

IEA Strategic Policies¹

Based on the understanding of (1) the present situation of the IEA, (2) the general guidelines recommended in the Future of Ergonomics report (FoE)^{2, 3}, and (3) the IEA goals and sub-goals mentioned in above sections, seven strategic policies were specified to guide priorities, activities, and administration. Officers and standing committee chairs were requested to coordinate their action plans in line with the policies. These policies were created by Past-President Yushi Fujita during the 2015-2018 Executive Committee term and further developed and pursued during this term.

(1) Engage Stakeholders

The FoE report identifies HF/E (human factors/ergonomics) as a unique discipline that (1) features a systems approach, (2) is design driven, and (3) focuses on two closely related outcomes, performance and well-being. HF/E has great potential to optimize performance and well-being through design-driven and systems approaches. However, the report recognizes that the potential of HF/E remains under-exploited and points out that this can lead to sub-optimal systems with a number of deficiencies such as quality deficits, reduced efficiency, illness, and dissatisfaction. Among four major reasons for this situation identified in the report, the following are considered particularly important:

- Various stakeholders are not aware of the value of HF/E.
- There is not enough high-quality HF/E because of the absence or limited scope of HF/E application.

The 2012 FoE report concludes the following as basic strategies for improving the situation:

- Strengthen the demand for and the application of high-quality HF/E by (1) enhancing the awareness of stakeholders' need for high-quality HF/E by communicating with specific stakeholders about the value of high-quality HF/E in their own language, (2) build partnership with these stakeholders and their representing organizations, and (3) educate stakeholders to create awareness of high-quality HF/E and its contributions to system design.
- Strengthen the application of high-quality HF/E by (1) promoting the education of HF/E specialists to apply high-quality HF/E, (2) ensure high quality standards off HF/E applications and HF/E specialists, and (3) promote HF/E research excellence at universities and other organizations.

The FoE report contends that international development of HF/E is dependent on gaining a better relationship with various groups of stakeholders. More specifically, it promotes the use of the following development strategy based on the need to facilitate the two important goals identified above:

- Promote the desire for high-quality HF/E specialists to important stakeholders by increasing their awareness through (1) improved communication with stakeholders, (2) education of stakeholders, and (3) development of stakeholder partnerships.
- Educate HF/E specialists to ensure (1) high-quality standards of HF/E applications and specialists,

¹ IEA 2021 Triennial Report

² : Under the auspice of the Development and Promotion Standing Committee, an ad hoc committee was assembled to examine the field and future directions of human factors and ergonomics. The final committee report was submitted in 2012: Jan Dul and others, "A strategy for Human Factors/Ergonomics: Developing the discipline and profession. The report is downloadable from:
https://www.iea.cc/project/FINAL_REPORT_Future_of_Ergonomics_Committee_A_Strategy_for_Human_Factors_Ergonomics_22_January_2012.pdf.

³ : Jan Dul and others (2012) "A strategy for human factors/ergonomics: developing the discipline and profession," Ergonomics, Volume 55, 2012 - Issue 4: <https://www.tandfonline.com/doi/abs/10.1080/00140139.2012.661087>.

and (2) promotion of HF/E research excellence.

In short, engaging and educating various stakeholders is a key. To effectively implement this policy on a global scale, it is considered necessary for IEA to reach out to various stakeholders and present some good cases of HF/E effectiveness. These cases must be designed to show that implementing high standards for HF/E contributes to a positive social reputation through accomplishment of high-quality systemic projects.

(2) Collaborate with and Reinforce IEA Networks

The IEA Networks are groupings of Federated Societies or their affiliates that are formed to address specific needs. The Council approves the formation of an IEA Network based on a formal proposal that is endorsed by participating societies and which states the purpose, organizational structure, and mode of operation of the proposed IEA Network (cf. The IEA By-laws). As of June 2021, there are six IEA Networks, which include Federation of European Ergonomics Societies (FEES), La Unión Latinoamericana de Ergonomía (ULAERGO), The South East Asian Network of Ergonomics Societies (SEANES), ErgoAfrica, BRICS_{plus} Network and Asian Council on Ergonomics Design (ACED).

Some topics that are potentially relevant to a region are also common to the individual societies in the region. To handle these topics, it is desirable to engage as many as possible regional stakeholders so that regional needs are better understood and actions better implemented. Networks are considered to serve this role of representing regional needs. It is further considered that networks could work together to handle global topics.

However, for these strategies to work it is necessary to reinforce the IEA networks. There are several benefits of reinforcing the IEA networks. First, IEA coverage needs to be widened in all regions. There are countries where ergonomists and human factors practitioners exist, but their numbers are too small for IEA membership as Federated Societies. Second, networks enable the technical distribution of members to be broadened and removes limitations to certain HF/E disciplines. This is important in order for HF/E to play bigger and more important roles in society. Third, it is desirable for the HF/E community to work more closely with relevant communities. IEA can establish formal relations with international organizations for this purpose. In addition to this international effort, it is desirable for member societies to establish formal relations with external organizations, such as societies and industrial communities of non-HF/E disciplines. This could be done effectively by the IEA Networks.

(3) Contribute to Science, Technology, and Practice

HF/E is an applicational discipline that rests on sound science. It has always been IEA's fundamental role to promote good science. Considering the ever-changing, rapid advancement of technologies that potentially affect people's lives, IEA must continue promoting HF/E research, both science and practice, that is relevant to cutting-edge technologies. To serve this important role proactively, IEA must be a center of cutting-edge information on HF/E science. This may take various forms, such as the publication of guidelines, the promotion of state-of-the-art technologies by Technical Committees, and the discussion of roles that HF/E should play in relation to emerging technologies.

(4) Identify the Roles of IEA in Promoting Education, Certification and Professional Standards

Almost 20 years ago, IEA introduced guidelines for the certification of professional ergonomics and human factors practitioners (typically called *ergonomists*) and began to endorse certification systems that were in line with these guidelines. However, only a few certification systems have been endorsed by IEA, and feedback from societies that had developed certification systems, as well as those currently developing them, indicated that IEA documents were too complex and not well understood. Essentially,

the purpose of the endorsement mechanism is to ensure a high standard of HF/E science and practice and to provide guidance for educational programs to train ergonomists and human factors practitioners. The guidelines include a list of “core competencies” that describe the required knowledge and skills of a professional ergonomist, as well as other recommendations that must also be followed, such as non-commercially oriented approaches, independence, possibility of independent review, and non-discrimination. To standardize and promote certification, IEA reviewed and updated the certification guidelines and reviewed the core competencies. We also revived a system of regular reviews, to ensure that the practices of the certifying bodies remain in line with IEA guidelines.

Encouraging mutual recognition of certification among countries is recognized as an important topic for giving value to IEA-endorsed certifying systems. Mutual recognition is being practiced at an unofficial level between many IEA-endorsed systems, although very few ergonomists change their country of work. Some certifying bodies are limited in granting recognition to others because of their accreditation standards; however, IEA can play the role of publishing on the IEA website the qualifications from IEA endorsed systems that are deemed to be equivalent. This is an important means of giving value to IEA endorsement and of improving the maintenance of high standards for professional ergonomists globally.

As a consequence of local needs, several existing certifying bodies are adopting a multi-layered certification system. Certifying bodies that wish to obtain IEA endorsement must have at least one level of certification that meets the level of the core competencies; however, IEA may need to introduce more levels in the endorsement system in the future. IEA must keep up to date with these developments and, if necessary, produce further guidelines, so that the level of qualification of all certified ergonomists remains clear.

(5) Strengthen Relationships with External Partners

IEA has long and formal relationships with leading international agencies and organizations. IEA is formally registered by United Nations (UN), World Health Organization (WHO), and International Labour Organization (ILO) as a Non-Governmental Organization (NGO). IEA has maintained a triparty MOU with the International Commission on Occupational Health (ICOH) and the International Occupational Hygiene Association (IOHA). IEA has formal liaisons to Technical Committee 159 of the International Organization for Standardization (ISO). These existing relationships require continued effort to maintain their mutual benefit.

When the interdisciplinary nature of HF/E is considered, it is evident that IEA should establish new relationships with more international organizations both inside and outside of the HF/E community. This is a way to enable IEA to promote HF/E tightly coupled with related disciplines. In the past several years, we have established collaborative MOUs with the International Society for Quality in Health Care (ISQua), the Foundation for Professional Ergonomists (FPE), the Institute of Industrial and Systems Engineers (IISE) and their Applied Ergonomics Society (AES), and International Council on Systems Engineering (INCOSE).

(6) Reinforce the Infrastructure of IEA

For IEA to fully function as an international organization that can exert substantial influence over people and promote recognition that HF/E is an indispensable discipline for our life, IEA must have a sound infrastructure. As a voluntary organization with limited resources, it has been not easy to develop a sound infrastructure. It is one of the most critical problems that IEA is facing. In a previous term, the rule systems (i.e., by-laws and operating procedures) were improved considerably. We added a part-time

Administrator to provide continuity and operational support. We converted to a better and more transparent accounting system. But there still remains much room for improvement in almost all aspects, from the legal status through the financial system to the administrative system. To make the IEA more financially and administratively sustainable, the infrastructure must be reinforced.

(7) Maintain a Future Focus for HF/E

The need for a future focus is apparent in the recommendations of the Dul et al. *Future of Ergonomics* report. IEA must be several steps ahead of the trends, issues, challenges, and unanticipated events that will need to be addressed by the HF/E systems approach. Many of these will be tied to the future of work; thus we collaborated with the ILO to provide guidance on HF/E in future work system development and maintenance. During this term, new challenges were precipitated by COVID-19; IEA and member societies had to think in new ways to solve problems associated with PPEs, ventilators, and the vaccination process, and collaborated with WHO to provide guidance on HF/E in health care and patient safety. IEA's future focus is a strategic priority for our association and for HF/E. The use of *HF/E* and *human factors/ergonomics* (rather than simply *ergonomics*) throughout this report is deliberate and future focused. It is a recognition that our successful future requires that we embrace all sides and aspects of our discipline and claim them as our own. This is key to our survival as an association as well as to the advancement of our multi-faceted discipline as a science and profession.