Holistic Approach to Realizing Collaborative Safety as Supportive Measures of Safety, Health & Well-being

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Well-being Tech Forum

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Ultimate Goal of Collaborative Safety

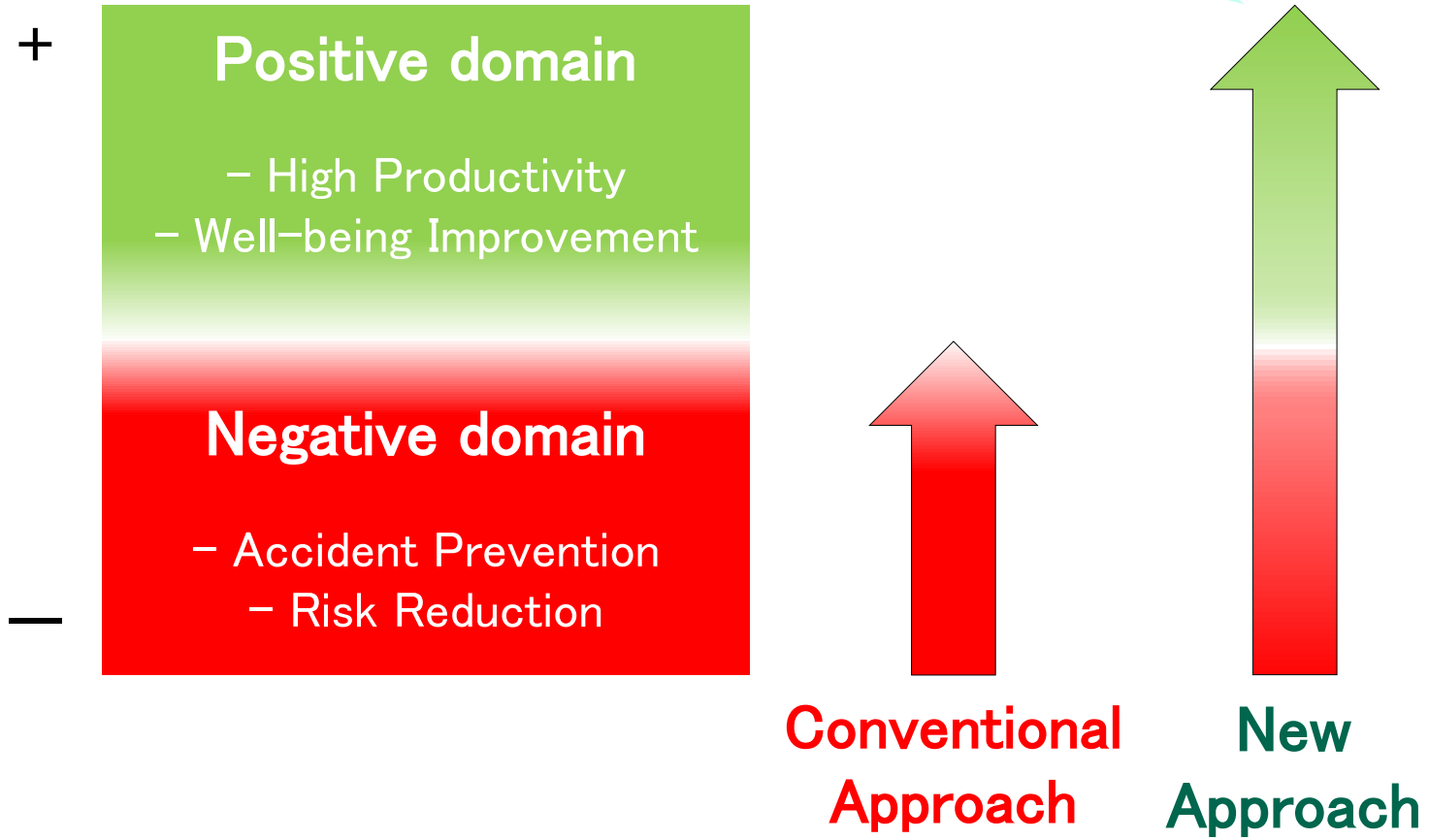
Scope of Collaborative Safety;
Safety, Health & **Wellbeing**

Mental/Psychological safety oriented

- *Award-based approach*
- *Human-centered measures*

Physical safety oriented

- *Incident-based approach*
- *Machine-based measures*



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Well-being Tech. & Collaborative Safety

Collaborative Safety
Safety achieved with collaboration of human, machine & environment

Concept

Well-being Technology
Technology supporting human's fulfillment & ANSHIN with retention of safety & health

Safety 2.0
Technology applying ICTs to collaborative safety functions

Technical Measures

Occupational Safety & Health
Working healthy & with sense of happiness in a safe environment

Objective

Safety 2.0 Conformity Assessment Program
On-site assessment on safety measures to Safety 2.0 Standard

Verification Methodology

Realization of Well-being

Ultimate Goal

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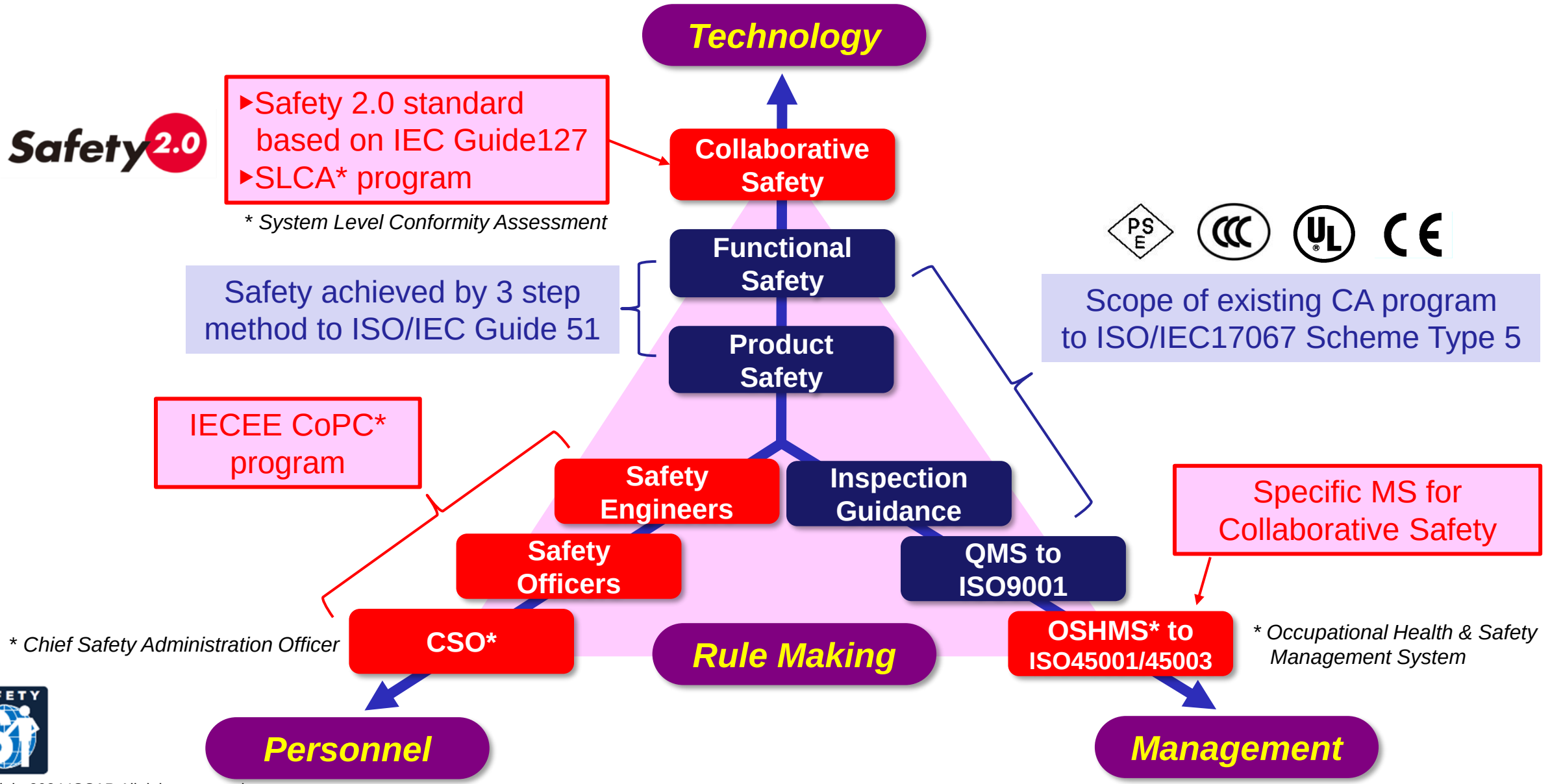
Holistic Approach to Collaborative Safety Standard & CA



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Way Forwards Standardization of Collaborative Safety

IGSAP

Standard Development

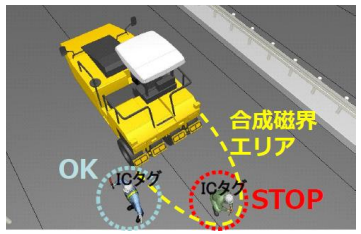
CA Program Implementation

Technology

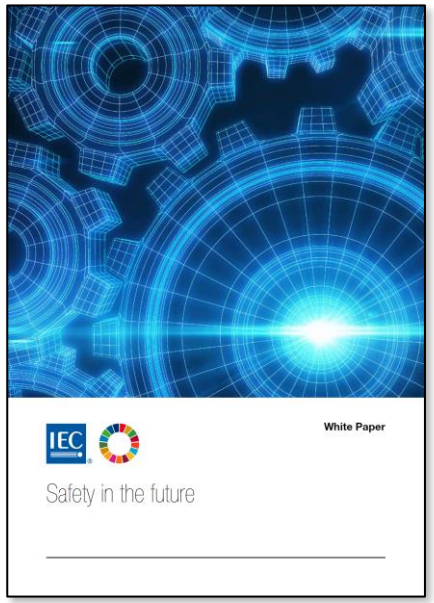
Human **Management**

Rule Making

Use-case accumulation for international proposal



Issue of IEC Whitepaper



International Standardization

IEC

ISO

Safety Health Wellbeing

Global Platform contributing UN SDGs

3 GOOD HEALTH AND WELL-BEING

8 DECENT WORK AND ECONOMIC GROWTH

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Principle of Standard & CA Program Development

Background

- *Advanced ICT could support the increased needs of "human-centered" industry to satisfy "safety, health & wellbeing" of company employees*
- *Industries need to have demonstrative means to show the compliance of advanced safety measures with the "state-of-the-art" technology*

Safety 2.0 Certification Program

Safety 2.0

Standard

- Safety achieved by real-time risk communication among human, machine & working environment
- Common applicability to different industry sectors
- "Performance-based" standard not preventing flexible use of day-to-day technology evolution

CA Program

- System Level Conformity Assessment
- Assessment of technical measures, functionality, trustworthiness & risk assessment result
- Overall safety management of O&M & personnel competence by holistic approach

Standard & CA program are developed in parallel with its CA Practice, reviewed & improved to propose future IEC/ISO standardization

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Elements for International Standardization in Progress

Elements	Way Forward to International Standardization
Safety 2.0 Technology	Prescriptive standardization by accumulating the use cases of certification based on “State of the Art” principle applied to different sectors. ➔*Discussion is going on at IEC SMB, instructing ACOS (Advisory Committee on Safety) to assign the Task Force to develop the new IEC Guide for collaborative safety according to the recommendations of IEC Whitepaper*
CoPC* Program on Collaborative Safety	Based on the IEC/NECA MoU on the CoPC program for safety assessors in 2015, current scope of machine safety program to be expanded to the collaborative safety sector after its implementation. ➔*IECEE established WG34 for CoPC in 2017 with leadership of NECA expert, and the work is going on to develop the necessary rules to put NECA CoPC program into practice as a pilot case under the IECEE platform.*
Collaborative Safety Management System	Both elements above to be integrated in the ISO45001/45003 framework in order to enable the efficient and sustainable operation of collaborative safety at workplace. ➔*The issue is beyond IEC’s task and an appropriate action is to be taken by the approach to ISO/TC283 for OHSMS* for the feasibility to be integrated*

**CoPC: Certification of Personnel Competence*

**OHSMS: Occupational Health & Safety Management System*

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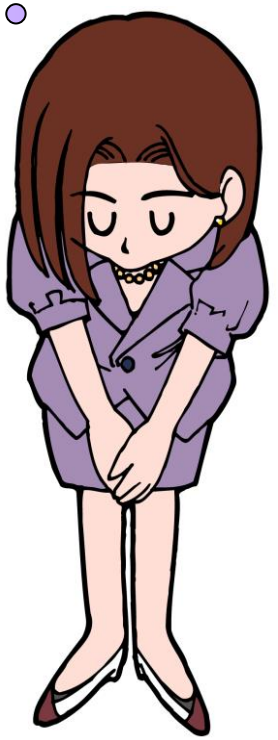
We are expecting to build global platform of collaborative safety by international standardization…



Thank you for your attention !

Toshiyuki Kajiya

Director, Member of the Board

The Institute of Global Safety Promotion