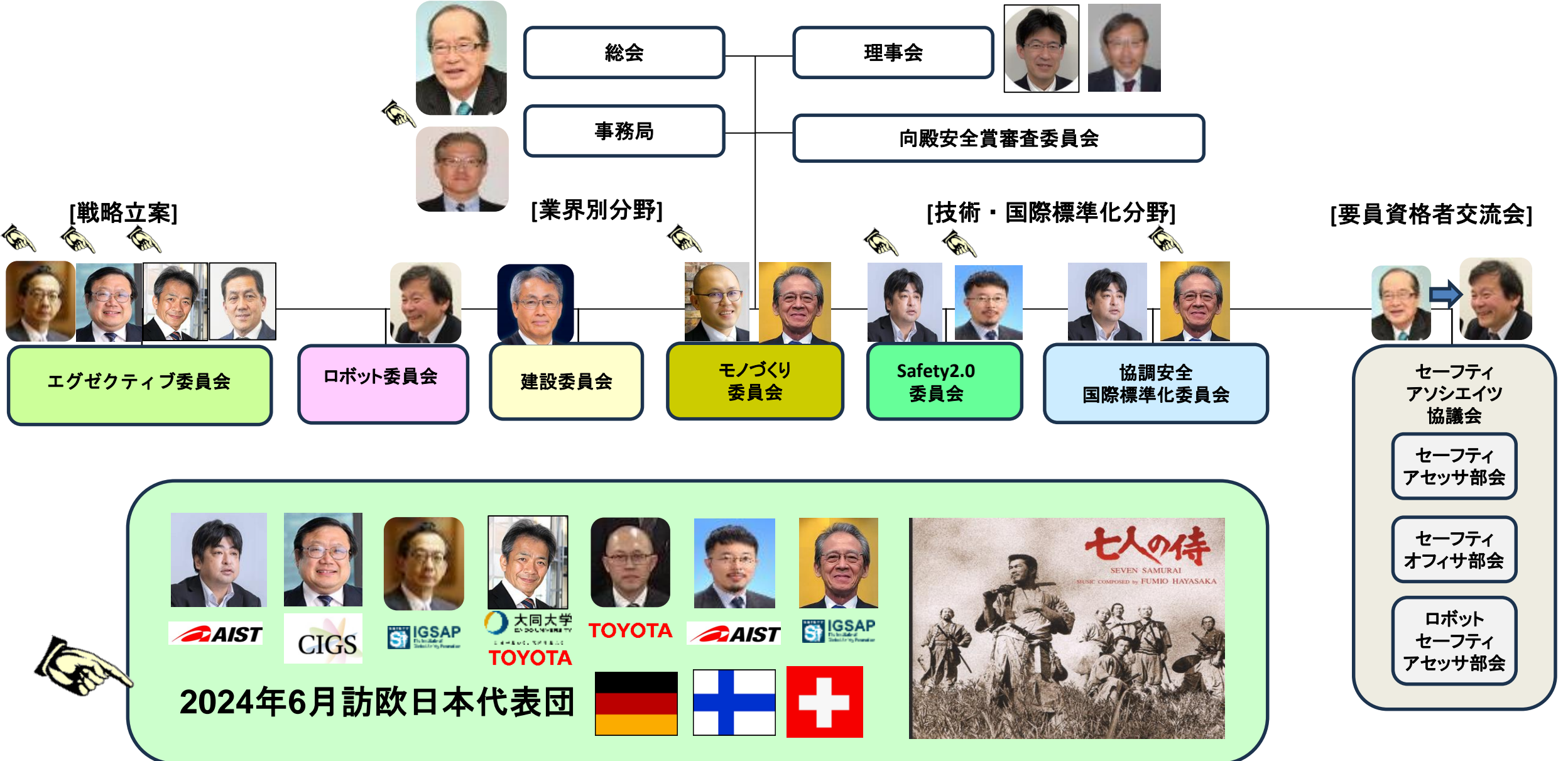


Safety 2.0

ICT技術を使って、リスク情報をリアルタイムで共有して、協調させることにより安全確保する



IGSAP委員会構成と2024年訪欧日本代表団



International Conference on the Safety of Industrial Automated Systems – SIAS 2024

12-13, June 2024 Tampere, Finland

世界で唯一の安全技術の国際会議
6年ぶりにリアルで開催!!



Safety of Industrial Automated Systems – SIAS 2024, 12. – 13. June 2024, Tampere, Finland



SAFETY OF INDUSTRIAL AUTOMATED SYSTEMS – SIAS 2024
12. - 13. JUNE 2024, @ HOTEL ILVES, TAMPERE, FINLAND

Dear Colleagues
It is my pleasure to invite you to Tampere, Finland to participate in the Safety of Industrial Automated Systems – SIAS 2024 – Conference. The conference was previously held in Montreal, Soers, Tampere, Chicago, Nancy and Tokyo. Tampere is a technology-oriented city and is home to, among others, Tampere University, research units of VTT Technical Research Centre of Finland, Forum for Intelligent Machines and various industrial facilities that apply automation and mobile machines. Technology has also been very important in the city's history. Electrical light lit up first times in Tampere already in 1882 – first in Nordic countries and fifth in Europe. Electric lights also provided a new technology to improve fire safety by replacing the gas light. Since then, several innovations have been developed and applied at Tampere. The conference venue, Hotel Ilves, is located in the Tampere city centre.

- Timo Mäkinen, Chair of the NOC

IMPORTANT DATES
- Call for papers August 2023
- Submission of abstracts December 2023
- Notification of acceptance March 2024
- Submission of full papers April 2024
- Early registration April 2024
- Conference 12.-13. June 2024, at Ilves hotel in Tampere, Finland

SCOPE
Automation has reduced the frequency of man-machine physical interactions; however, it has increased the complexity of human interventions. Therefore, it is not always evident that when the degree of automation increases, the number of accidents decreases. Accidents often occur during maintenance, troubleshooting and repairing and usually because the machine starts up unexpectedly. Better understanding about these conditions of man-machine interface as well as development of methods, means and tools to control them needs to be considered. This conference takes a close look at research and development in industrial from safety viewpoint. The conference will be of interest to work systems and users, designers and occupational health & safety experts interested in the general theme of Safety of Industrial Automated Systems. The planned topics describe a non-exhaustive list of suggested themes. Other topics related to the scope will be considered. Texts, posters and oral presentations will be in English.

PAPER SUBMISSION
The abstracts written in English should contain title, authors, affiliations, address and email address of the corresponding author. Appropriate length is 500-1000 words without any figures. Submission of all papers and abstracts is handled via EasyChair. The Scientific Committee will select the presentations on the basis of the abstracts. The presenter will be asked to provide an article of max. 6 pages to be published in the proceedings of the conference. The proceedings will carry an ISSN number and the copyrights are held by the Finnish Society of Automation. The proceedings will be available as Finnish Society of Automation website.

SCIENTIFIC COMMITTEE
- Tetsuro Sato, INCSG, Japan
- Jean-Christophe Baille, INRS, France
- Damien Bortel-Vienney, FOST, Canada
- Jaroslaw Jaskowski, CIOP-PIB, Poland
- Nicholas Hall, HSE, UK
- Lenn Winkler, INRS, France
- Thomas Blaser, IFA - OGVV, Germany
- Toshihiro Fujita, NECA, Japan
- Yoji Yamada, National Institute of Technology, Tohoku College, Japan
- Yuvraj Chavhan, Polytechnique Montreal, Canada
- Timo Mäkinen, VTT Technical Research Centre of Finland
- Riitta Tuusanen, VTT Technical Research Centre of Finland
- Jouni Kivimäki-Rahvasto, Tampere University, Finland
- Minna Lahti, Tampere University, Finland

NATIONAL PROGRAMME COMMITTEE
- Timo Mäkinen, VTT Technical Research Centre of Finland
- Riitta Tuusanen, VTT Technical Research Centre of Finland
- Marko Vuorio, Finnish Society of Automation, Finland
- Aso Ranjiv-Singhania, Finnish Society of Automation, Finland
- Jouni Kivimäki-Rahvasto, Tampere University, Finland
- Jyrki Laakkarinen, Tampere University, The Robotics Society in Finland
- Ossi Raik, Tampere University of Applied Sciences, Finland
- Anika-Niika Rappoluo, Mettler, Finland
- Aarti Sene, IFMA, Finland

PROPOSED TOPICS
Safety of machinery
- Safety concepts and principles
- Design rules and strategy
- Engineering-economics multidisciplinary in safety research
- Collaboration with autonomous machines
Risk assessment
- Hazard identification, historic experience, mitigation
- Methodologies
Practical applications/experiences
- Accident analysis and investigation
- Economics of safety
Human and organizational factors
- Organizational design, management and leadership
- Socio-technical system approach to automation safety
- Safety culture
Protective devices and systems
- Safety of autonomous machines, robots and cobots
- Intelligent personal protective equipment
Control system designs and evaluations
- AI and safety
- Digital twins
- Cybersecurity
- XI technologies improving safety
Standardization and regulations
- Standardization in the safety of machinery
- Effects of new EU regulations
Functional safety
- SILs and PLs of intelligent devices
- Experience of new functional safety standards

SIAS会議での主たる日本企業等からの講演者の所属

International Conference on the Safety of Industrial Automated Systems(SIAS)

SIAS Hosting Countries: 1999 - 2026

	1999	2001	2003	2005	2007	2010	2012	2015	2018	2021	2024	2026
Venue, Country	Montreal, Canada	Bonn, Germany	Nancy, France	Chicago, USA	Tokyo, Japan	Tampere, Finland	Montreal, Canada	Königswinter, Germany	Nancy, France	Online, Japan	Tampere, Finland	Osaka, Japan

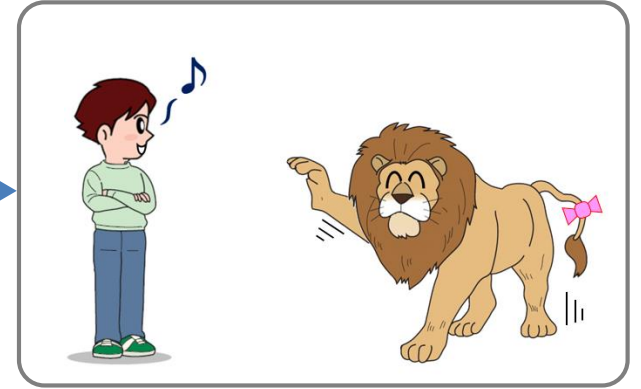
Held Virtually

Safety



Safety 1.0

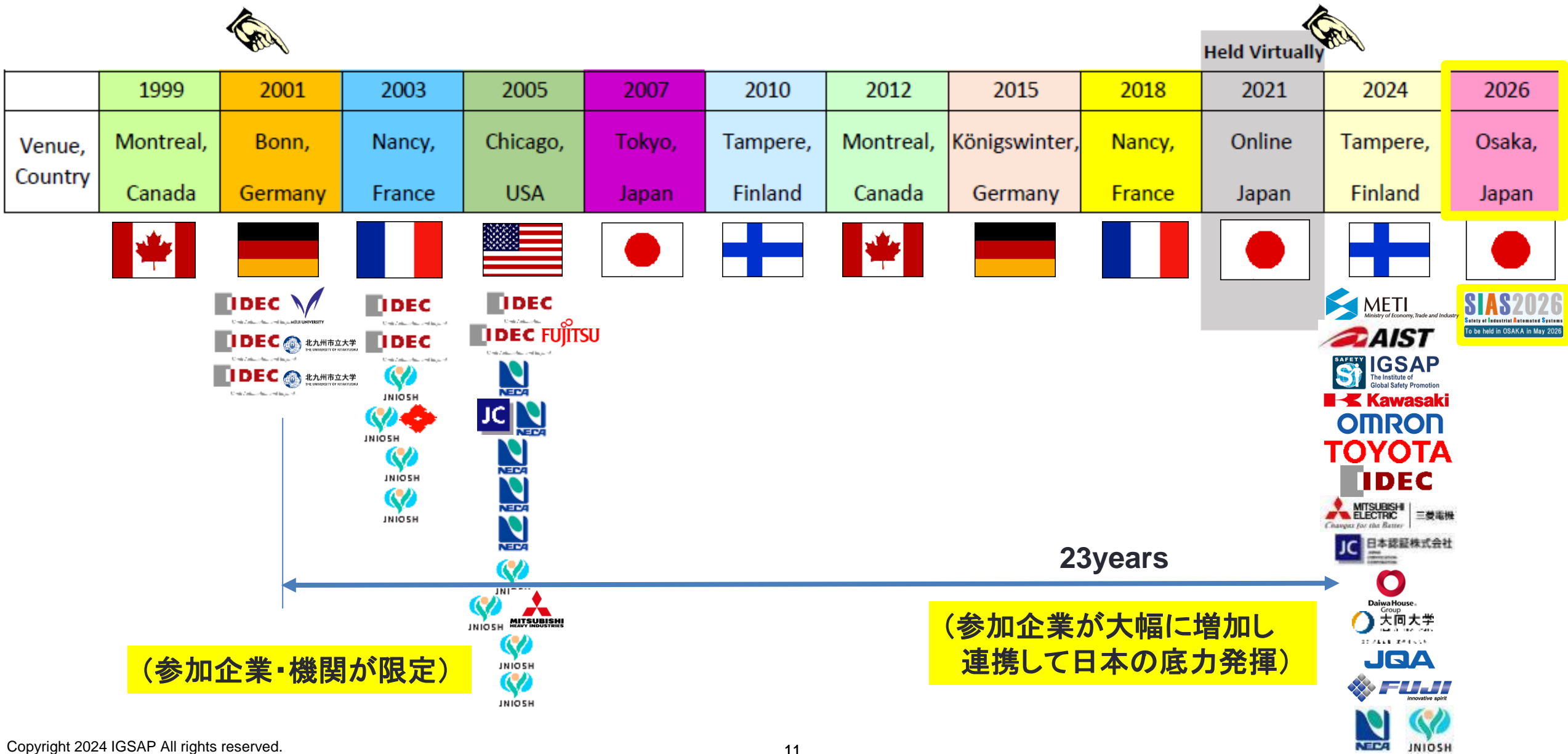
Safety + Well-being



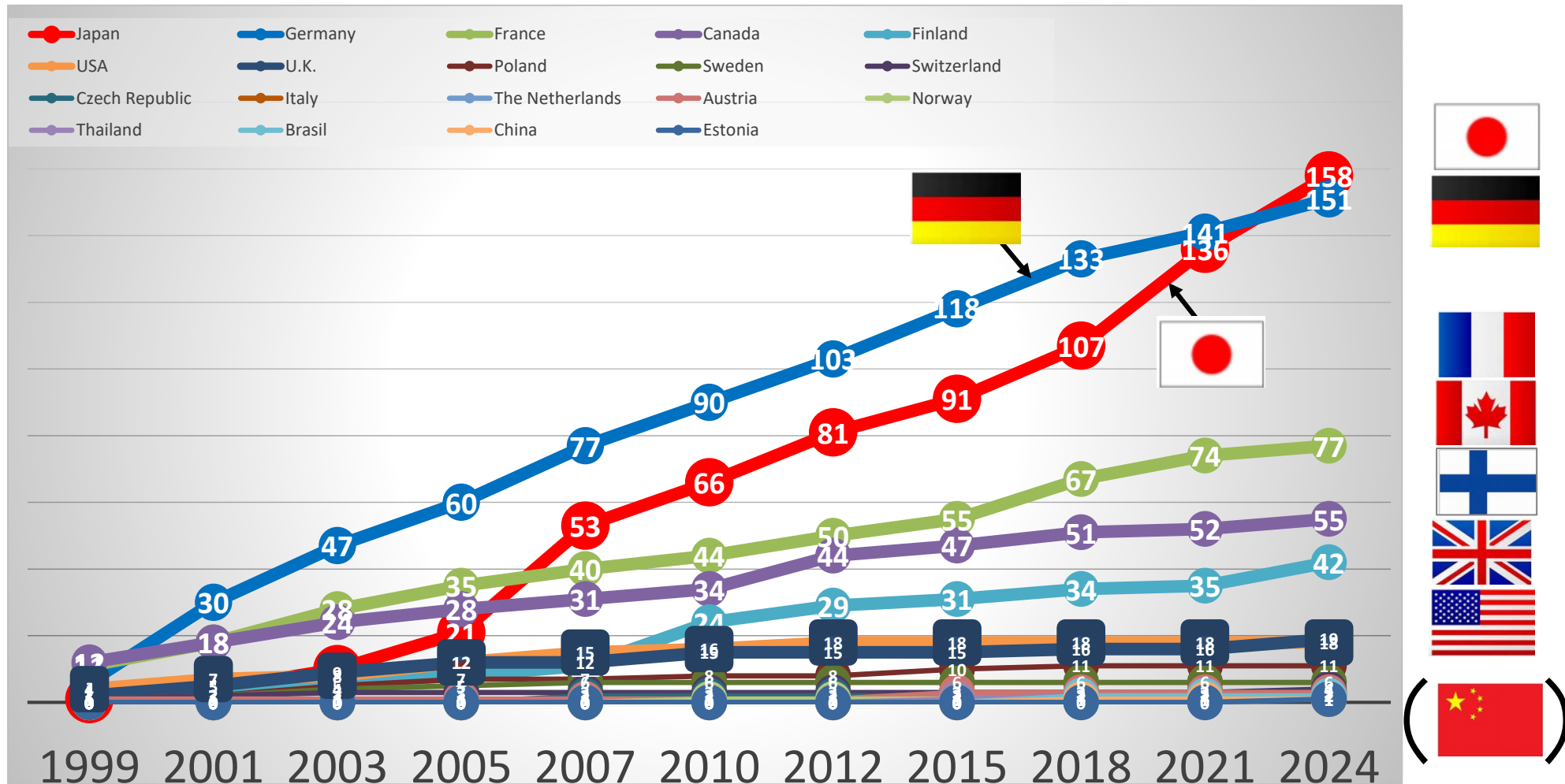
Safety 2.0

International Conference on the Safety of Industrial Automated Systems(SIAS)

SIAS Hosting Countries: 1999 - 2026



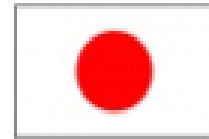
SIAS安全国際会議での各国別累計発表件数推移



2000年代のドイツリードの安全技術力に、2024年には日本が肩を並べる状況を実現、ドイツと連携して世界をリードできる兆候が見える所へきた。

G7

(Group of Seven)



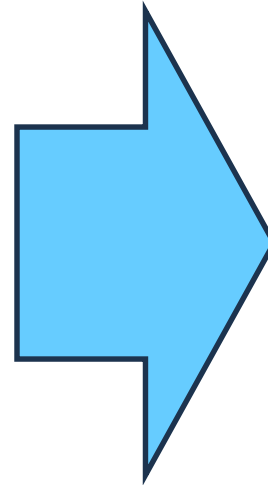
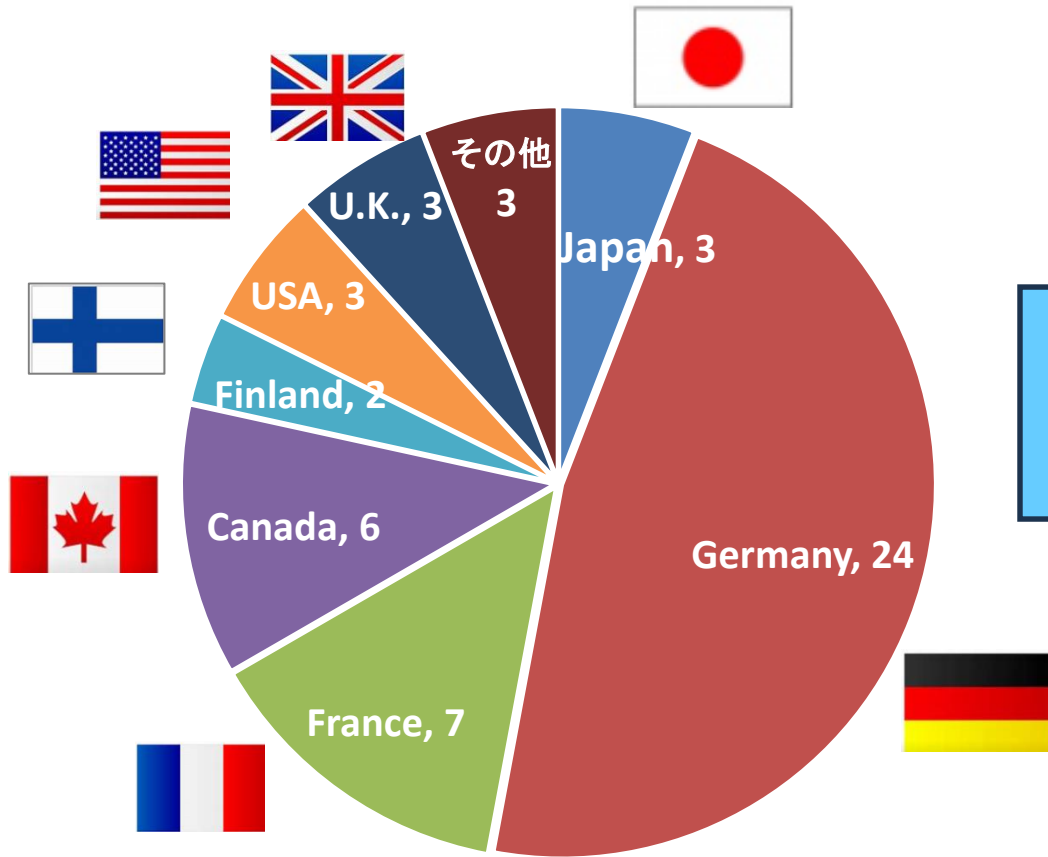
S7

(Safety of Seven)

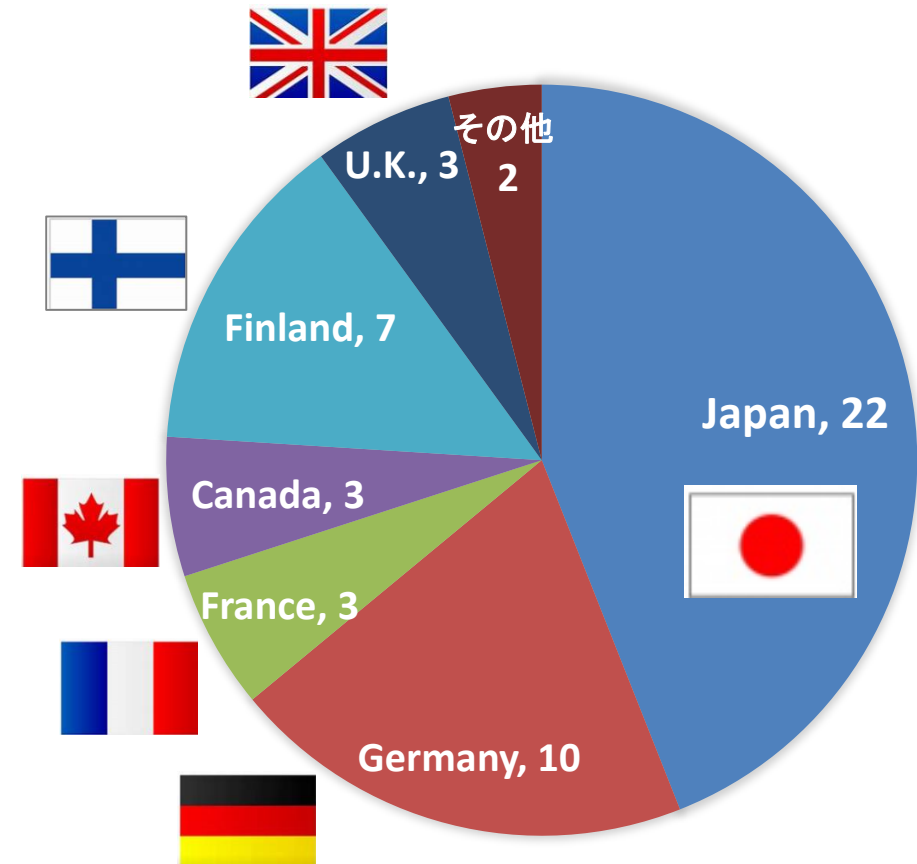


SIAS発表件数国別比較 2001年(Bonn) vs 2024年(Tampere)

2001年 Bonn, Germany

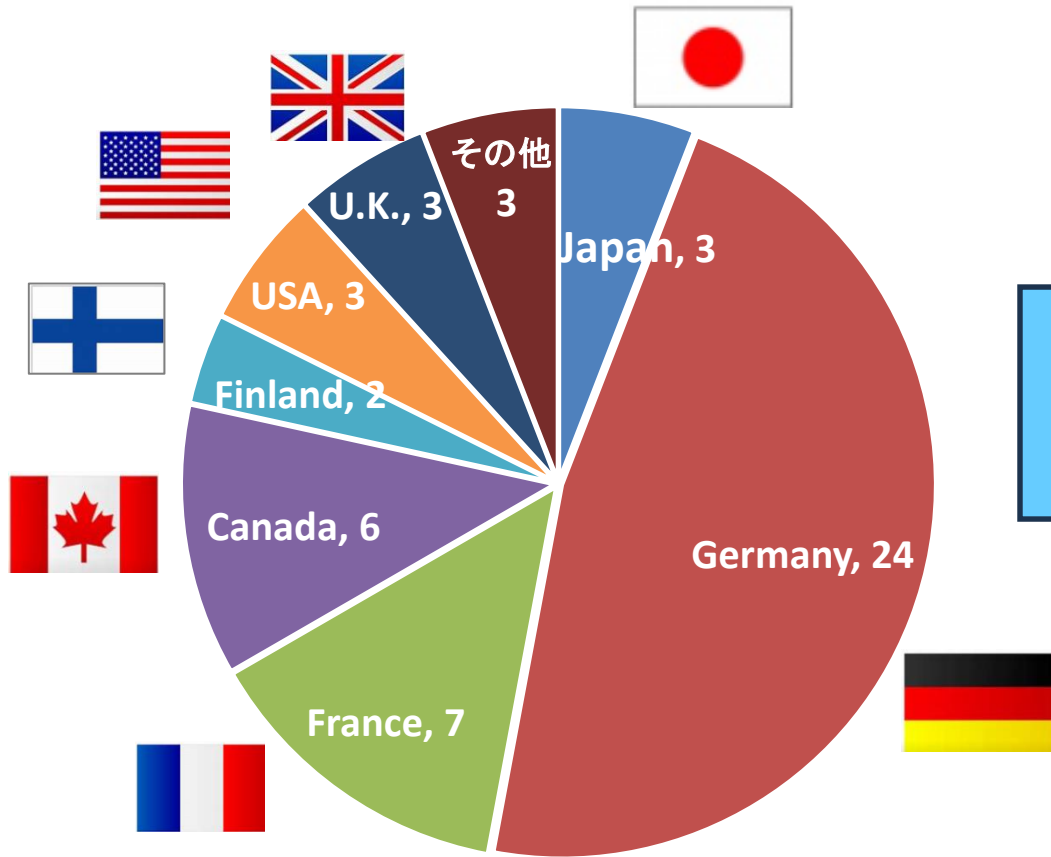


2024年 TAMPERE, FINLAND

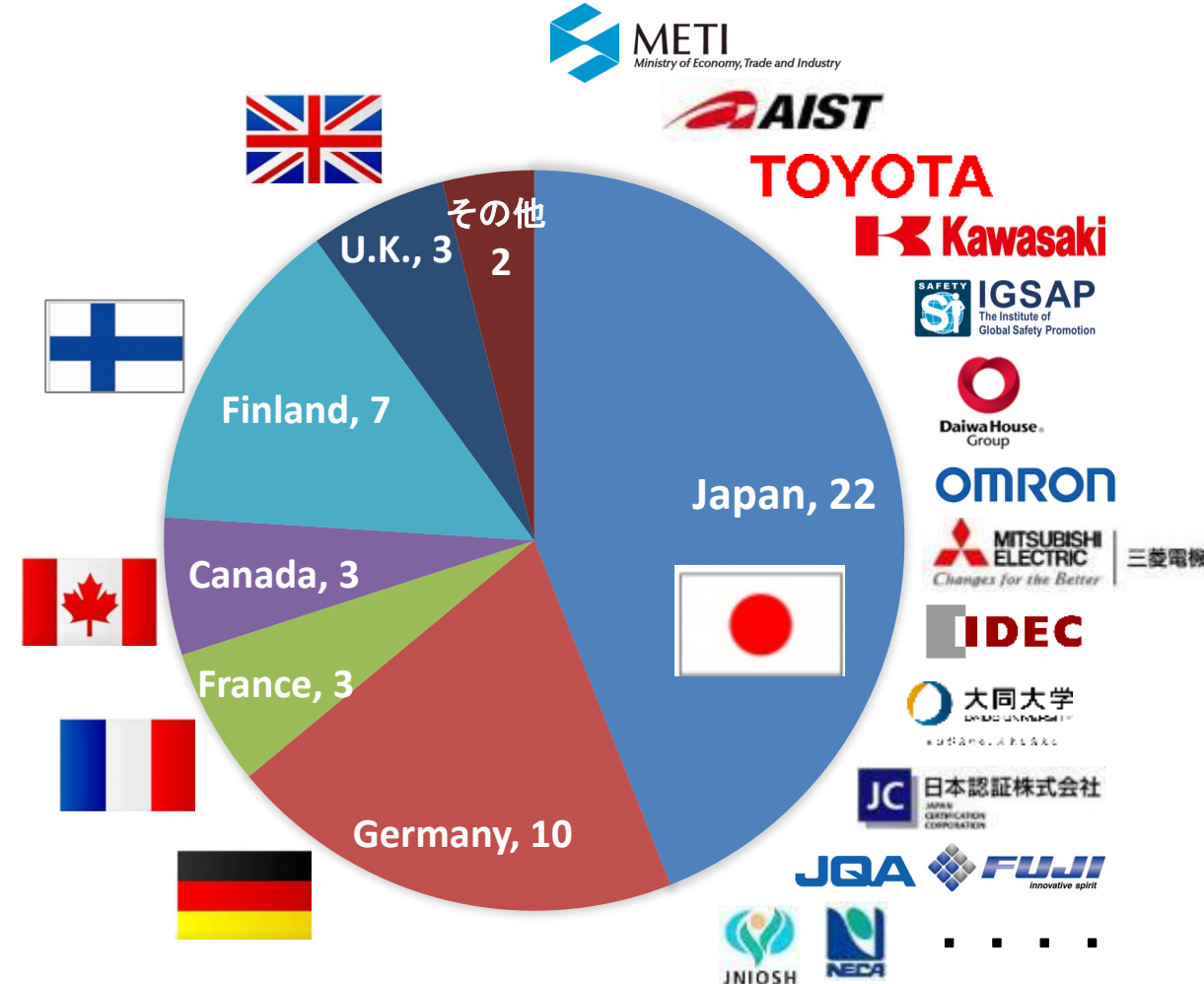


SIAS発表件数国別比較 2001年(Bonn) vs 2024年(Tampere)

2001年 Bonn, Germany



2024年 TAMPERE, FINLAND



2026年SIAS日本開催誘致成功!!

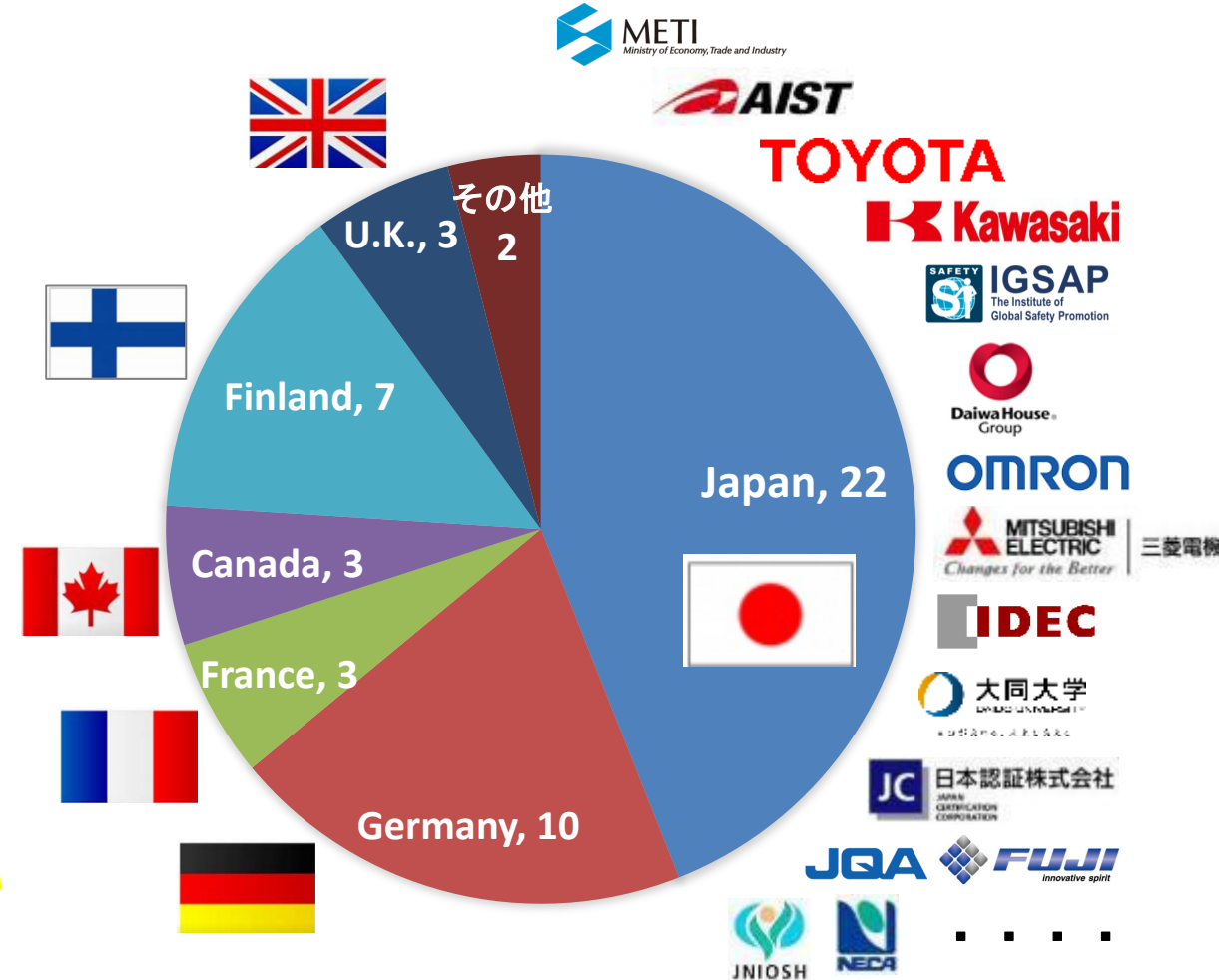
テクノロジー・インバウンド&インダストリー・インバウンドの推進

2026年日本開催誘致成功!!
 →国際標準化や産業創成に有利!!



テクノロジー・インバウンドの推進
 (日本の産官学協力の成果)

2024年 TAMPERE, FINLAND



VISION ZERO TOKYO DECLARATION
<https://japan.visionzerosummits.com/japan-2022/tokyo-declaration/>



VISION ZERO SUMMIT JAPAN 2022

DAY1, 8:15 AM (CEST), 15:15- (JST), 11-May, 2022
Opening Statement and Keynotes

Masao Mukaidono	Shigeyuki Goto	Tedros Adhanom Ghebreyesus	Joachim Breuer	Stefan Olsson	Vanessa Harwood-Whitcher	Kazuhiro Ishimura	Manfred Schoch	Kazuyuki Inoue	Tommi Alanko
Chair, JOC	Minister, MHLW Japan	Director-General, WHO	President, ISSA	Director DG Employment, EC	CEO, IOSH	President, AIST	Chair, Works Council, BMW Group	President and Representative Director, Shimizu	Leader, Global Coalition Task Group

VISION ZERO SUMMIT JAPAN 2022

The Tokyo Declaration on Vision Zero for All

Global Coalition for Safety & Health at Work

Safety Health Well-being VISION ZERO FOR ALL

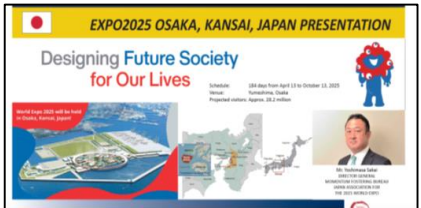
VISION ZERO Safety, Health, Well-being

With one click , you can explore over 200 lectures delivered by top executives, leaders, and safety experts from around the world.

Vision Zero Summit Japan 2022 OFFICIAL BOOKLET
[VZSJ2022 OFFICIAL BOOKLET\(JPN\)](#)

[VZSJ2022 OFFICIAL BOOKLET\(ENG\)](#)

未来への贈り物 80億人の安全・健康・ウェルビーイング



Vision Zero Summit Japan
May, 2022

Global Network

ILO, WHO, EU, DGUV, IOSH, etc.
Global companies around the world

Growing needs for improved well-being

Work style reforms accelerated by Covid-19
DX, EX, Sophistication of technology
Mental trouble increasing
Climate change
Well-being technology.

From OSH of Experts to SHW of Global Citizens

Holistic approach
Human resource development
Education for children

“Designing Future Society for Our Lives”



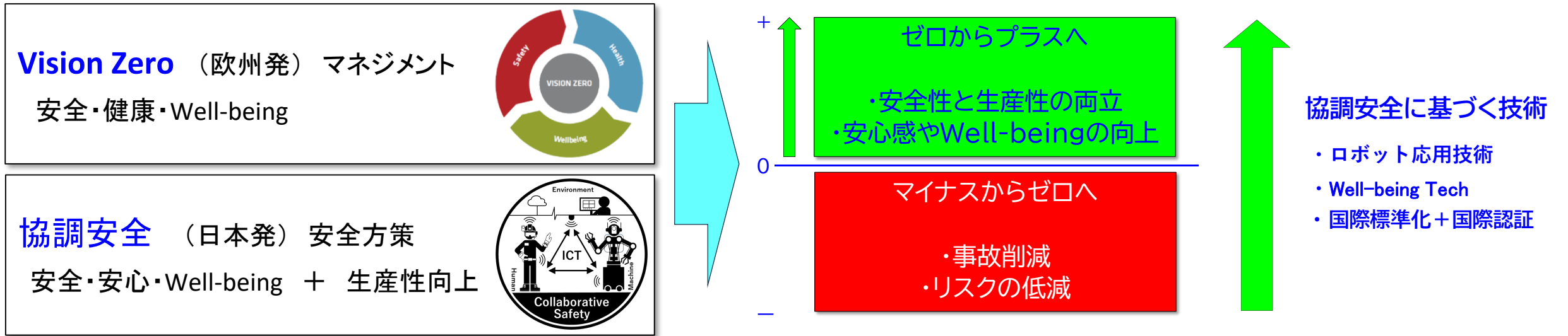
A great opportunity
to disseminate the Vision Zero concept of Safety, Health, and Well-being internationally,
in line with the theme of EXPO2025
“Designing Future Society for Our Lives”



Vision Zero Across the globe



地球上の80億人に届けるべき新たな概念の誕生 - 日本の技術力で



欧州から発信された「安全・健康・ウェルビーイング」を実現する**Vision Zero**というグローバル潮流と整合させ、日本リードで「安全・安心・ウェルビーイング」と「生産性向上」を技術的に同時実現する「**協調安全**」を、(一社)セーフティグローバル推進機構では提唱し推進しています。

日本のロボット産業等の優位性を一層高めつつ、協調安全やウェルビーイングテクノロジーが世界浸透することを視野に、大阪万博で2025年7月にイベントを実施予定です。ここでは、世界的イニシアティブGISHWを、日本リードで国連専門機関や多くの国際機関・企業と連携しながらグローバル推進中であることをご報告致します。日本の多くの機関や企業に参画して頂くことを熱望しています。

日本リードで産業創成するために目指すところ

IGSAPモノづくり委員会

トヨタ自動車が決案の1つとして着目した協調安全の多くの企業での実証一般化により、従来の機械安全(Safety 1.0)と同等以上の安全性を確保しながら、生産性を両立し、ウェルビーイング（安心感・働きがい）の向上も目指す。

SIAS 2024 12.-13.6.2024, TAMPERE FINLAND

“Collaborative Safety Guideline” within Toyota Group

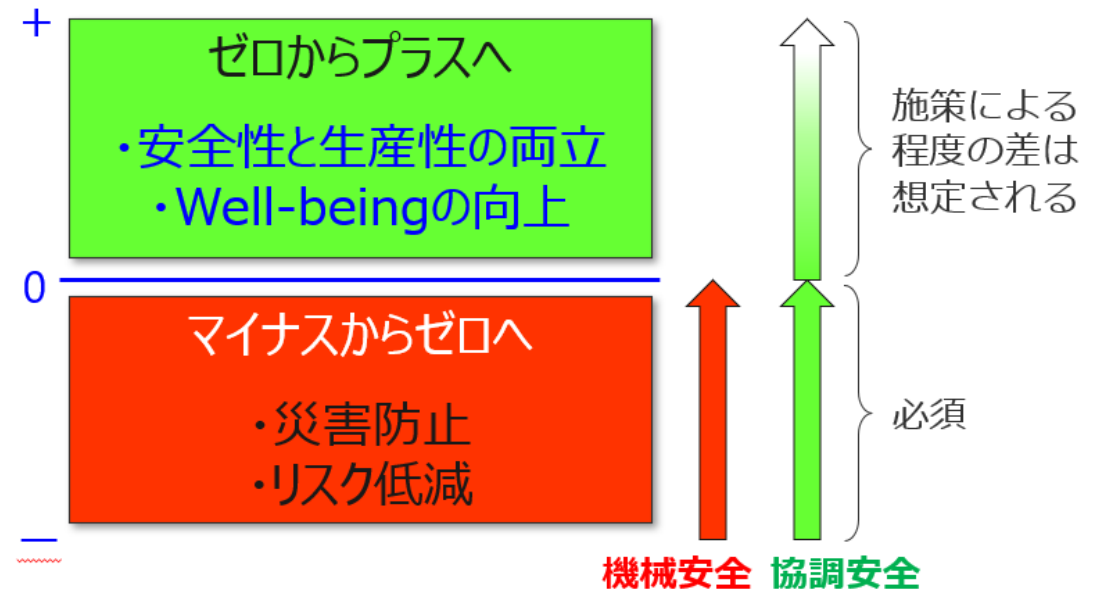
- Developed the concrete methodology of risk assessment and risk reduction for collaborative safety
- Issued “Collaborative Safety Guideline” as a rule for demonstration within Toyota Group
- Verifying the effect of risk reduction measures for collaborative safety and validity of the rule

<Guideline> <Demonstration on site>

VTT Tampere University FINNISH SOCIETY OF AUTOMATION

トヨタグループ内で協調安全実証のため
協調安全ガイドラインを策定

TOYOTA



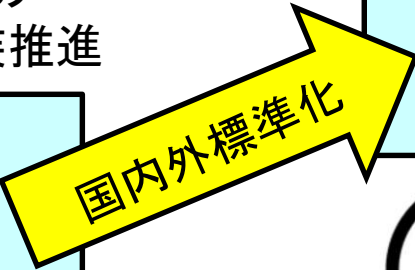
日本リードで産業創成するために目指すところ

国内外での協調安全の標準化と社会変革

国内外モノづくり現場での協調安全の実証と具体的実装推進

協調安全
国際標準化
JIS/ISO/IEC

モノづくり委員会
協調安全ガイドライン
の世界普及検討



TOYOTA

トヨタグループ内での
協調安全の実証

SIAS 2024 12.-13.6.2024, TAMPERE FINLAND

“Collaborative Safety Guideline” within Toyota Group

- Developed the concrete methodology of risk assessment and risk reduction for collaborative safety
- Issued “Collaborative Safety Guideline” as a rule for demonstration within Toyota Group
- Verifying the effect of risk reduction measures for collaborative safety and validity of the rule

<Guideline> → Provide rule → <Demonstration on site> → Feedback → <Guideline>

Logos: VTT, Tampere University, FINNISH SOCIETY OF AUTOMATION

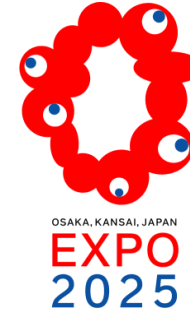


十日独連携



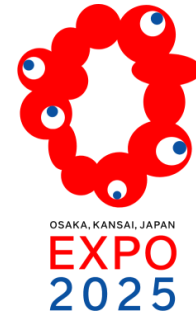
日独が連携して推進すれば
国際標準化も産業創成も可能

トヨタの協調安全ガイドライン

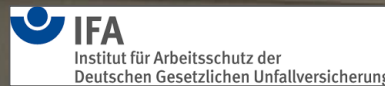
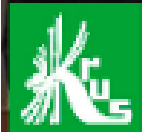


Messe
Düsseldorf

Meeting on GISHW on June 10, 2024 at Messe Dusseldorf, Germany



MoU signing ceremony aimed at achieving success of GISHW (@Messe Dusseldorf, June 10, 2024)

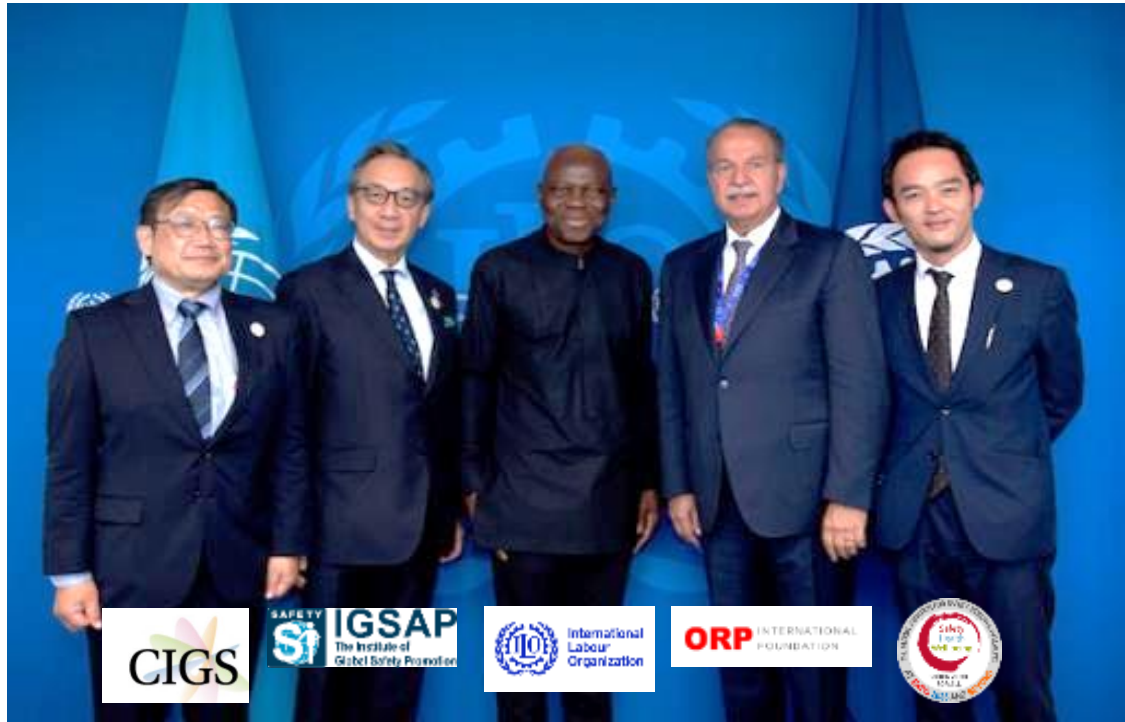




ILO 事務局長 (Director-General) Gilbert F. Houngbo ジルベール・F・ウングボ氏 との会談(2024年6月17日)



International
Labour
Organization



June 17, 2024 @ILO Headquarters, Geneva

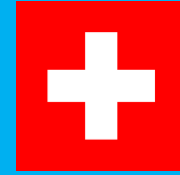
© Violaine Martin / ILO



WHO訪問

Dr. Maria Neira, Dr. Ivan Ivanovと会合

2024.06.18 Geneva



Global Initiative for Safety, Health, and Well-being at EXPO2025 and Beyond (GISHW)



1st Executive Meeting @23rd WCSH Sydney

Nov. 27, 2023

More members to join!

Executive Committee Members

Organizing Committee Members

 IGSAP Honorary Chair Masao Mukaidono	 IGSAP Chair Toshihiro Fujita	 日刊工業新聞社 Vice-chair Eiyu Hayashi	 ORP Vice-chair Hans-Horst Konkolewsky	 iosh Vice-chair Marijana Zivkovic Mlegha	 International Labour Organization Vice-chair Shinichi Takasaki	 OSAKA Vice-chair Yoshikazu Tanaka	 Messe Düsseldorf Vice-chair Lars Wismer			
 Finnish Institute of Occupational Health Torimi Alanko	 insitpo Dee Arp	 JSA ZBA GROUP Hiroshi Asahi	 issa Mohammed Azman	 EMSTON Ulrike Bollman	 IOHA Samantha Cornell	 iosh Bernie Doyle	 ENRICO Mireya R. Fabregat	 Basi Christian Felten	 Japan Safety Association Hiroshi Fujiwara	 SIEMENS Andresa Hernandes
 IALI Ho Siang Hin	 iosh Stuart Hughes	 OSGUY Stefan Hussy	 World Health Organization Ivan Ivanov	 OSAKA Yasufumi Kaneda	 ICGM Seong Kyu Kang	 Finnish Institute of Occupational Health Hiroshi Kasai	 IGSAP Takashi Kawata	 NECA Akira Kubota	 MTG Tsuyoshi Matsushita	 O Yasutomo Nasu
 International Labour Organization Joaquim P. Nunes	 M Akiko Ohara	 EU Stefan Olsson	 B Manfred Schoch	 LOREAL Malcolm Staves	 iosh Alan Stevens	 AIST Tamio Tanikawa	 human house Lars Torvig	 human house Bonnie Yau	 OSAKA Yuka Ujita	 International Labour Organization Nathan Winter

 IGSAP Chair Toshihiro Fujita	 IGSAP Koji Akamatsu	 IGSAP Masahiko Ariyama	 European Agency for Safety and Health at Work William Cockburn	 LOREAL Philippe Debeq	 iosh Bernie Doyle	 ENRICO Ockert Dupper	 ENRICO Mireya R. Fabregat	 Basi Christian Felten	 MANAGE DAMAGE Jillian Hamilton
 日刊工業新聞社 Eiyu Hayashi	 SIEMENS Andresa Hernandes	 iosh Satoshi Inouae	 World Health Organization Ivan Ivanov	 issa Jens Jühling	 IGSAP Toshiyuki Kajiya	 IGSAP Hiroshi Kasai	 IGSAP Takashi Kawata	 ORP Hans-Horst Konkolewsky	 M Masahiro Hashiki
 NECA Akira Kubota	 CIGS Jun Kurihara	 Congres Keisuke Mikawa	 iosh Marijana Z. Mlegha	 ENRICO Tomoe Murakami	 IDEA Tatsunobu Nakai	 ORP Pablo Nieto	 IGSAP Koichi Noda	 M Akiko Ohara	 iosh Marcel Le Roux
 日刊工業新聞社 Koji Sagawa	 OSAKA Yuri Sakamoto	 OSAKA Kazutosugu Saita	 大阪大学 Manabu Tanaka	 OSAKA Yoshikazu Tanaka	 AIST Tamio Tanikawa	 human house Pernille Thau	 OSGUY Sven Timm	 human house Lars Torvig	 issa Bernd Treichel
 ENRICO Takahiro Uehara	 International Labour Organization Yuka Ujita	 ENRICO Nathan Winter	 M Lars Wismer	 M Magdalena Wachnicka-Witzke	 ENRICO Selguk Yagar	 ENRICO Hideki Yamada	 ENRICO Mariko Yamada	 OSAKA Bonnie Yau	 OSAKA Winson Yeung

万博会場で開催する 「安全・健康・ウェルビーイング」デイズ・プログラム

2025年7月16日～19日

- | | |
|--------------------------------------|---------------|
| ➤ SUMMIT | EXPO内 |
| ➤ WORLD ASSEMBLY | EXPO内+INTEX大阪 |
| ➤ INTERNATIONAL SYMPOSIUM | EXPO内+INTEX大阪 |
| ➤ FESTIVAL | EXPO内 |
| ➤ ILO YOUTH CONGRESS | EXPO内 |
| ➤ THEME PARK & EXHIBITION | EXPO内+INTEX大阪 |



EXPO HALL (MAX 2,000名)

シンポジウム・国際会議・展示会でこれからの
安全やウェルビーイングを世界と共に討議・推進する

<https://gishw.com>

2000年から2030年までの30年間の「安全・健康・ウェルビーイング」の歴史と展望 日本の取るべきリーダーシップとそのチャンス到来

グローバルイニシアチブGISHW発足

継続的にテクノロジー・インバウンド
を実行し、サウジアラビアへ繋ぐ！

日本での安全国際会議
VZSJ2022大成功！

万博を契機に日本がリードして
国際標準化やロボット産業創成を推進

欧州からのVision Zero潮流開始

「安全・健康・ウェルビーイング」が
世界初の万博テーマに！

日本からの新たな考え方
「協調安全」の提唱

11月18日東京円卓会議
@日本工業倶楽部 CIGS



国際安全標準
の黒船来航



International Participants: GISHW Tokyo Roundtable (Nov 18, 2024) & Osaka Ex-com Meeting (Nov 13, 2024)

Osaka Tokyo



IFA
Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung

Thomas Bömer

IFA 

Institut fuer Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung

Osaka Tokyo



DGUV
Deutsche Gesetzliche Unfallversicherung Spitzenverband

Sven Timm

DGUV 

Deutsche Gesetzliche Unfallversicherung

Osaka Tokyo



BG BAU
Berufsgenossenschaft der Bauwirtschaft

Jakob Kort

BG BAU 

[Berufsgenossenschaft der Bauwirtschaft](#)

Osaka Tokyo



Lars Wismer



Messe Düsseldorf

Messe Düsseldorf



Osaka



SIEMENS

Andresa Hernandes

Siemens



Osaka Tokyo



iosh

Alan Stevens

IOSH 

International Commission on Occupational Health

Osaka Tokyo



iosh

Marijana Z Mtegha

IOSH 

International Commission on Occupational Health

Osaka



ILO 

Joaquim Nunes

ILO 

International Labour Organization

Osaka Tokyo




ILO 


Shinichi Takasaki

ILO 

International Labour Organization

Tokyo



ILO 

Yuka Ujita

ILO 

International Labour Organization

Osaka Tokyo




WHO 

Ivan Ivanov

WHO 

World Health Organization

Osaka Tokyo



National Council for Occupational Safety & Health

Majed bin Ibrahim Alfuwaiz

NCOSH 

The National Council for Occupational Safety and Health of Saudi Arabia

Osaka Tokyo




inshpo


Nathan Winter

INSHPO 

International Network of Safety & Health Professional Organisations

Osaka Tokyo



OSHC 

Bonnie Yau

OSHC 

Occupational Safety and Health Council

Osaka



issa 

Mohammed Azman

ISSA 

International Social Security Association

Osaka Tokyo




ORP 


Hans Horst Konkolewsky

ORP 

Fundación Internacional ORP

Osaka Tokyo




ICOH 

Seong Kyu Kang

ICOH 

International Commission on Occupational Health

Tokyo




IALI 

Siong Hin HO

IALI 

International Association of Labour Inspection

Osaka Tokyo



Finnish Institute of Occupational Health

Tommi Alanko

FIOH 

The Finnish Institute of Occupational Health

Osaka Tokyo



DANISH VISION ZERO COUNCIL

Lars Tornvig

Danish Vision Zero Council



Osaka Tokyo



MANAGE DAMAGE

Jillian Hamilton

Manage Damage



The number of participants may increase.



Sowing the seeds of Vision Zero

Plant a seed of Vision Zero



--	--	--	--	--	--	--	--

Vision Zero for All Safety · Health · Well-being



2030

Flourish



and Beyond