International Ergonomics Association

MEETING OF THE IEA EXECUTIVE COMMITTEE

March 30 and 31, 2019
Hotel Spiwak Chipichape
Cali, Colombia

Meeting Notes

Executive Committee Attendees:

Kathleen Mosier, President (KM)
Sara Albolino, Vice-President and Secretary General (SA)
Jose Orlando Gomes, Vice President and Treasurer (JOG)
Yushi Fujita, Past President and Chair (ex officio), Awards Committee (YF)
Andrew Todd, Chair, International Development Committee (AT)
Michelle Robertson, Chair, Communication and Public Relations Committee (MR)
Max Chang, Chair, Professional Standards and Education Committee Chair (MC)
Elina Parviainen, Chair, Development and Promotion Committee (EP)
Ernst Koningsveld, IEA Historian (EK)
Juan Carlos Hiba, Chair, Future of Work Task Force (JH)
Maggie Graf, Director (MG)

Staff: Lynn Strother, Administrator, IEA Secretariat (LS)

Invited guests:

Frank Po-hung Lin, Cochair, Professional Standards and Education Committee (FL)
Juan Carlos Velasquez (JCV)

Attending via SKYPE:

Thomas Alexander, Chair, Science, Technology and Practice Committee (TA)
Takashi Kawai, ICT Director (TK)
Ian Noy, Chair, IEA 2021 Organizing Committee (IN)

30 March 2019

Agenda item	Resp	Discussion, Decisions and Action Items
1.Call to Order and Approval of Agenda	**KM/SA**	The meeting was called to order by President Kathleen Mosier at 9:03 a.m. The agenda was approved as amended by unanimous consent.

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		Discussion: JCH: White paper on ergonomics and Future of Work is in process. I was wondering whether to continue or not. The ILO started to request different initiatives—for example, a very short one, which is a 3-page "think paper" on ergonomics. Did you distribute it, Kathy? KM Not yet, but will do. JCH: They requested definitions from Kathy. So we developed a three-page paper. Second request was bigger—a book of guidelines on ergonomics for the workplace. So there is a group of coauthors writing these drafts. Given that situation, I asked myself, whether we need the white paper or not. It would be a 7-10 page document that could be distributed widely within the ILO, not just a few departments. It would be useful to be distributed within the community. It would improve the relationship within the ILO and would include how to get in touch with the ILO in different regions in order to get in touch with them and develop systematic cooperation. ILO is very bureaucratic; they work within a two-year program. Not easy to get into their work program. KM: Upshot with white paper is that is percolating on the back burner. More to come. KM welcomed attendees and gave introductory remarks. Each attendee in turn introduced him- or herself. FL mentioned that he is from Taiwan and is an observer at the meeting, coming with support from his university and in his role as cochair of PSE.

2. Approval of the Minutes of August 2018	**KM**	The August 2018 EC meeting minutes were circulated to EC via email. Edits received from the Executive Committee members were incorporated. Per the IEA Operating Procedures, the minutes were approved.
		[Ref: 02 EC Meeting Notes Florence]
		
		The following are ACTION ITEMS from the last EC meeting:
		    (ACTION ITEMS)
		    1. JH/KM – Draft two-page white paper on Future of Work for ILO
		    2. TC Chairs: Nominate good papers for handbook
		    3. TK and the Technical Committee on Ergonomics in Advanced Imaging will discuss how to make an ergonomics guideline in collaboration with the Advanced Imaging Society and promote activities step by step

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| 3. VP/Treasurer's Report | **JOG** | JOG provided the VP/Treasurer's Report (*Ref:03 VP Treasurer's Report to EC Cali 2019*).

Summary of IEA 2018 Finances (with SA?)
Travel policy
Sponsorships for EC/Council meetings
Adding new Affiliate Societies
Cost projection by committee chairs

Discussion:

Revenue - -$6K. We received some membership dues in January/February of last year. Thanks to IEA 2018 organizers, we received capitation fee of $28K. We moved from zero in Australia to this.

Exchange rate variation in Canadian to US Dollars. You can see the cash-flow movement. Dues plus capitation fee, the result should be positive. In 2019 we have new expenditures for new website. 9K each year. [Reviews the exchange rate fluctuations, see report.]

We have 35 of 50 societies that pay small dues, which is hard to remit through banking system. PayPal is a good solution—they pay a small fee.

We will keep the Scotia Bank account open until the end of the year. We will then transfer the investment to UBS in Switzerland—2% return on investment, minimizes risk. Will transfer by June. No extra fee in the transfer.

The big task is to comply with Swiss regulations regarding accounting. Currently in Excel, will be Banana. This will facilitate compliance with Swiss regulations. All data need to be exported from Excel to Banana. We had difficulty transferring information due to tax regulations in Switzerland. There are always some small tricky things. The cost of work in Switzerland is very high. To send a credit card invoice to us costs a lot, so we need to be very careful to avoid these extra costs.

We have received a request to disclose how much each society pays. To do so, we need to get information from the societies. Not only what they pay, but also the number of members, affiliates, etc. We need to figure out a new way for them to fill out this form. Some are very kind, but 30% find it hard. [See slides on Issues and Recommendations.] |

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I would like to thank the IT chair. We have societies that have gone five years without paying. They always do during the IEA Triennial Congress. Slovakia—very interesting case. Iran is another case.

Any questions?

KM: Jose Orlando and Gilbert have had to go to extraordinary lengths

Interim Treasurer report:

Budget file. We need to be proactive, not reactive. Membership dues are stable. Big societies are slightly decreasing. We need to be aware of this and plan. Some big societies decreased 25% of membership. We need to discuss and plan for the future. Not this term, but in longer term we need to rethink the model. IEA GFM model is important to engage stakeholders. We need to increase funding. It's difficult to tell you with 100% certainty, but our business model needs to be reorganized. Sustaining is not sustaining anymore. We need to consider other ways of increasing sustaining membership. Very briefly, we have some experience, $500 is nothing if they are interested in HFE. Rough exercise. If we have 100 member companies.

KM: So currently you are projecting a deficit?

JOG: It's an exercise. We don't have real numbers from each committee. I am talking about middle and long-term. The model is not sustainable anymore. Lack of capitation fees from Australia—if this continues to happen, it's not sustainable. Last term contained costs. So this is an idea of cash flow [slide on 2019 projected cash flow]. For each committee activity, we need to share costs with stakeholders. Sorry—I am so conservative. I hope that at the end of the term we approve this model .

KM This EC meeting has been very low-cost.

JOG: Yes—we need to get this done again.

KM Would you briefly report on SURA meeting?

JOG: Yes, many thanks to Professor Juan Carlos Velasquez. We have discussed the IEA GFM with Prof Velasquez. We started in Florence to involve two societies and universities. Contacted SURA as a stakeholder. The business of SURA is a big industrial group.

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		KM: Because of the extraordinary efforts of Professor Velasquez and Professor Gomez, we had meetings with them yesterday. They are preparing a letter of intent regarding projects that they would like to engage in. IEA's role is just as a facilitator. It's not an MOU, but an idea of what they would like to do with us and how we can help. We are proceeding slowly. JOG thinks it would be as a sustaining member. JOG They officially sent five requests to us. They are interested in working with IEA to clarify them. They would like to have studies on research in HFE; for example as to how HFE is linked to aging population. They have a variety of companies; e.g., car insurance. They want to have training for their personnel and clients. It's huge. Prof Velasquez is a director. We would like to have a prospective vision. Suggestion is to have a working group: YF, AT, JCV. Manage structure project by project, step by step. Several general managers. JCV Great opportunity for IEA YF: I would like to request that JOG develop a reserve policy. It is unhealthy to depend on IEA Congress. I agree that our financial system needs to be healthier. We need to specify a new target and level of reserves that we have to maintain. ACTION ITEM: JOG to develop a reserve policy. JOG We need to have a clear idea about our expenditures. One idea, don't take anything out of investments. If we don't receive any revenue, we can run for three years and then caput. We need to define a reserve policy. KM: Travel policy has been clarified from previous terms. Your request for reimbursement should only include airfare for this meeting. Please try to get funding from other sources. JOG: We need to get funding from societies for EC meetings. If you have space for this, it would be appreciated. AT: We need to think about this carefully. If we want to grow, we may need to go to countries without the funds/resources that we have here. We need to define it carefully. ACTION ITEM FOR SA: Look at policy for proposals to host Congresses and put in clauses that would give weight to hosting EC or Council meeting(s).

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		AT: Andrew Thatcher" Ergonomics should be for all...that can afford it" KM We need to take into account what the meeting will cost. It's a balancing act. AT: It goes with our philosophy. Go to South Africa, don't stay in 4- or 5-star hotels. SA It is not the only way to go to an EC meeting. Committee meetings can manage expenses better. AT Link it to activities. We have to bring our skills. In Africa it would work well if we ran a workshop on healthcare, as we did in the past. JOG Key word is to apply the IEA GFM. EP One question, I would like to ask how to create the kind of moral—do we really know our customers? We need to have content of what is in the world. I was surprised in Bogota about how much they already have. Much better, in some ways, than Finland. We should not assume that they don't have skills. In India, they do a lot with ergonomics. We may find totally new customers, and they are not only in health care.
4. Professional Standards and Education Committee	**MC** **MG**	MC and MG provided an updated on the activities of the Professional Standards and Education Committee (*Refs*: *4a PSE 3 year plan 2019-2021* *4b PSE 2018-2021 Timeline* *4c Certification 3-year plan 2019-2021* *4d Certification Timeline 2019-2021* MC: I will present the Education part — Maggie is the expert on certification. Here is my plan. The main goal is to create a worldwide database for HFE educational information. As an international student, where can I go for information on programs in other countries? What kind of program is offered in those countries? Google is not good enough. This should be a database on the IEA website. Past committee did a good survey. A student analyzed the information. The problem is that the survey contained open-ended questions. The data are not useful from a systematic point of view. I want to design a new survey using multiple-choice questions, which provides a better way to analyze results.

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		The current survey is good page by page. Survey is in pilot run. Based on IEA information on website.
		ACED meeting in Taipei—I used the participants as a pilot test. [Results on slide "Results from Pilot Data"]. Indonesia - one university. Shows number of HFE faculty among total faculty.
		Perhaps need to expand list of areas beyond TC names. For now, you can choose from 27.
		Potential application example-- Google map link, QR code. In the future, we will look for help from you guys.
		Project 2 Focus on ACED. They are trying to do something quickly [See slides].
		We need to have input after this meeting regarding keywords for organization. Lot of discussion (Slide 32 of 35). I don't have an answer about the taxonomy.
		KM: In view of systemic approach, we may not want to silo. We will talk more about this during the workshop.
		AT: To get this data, it would be good to work with the networks. To do so through ACED. It's important to do this through an Asian perspective
		JOG I am so happy—since 2012, I can see today, we cannot be surprised by diversity. It's a source of power, not the opposite.
		EP: It could help to sort--you need to distinguished between medical programs and technical universities.
		AT: To build on that, if we put it on our website, there needs to be quality assurance. I would like to work closely on this from an ID perspective. The data you get from a society would depend on how much the society is developed.
		JOG: Use another column for research groups.
		MG - Certification. Not going to explain all five projects. They are closely linked to each other. [See slides.] Five projects all interlink. Problem is that some societies have certification programs that are too linked to the societies. Possible to create an endorsement category that is not full

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| | | endorsement, but a different kind of endorsement. Need to find out from accreditation authorities whether there is an issue with getting rid of this requirement.

If societies offer a form of mutual recognition, we need to make clear what categories are. Some socieities, particularly in US, cannot have mutual recognition.

Global extension of certification. Some societies have indicated that they will apply for certification. They are new—we need to know that their system is sustainable. Particularly, Malaysia is advanced. Chile and South Africa are as well. I'm keen to bring more systems in that are outside of Europe and North America.

Everything is related to defining core competencies. What do ergonomists actually have to know? The hard work of defining core competencies precedes the grading of certification.

What are core competencies? The things that a certified practitioner needs to know and what they can do. Their educational background is the most important aspect of that. What they can do also involves experience—putting education into practice. It defines the profession and describes them to others. What can an ergonomist give them and provide? Wherever I go, people ask for guidance on educational programs. It's the basis of the certification system. At the moment, the systems that we have certified have a consistent set of competencies, but they are not related to the IEA ones. So we should get back to ours.

Because we don't provide them information, they do it themselves, but we need to prevent further divergence from our program. The profession may fragment if we exclude too many of them. How much knowledge is necessary in what fields to qualify you? We have to allow people to specialize in fields or domain areas. We should not exclude them from being certified—if we do, they will break off.

Problems in defining core competencies. Traditional—physical, cognitive, and organizational. A holistic approach includes all this. But we actually have a 3D matrix-- physical/organizational/cognitive is overlaid by domains and includes their own set of competencies.

The ACED system recognizes this and classifies where keywords fit into the domains (occupational health, ISE, Product Design, Physical Therapist). Some |

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competencies don't come from basic training. There are several hundred things that you have to know a little bit about each, but there are skills (communication, systems approach, etc.) that an ergonomist provides. That's our added value and must be included in core competencies. This concept needs to be expressed clearly. I want to work with you in the next few years to define these.

KM: This reminded me that we need to go back to societies that have been certified and not recertified in 25 years for recertification.

KM: First item that MG talked about—CIEHF. Their request to be recognized for their chartered member system. It's done within CIEHF. That is part of their charter and can't be changed. In principle, that is a formal recognition but not a formal endorsement of their certification system. Is it possible to give something that recognizes that their system is valid?

EK: it's the wording.

KM: So can we discuss a term that is mutually acceptable? They did not ask for endorsement; they asked for formal recognition. They are worried about applying for endorsement and being rejected. That would look bad.

Is there mutual recognition between CREE and CIEHF?

MG: Yes, there is.

KM But their members are not certified by CREE unless they apply. And this is the same with every other society in CREE. They all have certification boards.

JOG: In Europe, the national board is independent of the societies.

MG: CREE is separate.

JOG: CREE has two levels. I have participated in evaluation for the UK for people from Asia. So this has a cascade effect.

MG: it's a rule to be part of CREE that you have to allow people who are not members of your society to apply for certification. There are people from all over the world who are chartered, and we will leave them out of the system if we don't have mutual recognition systems.

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		AT: It is hugely concerning that we think that physical and psychological are two separated entities. It affects our ability to deliver that we don't demystify.
		MR: And organizational
		AT: And for what earthly reason do we consider office ergonomics as organizational?
		YF: Three things. I agree with KMs idea of giving recognition of the charter. THat's okay. Are we going to erase them from our list of certified organization?
		KM: They are not endorsed.
		YF: I don't like to go back to past history, but they are not there.
		MG: Say "endorsed or IEA recognized"
		YF: There is no evidence that Australia ever applied formally.
		KM: That's why we are asking them to reapply.
		EP: Could there be some order—you can't define how to endorse without having an educational framework.
		KM: RIght now we have a set of requirements and we need to work within those. We are talking about the current certification requirements.
		EP: So we can modify when the educational requirements are in place?
		KM: Yes.
		YF: There are so many mechanisms for certification coming out around the world. We need to think about a redesign of our endorsement criteria. This may be a bit provocative, but we can't stand around looking at people's backs. We need to insist on the separation of certification bodies and societies. CREE and BCPE are the only ones that satisfy this criterion.
		MG: I thought Japan was independent.

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		YF: No—they were not able to achieve this. This is another reality that you find everywhere. MG: Maybe we can come up with some guidelines for letting in societies where there is no separation, provided that they have a separate internal body within the society that is not part of the management team and operates without undue influence. We need to look at the reasons why they can't do that. KM: For right now, what I will tell the UK is that they are on the website and that we are revisiting the categories. JOG: Too big of a task to combine certification and education. We need to focus on the basic training of an ergonomist. MG: Personally, I have not been really happy about making different levels of certification. People seem to want it. The big issue is not that they want to have a PhD and lower-level certification--they want to be able to specialize in the domain that they are working in. We have to allow people, for instance, to focus on health care or OHS. We must not confuse this with "what is an ergonomist." Last slide — Example from New Zealand. OSH practices. Good example of the sort of thing we will be producing. AT: There is a huge difference between specialization in healthcare and specialization in physical ergo. KM: What is the core of competencies that everybody needs? We are looking at this in two different committees and need to reach a solution. One other comment—when I write to CIEHF we will first change the website to "endorsed or formally recognized."
5. Development and Promotions Committee	**EP**	EP provided an update on the activities of the Development and Promotions Committee *(Ref DP Report March 2019)* EP: I need to hear your views. When we speak about the Congress model, there are 5 steps: 1. What it takes to apply.

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		2. Organizing plan—project plan.
		3. How to report progress—how is steering group defined?
		4. Execution of Congress.
		5. Report of success of conference.

2. Organizing plan—project plan.
3. How to report progress—how is steering group defined?
4. Execution of Congress.
5. Report of success of conference.

These need to fit together. Budget is very important.

Minimum criteria need to apply. If there is no common agreement, how can the steering group be sure that the candidate is capable to do it?

I have a project plan, if you are interested to read it. Who has the responsibility to monitor the criteria?

KM: We have that.

EP: Project plan should be based on the application, but should include much more. I have not had time to go through this. Then the content and activities should not be mixed. I would like to see that there is feedback. Lessons learned—all done differently, because the project plan is missing. You should have a clear visibility, looking back, on how well it went. That is the kind of learning.

"Creation of the IEA Triennial Congress Model" slide
Each of these four projects has its own manager. Making the plan is the biggest work. Accepting the application exists. Then the project plan (new area that we need to focus on most). Then there needs to be a template. Focus on something else that is important. What needs to be achieved, which priority.

Congress report—who will be the steering group? Need to be people from EC but also specialists that know how to monitor progress. I don't know everyone's skills and experience regarding project management.

This does not have to take three years. If there are people taking care of certain sections, we can include them in the current structure.

KM: It would be great to have this in place before bids come in in 2021.

SA: Should be next year 2020.

EP: Relevance of Congress model—education is very important. People are coming for information. Sometimes it seems that people are coming to the

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Congress just to show their own results, but we need to figure out how to promote the learning opportunity at the Congress.

Obstacles — not based on experience. We may not have known the competencies of those who managed a previous conference. Skills and competencies cannot be outsourced. Role of EC in acceptance and steering the organizing of the conference needs to be clarified.

We have a lot of knowledge—existing material, people who handle sections. Lessons learned—how much will it be used? Create a model and see what gap there is from lessons learned.

Implementation— so many ways associations operate. This model should not be used until we understand whether it would help them. Denmark association has skills and competencies.

Budget—depends on how many meetings are needed and where—travel costs according to the locations of those responsible.

NES - NETWORKS AND CONNECTIONS OF FEESA, CREE, AND NES — NES 2019 workshop. Mapping connections of associations.

Why this mapping? Helps to find out who are stakeholders. It bothers me that some peole speak in the name of ergonomics. What do associations want to achieve through networks? Facilitating associations to develop their targets. Why are we existing? Avoid reinventing the wheel. No model is permanent. I speak about customers, you speak about stakeholders We have stakeholders and customers.

Slide of the steps for NES 2019. After the workshop we will do a summary of the answers. FEES, NES, CREE, IEA.

KM: One thing that is critical to conference model and success, either the organizing company and/or the skills/knowledge of those who are supporting. Some things we would have looked for differently in the organizing company in 2018, for example.

EP: It is the association that is organizing the meeting. For example, in Iceland, they are all physical, they would not be able to do it.

SA: We have been talking with Elina in the past month about the Congress model, from my different role. Project plan—-we are missing. We have been

working with Ian Noy to pass information about our project plan so they don't reinvent the wheel. Knowledge translation. One of the key points of the model. Steering committee — key issue. We should have an organizing committee not only at FS level but also at the IEA level. An appointed group, not the EC. Useful to discuss the Congress in EC meetings, but need to define the role of the steering committee, as it is not clear what IEA can offer. 3. Advertising— introduces the topic of the organizing agency. When an FS organizes a congress, they rely on an agency. They may I not be aware of all the requirements of contracting with the agency. It may be that the agency organizes the events within our community. We need to establish some rules about that. We have been working to reconstruct the contact list of IEA 2018 because of a lack of experience.

EP: We need to start from a clean table, from a point of view of how this is done. Start from the project plan.

JOG: Briefly, our main product is the Triennial. It should be professional. We can't continue with amateur model anymore. What do you do after depends on our decision. Does IEA take this on or not? We can outsource from the same source for each conference. We can't continue.

KM: We might get our own organizing company, but not sure that this is possible.

YF: Two questions, possibly naive. It is not clear to me how this model will help EC. 1. Does this model help us? (EC)

EP: Definitely

YF: It is the Council who chooses where to go six hears in the future. We cannot be choosy before the election—we cannot say that you are not eligible.

KM: There are requirements.

YF I would like to understand more how the model will help us before the election. And one more thing. After the next election, our job/responsiblity is to help those who are chosen. Help them to move ahead. We need to help them by providing them with knowledge and experience. It is the society who experienced the congress. EC cannot maintain that knowledge. Howe will this model help us on that point?

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| | | KM: In the charge that Elina agreed to take on, it was her intent that IEA have more control over the congress. So the model might exclude bidders that don't have plan or after they are selected. If we don't take more control, there is no way to influence the success.

YF: This proposal doesn't clearly explain how it can satisfy your intention.

EP: To start to think at all, it was hard to describe the current state. If this application is so rough, it doesn't describe the possibilities. The application needs to be the first-level project plan and it has to fill the requirements to the point. Then they have to fulfil the plan.

KM: That is where the EC comes in.

EP: They need to provide the plan.

AT: I agree that it should be professional. When you say that it's our product, does it mean that we have to make money?

JOG: The conference costs $1 million. We have a risk that is unsustainable.

KM: Let's continue the discussion over lunch.

EP: The application needs to be so good.

CONGRESS MODEL (continued after lunch and VPSG report)

KM I discussed with Elina possibility of producing requirements. For example, we have a retained organization company that bidders are required to use or work with (small board from Congress organizing company that is globally knowledgeable), or the society can pick a local company within our requirements (risk assessment, science background, intellectual property, etc.).

EP: How about the scientific content?

KM: The scientific content is part of it.

EP: There are external companies who are not experts in scientific conferences. We need to provide requirements to the external companies. |

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| | | KM: I would assume that IEA would always manage the scientific companies. We would need a list of all of the facets of the Congress. We would need to cover all of the facets.

SA: We would need to decide whether/how the Federated Societies would be involved. It would be a challenge for the societies to have a plan at the time that they make a bid. Do we want to be inclusive regarding those societies? If so, we need to take more risk.

KM: Is there any conflict of interest if societies come to s for help with their bid?When they prepare a bid, some societies are not very good at that because they have not done it before. They may see that there are conflicts.

EP: We have to have a combined application form. If you are using external organizers. First you need to figure out.

KM: You are talking about a different issue, but they meet.

JOG: We need to decide to change the way you have of controlling.

KM: We have decided that.

JOG: This is for 2027.

KM: Yes

JOG: We should define how it would work for a local society

EK: I talked to Yushi—use terms "guidance" and "control". Elina, I am very happy to talk with you. IEA should not help them. You might really get a conflict of interest.

AT: But we [the EC] don't vote—it's really not a conflict in that regard. Not sure that we have the capacity.

EP: We create a simple document that is used by the organization. They have to have a schedule in their project plan and targets. Every milestone, they need to provide a report. There are existing examples so it's easy to do.

SA: For example, the way we managed the abstracts, we needed to manage the review. But we were not sure about the abstract management system. |

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		We needed to manage the scientific process. Sometimes the process is not reliable because someone else is managing the system. KM We could handle this in the requirements. So we will coordinate that— the report and the vote.
7. Science, Technology & Practice Committee	**TA** **Via Skype**	TA provided summary of Science, Technology and Practice Committee (*Ref*: *07a STP presentation 2019 EC* *07b STP TGchairshandbook.final* Presentation TA: HFE is a hot topic. Diverse, multidisciplinary, holistic, and more. The general public may not know how crucial HFE is for the success of new ideas and products. We need to work on public awareness of this. Not just usability, applied technologies. STP coordinates (see slide) 4 main goals: • Supports Triennial Congress • Explains interdisciplinarity and reputation • Supports the IEA Community - primarily TCs (2018 goal). Last year, there were a lot of changes, ongoing restructuring. • New IEA handbook of HFE Support Triennial Congress: Organizing team is very active. Ian will talk about this later. We had our first exchange of ideas, lessons learned. Not as much feedback as we would have expected. Need to send 2 or 3 emails before feedback is provided. Survey about TC involvement. Ian will tell you about that. Assure high quality of publications. Indexing. Continue in future. Some ways to coordinate TCs' involvement. Revitalizing. Quarterly newsletters to TC chairs to inform them on what is going on with IEA, networks, Congress organization, etc. Merge topics and TCs to ensure active contributions. Find alternative POCs for inactive TCs. Not at the last minute. Support interdisciplinarity and reputation Support the EC with publication policies. Very little feedback from the TCs. 4-5 positive comments SA: I will present document after your presentation.

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		TA: The issue that is important is that we have to guarantee at least two publications per year. The TCs are involved in larger conferences, which they use for publications. Generally they like the idea but they need to love the idea.

Support of the IEA Community

Newsletter, feedback mechanisms. What to do about TCs with unclear status (e.g., contact information for the chairperson). In one instance, EC agreed that a new chairperson is needed. Design and Design for All are discussing merging. In Florence there was no feedback from Design, for which we have no information about the chairperson. Not to forget that when we are talking about inactive TCs, we should remember that there are very active TCs that should be supported. We can link them to activities of other TCs, Federated Societies. Handbook for TC chairs is another way of supporting them.

List of TCs (Slide 8)

Auditory Ergo, Psychophysiology in Ergo — unclear status. Not able to contact chairperson.

Lots of new TC chairs.

IEA Community

Guidelines for IEA TC Chairpersons. How to make this an official document? EC approval sufficient, or do we need to circulate it to the Council?

KM: We could start to use it, but I would like to know if the model for the TC is adequate. For now, let's just start to use them.

TA: I would agree and would like to understand this as a living document, able to be adjusted. It has been circulated among the TC chairs, and they want to see how the elections work out in progress.

Scope of the TC handbook
Reporting about special activities — show the TCs what the other TCs are working on. At this point, they pretty much work on their own. Not linked. By introducing newsletters and working on special activities, collaboration will be enhanced.

IEA Handbook of HF/E |

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		No work on this during 2018, but still on the list, and I agree it's important. Have to agree on where content comes from. One source is TCs, another societies, another from specific authors. Contributions from IEA 2018—TCs could nominate, but they didn't do that. During the summer, they could be asked to look at the 2018 proceedings again. Some TCs are not active, so the question is where content from their domain would come from. I might have difficultly identifying authors, volume editors. Additional reorganization of STP committee I would like to have cochairs or deputy chairs so that the workload could be distributed. One for Technology, one for Science, one for Practice. Andrew Thatcher liked the idea very much. For practice, Rosemary Seva's name has come up. She is very active—I have not asked her. Someone from Singapore? We want to have gender and international diversity. Female candidate from Asia or South America. If you have ideas of candidates, I would be happy to ask. We haven't talked about roles/responsibilities. Discussion MR: There is an activity that I put in my goals to work with you on endorsed IEA conferences. How we can go around the process of endorsing the conference. My committee disseminates the Congress proceedings, so maybe we can do that. I think I'm behind on which conferences are being endorsed, how to get proceedings. JOG: You made a good suggestion. I will help you find a cochair in South America.
8. VPSG Report	**SA**	SA provided the VPSG report (*Ref*: *VPSG Report March 2019 report*) and Publications policy [REF: 08a VPSG 3-year plan 2018-2021, 08b Publication Policy for IEA EC Cali 2019] VPSG Report Day to day: • Development of Social Media • Building of the mailing list of 2018. Developed a strategy to contact them.

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![IEA International Ergonomics Association logo]

		• Development of publication policy
		• Development of collaborations for projects with IEA networks. Skype once per month. For example, shared seminars in conferences in Capetown with involvement of ERGOAFRICA for ISQUA 2019. New ways of collaborating thanks to these events. We are exchanging logos to give visibility to other events. We are publishing on our website conferences of other organizations.
		Working with Ian Noy to manage the transition to IEA 2021. So that we don't waste the knowledge and lessons learned. Four Skypes, each focused on a specific topic—sponsorships, scientific program, etc.
		Collaborating in design of the Congress model. Happy to be involved.
		I'm going to provide a timeline to describe the milestones for the next years. Maybe some of us already did it so that we can have a general timeline of EC activities.
		HCTC - worked with them on organization of HEPS.
		Publications Policy
		It has been a great pleasure to work on the publications policy with TA and Elena Beleffi.
		It's important to have continuity to guarantee a standard of scientific production and brand/identity.
		Slide 2 - IEA supporting journals, IEA press currently published content. IEA Press not indexed on Scopus, which is a drawback to having academics attend the conference. We also have TCs that conduct IEA-endorsed conferences, such as HEPS, IEA2021. To guarantee a high-quality scientific product, we need more than an online publication (i.e., Australia). IEA2018 had an indexed proceedings with more than 100K downloads for each chapter. A main goal of IEA is to be global and talk to other scientific communities.
		TCs run seminars in congresses of other associations, but these become dispersed.

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		The main objective of the document received is to foster the scientific identity of our association. Publishing at high-level standards fulfills our policy, guarantees continuity.

The Proposal [See slide 4 of SA Publication Policy ppt.]

This will give us a brand for our publications. Our knowledge will be recognized under the IEA logo. A way for us to save our heritage of knowledge. High visibility in the scientific world.

This is a way to make money. We need to get people on board, and in collaboration with TCs.

I was asked to look into different publishers. I sent you the table with the different offers. We got an offer from Taylor and Francis and from Springer. Elsevier was not interested. Offers related to 3 different ways of publishing:

1. Only printed version
2. Payment for each access
3. Open access or access for a certain period of time for free to participants in the Congress.

It's not mandatory to publish with the same publisher for all publications.

It took a long time to contact, negotiate, etc., all options.

Recommend Springer—publisher for HEPS and for IEA 2018.

If there are other options, we need to get them by April. Two-step process:

1. Decide if we want a publication policy
2. Pick the publisher. Springer proposal is no cost to us. We can try for 1-3 years and see if we want to go on. Having an IEA brand in an indexed publisher would help our intention to become a global organization.

TA: The feedback I got from the TCs (and my view), publication policy. Very good initiative. There are no costs. Good for scientific community. Having the brand in there would be a top thing for HFE as well. Much better than having individual, different kinds of publications. I would support this. I looked at what you shared and believe that the Springer model is a good one. I don't see any better ideas. Needs to be indexed. |

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		KM: Comments? Great idea! I think the order would be to decide among ourselves that we want a publications policy. And then say we want to recommend Springer and then have the Council vote. Consensus?

EP: Creation of the Congress model, so I will contact you concerning this topic. We need the support of IEA Congress organizers.

MR: For IEA endorsed conferences this would be an opportunity? Just offering the opportunity, not requirement.
KM: Suggested because it's an IEA brand. Add to IEA endorsement application.

TA: Agree—it's an opportunity, not an obligation. A benefit. Before we forget, we might want to add a second logo if possible if another organization joins with us. (IEA Federated Society logo).

SA: Yes, I will put it in the agreement ACTION ITEM

JOG: Communicate proactiviely with societies, networks.

KM: I would assume that it would be published into the language of the conference first. Or bilingual.

JOG: Abstract in English.

MR: I would like to work with you on endorsed conference application

JOG: Springer has a huge database. It would be great if the database on HFE could be available to the societies.

KM: We are not talking about paper publications

SA: Imagine—we had more than 100,000 downloads for each volume. 16 volumes. A huge dissemination of our knowledge.

JOG: Elsevier and other companies have databases. Way to improve.

MC: If I organize a conference for ACED, if it's an IEA-endorsed conference, it's powerful.

SA: Ian Noy already has the same contract for IEA2021 as the one we had in Florence in 2018. |

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		AT: for a country like South Africa, it would be a huge incentive to be an endorsed conference. MG: A couple of times in the last month, in Ecuador and yesterday, people have said that they have a lot of trouble getting published. Same situation in Asia. People are not inclined (or good enough) to write in English. I'm really happy with this step that has been taken, but we need to help them if they are not native English speakers. KM: Or if it's bilingual, SA: In Springer agreement, there is the possibility of creating an IEA Editorial Board, with some support, and we can have a role with this. It's would be great to provide support. AT: And great to link with STP, IDCs. Mario Vidal, who's working with MC would be great. MC: English/bilingual makes more sense. For English, it's easier to find the information. Abstract in English would be great. KM So we are in agreement. We will recommend Springer. If we need to do it sooner, we can do an electric vote to Council. ACTION ITEM FOR SA

6. IEA Awards	**YF**	YF provided a summary of the IEA Award 3-year plan (*Ref*:
		     06a Award Committee 2019 Mid-Term Report
		     06b Award Committee 3-year plan 2018-2021
		     06c Award Committee IEA/Kingfar Award
		     06d Award Committee IEA/Tsinghua Award
		
		Proposal on two new awards (China)
		
		Two new annual awards are being proposed. We did that by email (electronic voting). All EC members answered that. In the agenda it is identified as a voting item, but it is a voting item that will be shortly decided by Council.
		
		They are not familiar to us (Beijing Kingfar). They provide comprehensive technology solutions. Their clients are PhD students.
		
		New Awards
		$10,000 each, $8000 go to award winners. Balance is for IEA.

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![IEA logo - International Ergonomics Association]

		As soon as the proposals are approved by Council, we need to wait a few more days. Once the proposals are approved, we are going to find the selection committee chair.. Selection committee chair— Gaur Ray.

MG: How do we define IDCs.

YF: Usually use the UN definition of high/low income.

AT: It's in the proposal

YF: Liberty Mutual - Stephen Bao has agreed to take the position vacated by Klaus Zink. George Brogmus of LM will be the sponsor representative. Stephen Bao won the award in Florence.

Topics for discussion:
1. We only have 12 awards—do we want more? YF: we have enough. If we are to have more, we need clear guidance about what to add. Now we are waiting until someone comes to us. We need to change that attitude if we want to expand.
2. Monetary benefit - do we pursue? This is complicated. LM and Elsevier are very different. There is a historical background to the rationale behind the prizes. For the future, we may want to have a rule. We then can negotiate with the sponsors, even the sponsors of existing awards.
3. Honorarium to chair/members of committee? My suggestion is that we don't pay unless otherwise specified in MOU. We might keep a small amount. When I look at the whole picture, I don't think we need to pay.
4. How to keep website info up to date? Website update is an issue. We need to improve the functions for the next website. If you go through the existing website you will be surprised at old and inaccurate information
5. How to encourage people to apply? Do we need a guideline for proactive actions if we need to ask people to apply?

JOG: Who is winner, where do they come from? New awards—come from university people. We should have 1000 names.

KM: As long as they are members of FSs.

JOG: 35 FSs have 26 members. We need to expand. The bid comes from Federated Societies.

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		KM: Excellent suggestion. Regarding honorarium, we could ask the proposers in the future if they want to fund the honorarium. YF: Even for the current awards we should do this. JOG: For me, it's not enough. Award for cutting-edge technology. The carrot is the award. MR: We should involve our IEA Fellows more in encouraging nomination. Once you become a Fellow, that should be their responsibility. JOG: They are retired. MR. Not only—in addition. EP: What is value? MR: Recognition, for tenure. International level gives you more points. JOG: It's like the Grammys for music. ACTION ITEM FOR SARA: Consider updates for new website. YF: Korean model is to find sponsors—that is their primary intention. Giving them an opportunity to give out an award with their name. I am going to write down a rule and would like to know if such a model is acceptable for IEA. KM: Is that what you did for Kingfar, Tsinghua? That is a good model. AT: A comment of thanks from IDC to YF and JOG. I you look at our policies, it is good for IDCs, so it's a great big step in the right direction!
9. International Development Committee	**AT**	AT provided an update on the activities of the International Development Committee. *[Ref: 9a IDC 3-year plan template]* AT: Objectives – 1. Support strengthening of existing societies and building of new societies through educational programs. Support development of

new programs, improve existing programs. I can't do this on my own. Need to work with PSE, etc.

2. Support development of IEA networks. We as a group cannot do this effectively on our own. Consistent with IEA policies 1-7, we need to build IEA network capacity to support development in their own regions. Use the GFM model. Second, we need to build coherence between IEA activities and network activities. Workshops in Colombia are great examples.

3. Long-term sustainable development. Going forward if we need to mobilize we need to develop a sustainable funding mechanism. One way is to provide better recognition to those who are contributing to international development fund. Show them how the money is being used. Help societies to help them fund activities by themselves. GFM

Africa and ERGOAFRICA — Hakim Benchekroun as cochair. French-speaking and Arabic regions. It's important to be ambitious. Not to be Federated or affiliated with IEA. Be affiliated with ERGOAFRICA and their policies. Hakim and Andrew Thatcher.

Tunisia is another example (Sara, JOG, Hakim, and AT)—they are requesting support from us to improve their education. We have been more discerning and critical about their requests. They are beginning to appreciate this and to ask for suggestions and offering to pay for someone to go there and train them.

OHS in Africa - Challenges and Actions. ERGOAFRICA session on HFE in Africa and how it links to OHS. Hopefully, they will support travel for people from North Africa. I will present, as will Andrew Thatcher and other colleagues. As SA has highlighted, there are good examples of HC ergo in Africa.

Asia - SEANES and ACED. Would like to do a workshop with SEANES to get collaboration going between SEANES and ACED. I chatted with MC about the usefulness of collaboration between these two partners.

I would also like to follow up with Vietnam, and we should not neglect to follow up on them. Good work in Bangladesh and Sri Lanka—I would like to link them to the network.

SEANES — need guidance on best strategy for international development.

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		BRICSPlus - need to distribute information on new awards. Thanks again to JOG and Chinese Ergonomics Society. We will continue to facilitate and support academic exchange. Half the world's population, most important emerging economies. Oceania - no activities Europe and FEES - European cochair for IDC committee? What does EC think. Thanks to Elina for FEES/NES workshop and MOU. This is an important step. The workshop in Denmark will be an important launching pad. To continue to build on the collaboration with FEES/IEA. FEES seems to have a struggle with resources and time. Continue our support for development in Eastern Europe. Latin America/ULAERGO Paulo Antonio Baros Oliveira - cochair. Continue strong collaboration in ULAERGO Panama, Cuba, Peru, Ecuador, Argentina, Chile, Costa Rica. Great PhD program in Cali. There will be an IEA/ULAERGO workshop in Argentina in November. JCH: Who will go? AT: I need to get it accepted as a proposal first JCH: So do so. JOG: I got an invitation last night to Buenos Aires. SA: They invited me, too because of HC work. AT: We need better communication between what we are spending money on and what we are doing with their money; e.g., funds from HFES, JES. Success stories, international development. Need to showcase this at donor events. Should we go further and converse with society boards about what motivates contributions? How to effectively integrate HFES and CIEHF into activities in Global South? Two new awards are an interesting concept. That model needs to be looked at more carefully. Ideas of workshops in developing countries is appealing. Pitch workshops in South Africa and money that comes in goes to IEA IDC initiatives in Africa.

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		Proposed budget - IDC fund for IEA Triennial Congress - $10K, ID travel to promote and support activities - $8000. KM: How much is in the IDC Fund? JOG: $15K. Just an idea — my perspective on what I observed in the last three years. We can communicate with big societies. We should be more proactive with plans for their donations. We should also have donors outside the IEA family. AT: Fantastic idea. Put this on the website. Around ID - here are projects we are involved in. MG: Let's do crowdfunding. ACTION ITEM FOR AT - Draft a proposal for donations KM: You, Andrew, are the king of the GFM workshop, which is why we wanted to have the workshop here. AT: Yes, this is key. I am IDC, but I rely on PSE, and there is no reason for me to have to do that in Asia when Max is there, and vice versa for the African context. We should not be committee silos. EP: Questions. In the beginning, support for education. In NES you don't have academics on association boards. When we come back to international activities we have CREE and we have associations. I have a mismatch in my head. We have to discover why, because in Europe it looks like ergo is disappearing. Programs are going away—they are working in companies because universities are losing program. JOG: Sorry to say that in Latin America we have hundreds of professors who trained in Europe. We should find out where they trained. A project to identify a reverse network of HFE in Europe. IEA can promote this. We cannot fight this trend or stay frozen. They continue to train people. My suggestions if it is not possible for FEES or national society, IEA take this proactively. Move ahead and do a seminar.
10. Future of Work Task Force	**JH**	JH provided a summary of the activities of the Future of Work Task Force *(Ref: FoW Task Force Report March 2019)*

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		Now we will see activities for the next three years. I will not comment on the high-level goal— not necessary

Project #1 I am the chair, but we need a member by world region or by clusters identified in Florence.

Final project goals:
- HFE community is updated on changes occurring in the world of work.
- HFE specialists are able to introduce strategies and procedures for better serving main stakeholders from the world of work.
- HFE disciplines and community better recognized for their contributions to the world of work.

Main outcome - Task Force structured and in operation.

Strategic means
- Identification of key experts interested in joining the TF
- Building up a solid network of proactive TF voluntary members
- Systematic search of reliable information/data related to world of work
- Sustainable exchange of information among TF members
- Periodic dissemination of info and data through HFE observatories or other ways

Project details, description of main activities
- Guidelines for operating a TF (based on guidelines for TC chairs)
- Criteria for identifying potential focal points: expertise, functions, roles
- Consultation with HFE societies and universities for identifying local experts as potential focal points. Also ask the EC for help in this regard.
- Potential for operation in regions or HFE clusters

Relevance to FoHFE
Interlinks to FoHFE will become closer, more frequent, and evident

Issues and preconditions
Interest from EC, FSs and networks |

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		Resources needed from EC Support for official contacts in Latin America and beyond with FSs and Networks. Need to have the official backing of IEA EC. **Project #2** Expanding relationship with ILO. History of JCH contact with ILO goes back to the 1980s Responsible JCH and other still unknown focal points. Need to be identified and invited Final project goals • Enhanced proactive between IEA and FSs network and IEA globally • Better knowledge among main ILO stakeholders and better knowledge of ILO among the HFE community. • Easier access to employers and unions. This is a final project goal because we have to work more within the ILO because it is a huge bureaucratic organization. Need to find the easiest ways to work within their structure. Accomplished and ongoing outcomes • White paper on HFE distributed within the ILO and HFE community • Think piece (3 pp) on "Essential Contribution of HFES to the Future of Work We Want" • "Foundational Principles and Practices of Effective HFE Systems in the Workplace" (book). We will have a meeting in a month in England with the writing group. Four strategic means to maximizing the benefit of outcomes to IEA members, etc. • Dissemination of key HFE info within ILO • Dissemination of key ILO information within HFE community • Establishing instructional and personal contacts with ILO officials worldwide • Joint HFE/ILO Activities Description of 2019 activities • Think piece (completed) • Section on new forms of work platform (in progress) • Guidelines on strategies for contacting ILO officials (being drafted)

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		• Information on ILO flagships projects addressed to HFE community and included in white paper (being drafted). Flagship progjects are the most relevant ones around the world
		Preconditions • Results will depend much more on our actions than what comes from the ILO. • Strong, proactive approach from HFE community through learning about the ILO, carrying out organizing, personal contacts with ILO officials, inviting them to HFE activities and designing HFE/ILO activities.
		Resources or help required from EC Suport for: • Creating links with the ILO website in their web pages • Disseminating ILO information and data • Promoting to organizers of HFE activities to include FoW section and issues into programs • Asking them to invite ILO officials from their regions to participate-- not an easy task.
		Project #3 Creation of HFE observatories
		Final project goals: Contribute to recognition and appreciation of HFE principles, concepts, approaches, and other procedures by other disciplines, social actors, and society
		Resultant outcomes HFE community is updated on HFES knowledge, research and advanced topics, cutting-edge issues,
		Recent outcomes SOCHERGO is creating an HFE observatory and transforming their Society into a Foundation (similar to ULAERGO).
		Strategic means Promotion in IEWA Website, MOUS for creation and support, presentations in congresses.
		Main proposed activities (raison d'etre)

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		• Information search and analysis on HFE issues in coverage areas
		• Systematic communication to a list of interested users
		• Call for attention and advocacy actions in their countries
		<u>Relevance to FoW FoHFE</u> same
		<u>Project details, descriptions of initial activities</u>
		Along 2018 - Drafting of proposal. Informal consultations within UNERGO. Early informal communication to EC.
		Q1 2019 and 2019-2021 (See slides)
		<u>Resources needed</u>
		Systematic support along the 3-year period.
		Discussion
		KM: Glad to see that your own observatory draft proposal is coming up. Will be a good example for other societies.
		JCH: Our university has a program for new proposals within the postgrad school.
		KM: That could be a template.
		JCH: Main characteristics of observatories. Drafted in Spanish, translated in English two weeks ago. Can provide a copy of that (ACTION ITEM) 2-page, 16 action items.
		ACTION ITEM FOR LYNN: Distribute this to EC (Done)
		MG: Question: Guidelines — is this criteria?
		KM: Guidelines for regulators "Human Centered Workplaces — different title.
		JOG: On observatories, do you think to organize them counting on cooperation from ILO? I understand the guideline proposed by Kathy. Not to be without a structure. ILO tried to point out concerns about the future of work in several directions. If they have difficulties understanding HFE, so much more so regarding FoW. If you could count on ILO structure, (Tripartite - industry, unions, government)—not let it be totally open. Good initiative. If

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		a society tries to organize an observatory, a society cannot do this on their own. JCH: That is happening in SOCHERGO—within their society. I am going to organize within my university. In both cases, there is no problem for communicating initiatives/programs that ILO is promoting concerning FoW. One source of information is to look at what ILO is doing and introduce that into the observatory. Everybody will be updated regarding what the ILO is doing. Plus declarations or statements from unions, NGOs, whatever. The focus is to be aware of what is happening in the world of work area of coverage. When you read the document, youwill see.
11. Historian	**EK**	EK provided the IEA Historian report (*Ref*: *11a IEA Historian presentation EC Cali March 2019; 11b IEA Historian 3-year plan 2019-2021*] FInal project goals (see report) All minutes of IEA EC are digitally available. LS can help with this. All of my work is performed except retrieving documents. Presentation of the history book is planned at several meetings in Cali. [EK distributes copies of the new history book to those present. KM expresses thanks and appreciation to EK and others for all of their hard work on the excellent new volume of IEA history.] SA: Books were left in the car so I didn't present them in Cali. MG: I will be at the Australian society conference in April. EK: Wait until the end of your term to decide to have a new historian.
12.Information & Communication Technology	**TK Via ZOOM SA/MR**	TK/SA provided summary of Information and Communication Technology Ad Hoc Committee activities and plans Information & Communication Technology [*Ref*: *13 IEA Web 190313; 13a Officer Comments on website Redesign*] Plans for the new website SA and MR led a discussion on Social Media Policy (e.g., Facebook, LinkedIn, Twitter, Constant Contact [REF Social Media Policy Report March 2019]) and standards for communication with networks

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		SA: We worked on the website. We are hoping to get it done at the end of this year in order to be presented in the first term of 2020. In terms of the redesign, we are very aware of the timing—not too much, not too little.
		TK: Plan and Progress on re-creation plan.
		Slide 1 - basic technical plan.
		Slide 2 - basic design plan.
		Feedback from EC - need to have new text that gives a better description of the field. Sara asks that this happen quite soon.
		AT: To move from domains of specialization to application areas.
		Discussion of how to incorporate feedback from the EC and the Council. We will stay with the current schedule.
		TK: Please describe the priority.
		SA We will add feedback to the ones you have already received by the 15th of April. (ACTION ITEM FOR EC). Then you can go to the third release.
13.Communications and Public Relations	**MR SA/YF**	MR provided summary of Communications and Public Relations Committee activities (Ref: 12 CPR 3-Year Pan EC Cali 2019) SA led a discussion on strategy for collaborations (e.g., ISQUA, WHO, ILO) and Social Media [REF Social Media final report for IEA EC Cali March 2019] YF discussed relations with ISO [REF: 12b ISO – What Does ISO mean to us IEA EC Cali March 2019; 12c ISO report 2018 from IEA] MR: Activity 1 - high-level document "Foundational HFE Principles and Practices for Human Centered Work System." Created an international team of experts. External review committee. Meeting at CIEHF, where team leaders will come together. Goal is to have a draft, external reviewers. After

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		April meeting we will have a couple of months. Will meet at HFES. Deliverable to ILO at the end of this year.
		Activity 2 - WHO: IEA is a registered NGO Development of case studies for the informal sector. We need a couple more. Brought in some ILO documents.
		Three-year plan—following 2020. Look at the WHO 11 target areas and we've addressed #7 — OHS of health workers. We can address another area if we are interested. I have spoken to Sara about how we want to deliver.
		I would like to link ILO document.
		I will go to World Health Assembly - Joint statement on assembly floor. IISE asked HFES president about this. They told me to back off.
		Target date - interested in having a keynote with World Design Organization. They do set up MOUs with other organizations. Very large organization — talking to ED. Who do we go to?
		Last year, YF asked to talk to Advanced Imaging Society. Who do I talk to?
		YF: Takashi.
		MR. Usability Professionals Association - like the idea of joint activities. Develop a portfolio of activities. Narrow down a bit. Create a robust MOU.
		Need to coordinate endorsed IEA conferences. I feel like I'm behind the curve.
		I'm always updating our external matrix.
		MR: Besides ILO main activity - developing case studies for IEA website. We have six selected. One-page publication. Don't know if it will go on the website. Want to keep momentum going. Have case studies that can support WHO in informal sectors. What are illustrations, how can we keep it simple. Took advantage of being in the UK.
		Then we need to think ahead. Contributions every year. Have another award in 2021. Got 25 submissions. Worked well but could be more efficient. We were very excited. Initial call.

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<u>Activity 3. Submission to Work Journal summarizing 2018 panel.</u>

We want to perhaps change Global Ergonomics Month to Worldwide HFE Month? Contact at EU OSHA would be excited about this. Journal article showing.

Goal 3. Need to review the survey administered to societies and networks. Determine action plans. Coordinate with SA. Website article on survey results.

KM: Examples may be replacing Ergonomics in Practice.

MR: Claire is retiring; we need another person.

AT: I was going to suggest someone from Latin America, where they have a good basis in systemic approach. Other languages.

MG: Publicize on Facebook to get people to submit.

MR: Now we have deliverables. We might want to decide what graphics we want. Graphic artist.

JCH: Once you have the six cases already published on website of IEA, could they feed into ILO white paper.

MR: Yes.

JCH Annex for people to have practical examples of workplace interventions.

MR Basically posters. We want new ones every year.

MG: Hidden agenda to show what HFE is.

EP: System approach. We have all these things and examples. Should we highlight those who are providing them?. What are the conditions that made it possible to do. There are always considerations in the background. That could be one part because if the examples are replacing "ergo in practice" it is not that. I hope that in the future we will focus on what it takes to do ergo in practice.

AT: In terms of relationships with stakeholders at a global/regional/local levels. We need to translate to national and regional/local levels. Even going

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![IEA - International Ergonomics Association logo]

		further back, in terms of our relationships with ILO, that should be translating into relationships with ILO in Africa.
		JCH: Don't forget as a criterion, show small- and medium-sized enterprises.
		SA: Maybe collect case studies from member societies.
		MR: Initiative is going
		MG: Needs of members - almost impossible to publish interventions.
		KM: We can publish series of case studies.
		SA: Social media. It's up to you to contribute. IEA 2018 Facebook Page is now the general Facebook page. We asked all EC members, FSs, etc.
		MR: Did we put our activities this week?
		SA: Lists those who have agreed to contribute to Facebook. Goal is to have one post a day.
		We agreed with Michelle to start a Twitter account with a pilot. A few people managing a pilot program with a few events. Discussed with Andrew that the Twitter account is related to events.
		LinkedIn Group — we may need to reorganize it.
		Constant Contact - general regulations. Lynn describes.

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31 March DAY 2		0845 Gather in meeting room
0900	**KM**	Call to order
0900 14. IEA 2021	**IN Via ZOOM**	IN provided an update on IEA 2021 Congress preparations (*Ref*: *14a IEA 2021 Report to EC March 2019* *14b IEA 2021 3-year plan 2018-2021* *14c IEA 2021 Powerpoint March 2019 EC* Draft timeline - created with PCO Prestige, with input from SA and Elena Beleffi (last year). High-level view—lots of detail not shown. Glimpse of Congress timeline. Dark green cells have been completed, light green in process, gray to come. Started work, lots of work still to come. Suppliers/situations will change. We have planned out major tasks, started making appointments. Living document, will continue to evolve. We have a detailed, step-by-step schedule from HFES. That will help a lot. You have these slides, but please ask questions. Org chart slide - lots of committees not yet established. Excellent hotel rate for Vancouver;. $330 Canadian/$250 US; university dorms for students We are committed to a certain number of room nights; we might offer a discount on the hotel for the first 400 people who book. If people want to find other accommodations, they can do this on their own. We have a vested interest in filling rooms. No meeting room expenses if we meet our block. Tremendous savings for the Congress. I don't feel anxious about meeting the room block. If we anticipate 1000 attendance, it's about half the people in the hotel. JO: Didn't see an alternative for IDC students. IN: I mentioned that we are in discussions with the U. Of British Columbia to make dorm rooms available. That's the only alternative to this hotel that we will provide. Otherwise they can go to Air BnB, etc. Shuttle will be available. Vancouver is a world destination but it's not an inexpensive place but neither is Melbourne, Florence, etc. Digital posters are being explored, as is a booking arrangement where presenters can book their own slots and advertise. It will be more like a ppt presentation as opposed to a poster board. It will enhance interaction process. Will depend on cost. About 20% of rooms will have standing workstations. We are looking very carefully at the software platform to make

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the whole experience friendly and efficient. Abstract management, mobile apps, etc. Software products will make the experience more user friendly.

Moderated "executive sessions" — people sitting on couches moderated by a professional facilitator. We don't know exactly know what the networking sessions will look like, but we would like people to be able to interact, and if you have any ideas of brainstorming session, again, we would like to explore that because the congress is a place for people to get together, exchange ideas, brainstorm, etc.

Digital name tags will identify people when they go to exhibits, meal functions, etc. Will help with management of events but will also provide stats on who went where.

Tech program - Nancy Black, Patrick Neumann. In touch with TA and some TCs so are well on the way to establishing relationships. TCs responded to a questionnaire; some TCs have not responded yet. Thomas is looking at making some changes and getting some additional responses. We are also establishing a scientific committee (chairs of TCs and other nominees).

Debrief meetings with SA and Elena. Nancy and Patrick are contacting publishers that might be interested in a special issue. Following Florence experience, where Springer has agreed to publish the proceedings under the same terms, allowing some to publish in a journal of their choice. Very grateful for this possibility—cuts expenses because we won't have major expenses with publication of proceedings other than some extra hard copies. Minimal, though, compared to past. Logistics, timeline discussions ongoing.

IEA TCs. List of TCs—those who have responded and/or those involved in Florence. See slide. Eight TCs have neither responded nor were involved in 2018. Candidates for some change—provided to Thomas.

Remark from yesterday—there was discussion about creating a model for IEA congresses. One concept that emerged was the need to look at the program from an IEA educational objectives perspective. I agree, and think that the way to do this is through the TCs. We expect that 70% of 2021 content will come from IEA — this is where the IEA has the ability to influence the program. Which are the TCs, what are their content, how to translate IEA's objectives? Proactive, strategic view is important. Otherwise, it's whatever comes in. It would be good to begin with the IEA TC structure, because that's what feeds the technical program.

(Fun exercise of joining the text message list)

Program structure (Technical Program 2 slide) Not going to go through this in detail, as it's fairly standard. 4 pages in length, 2 streams of submissions. ScholarOne and Coreapps for

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| | | Congress app. We are exploring and evaluating. There will be an onsite Congress app. Once they download the app, they will not need the website.

Tech Program 4 Slide. IEA has unique delegate demographics. In the interest of being inclusive we will reduce the requirements for abstracts relative to other societies.

Budget — this is a high-level budget and is a guesstimate. It's a conservative budget. There are revenues that are not listed here. We are confident that this is a break-even, worst-case scenario. If we get 1500 delegates, there will be incremental cost increases on some items, but other costs are fixed—in this case, the surplus will be very large. Registration cost is more or less in line with what was charged in Florence, Melbourne, etc. Doable budget—won't lose sleep. Bear in mind that this budget is based on Canadian dollars. 33% less than US dollars.

AT: IDC - thank you for the 25 free attendees from developing countries. Any expectation that there might be lower congress fees for IDC attendees?. For many of the IDCs the full congress fees might be steep. In Florence, we had different levels of registration fees for IDCs.

JOG: in Italy, only Latin America registration fees was 250.

IN: It will be more difficult to attend Vancouver than Florence. We may need to charge something in the area of what a student might pay. There will be a need for us over the next year to reevaluate this budget because in about a year or maybe longer, we will need to fix the registration costs so we can fix the registration process.

KM - You will have way more than 25 from IDCs. In addition to providing free attendance, you will need to provide a lower IDC. rate We understand how you have set it up, but we are worried that you have not made available to IDCs.

IN: We will have to reevaluate these numbers

ACTION ITEM: SA send numbers of attendees from IDCs in Florence.

SA: We sent you numbers. We can do it again.

IN: Let me make a point here—IEA Congresses (and I've attended almost all of them in the last 30 years) are all different. Depending on which part of the world you are in, you can't go by the experience of previous congresses. Can't assume that travel in Europe will be the same as in North America. Maybe Andrew can provide more information on expected attendance. We can't make a budget based on Florence attendance. |

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		MR: Are you contemplating free attendance for keynote speakers from other organizations? IN: Yes, in the speaker line. IN: IEA Council, ACE Council, and organizing committee have a 50% registration discount. Sponsorships - we have already started contacting and raising money. We need a lot of help, as revenues will not come in until 3-6 months before the event. In the meantime, we have a lot of work to do and expenses to cover. I need the help of the IEA EC and Council. See slide on IEA 2021 sponsorship plan/progress. Student registration is 20% of member fee. Sponsorships include earmarks for IDCs. What we need now. Seed funds. Ongoing expenses, we need urgently Assistance with sponsorships Travel support and speaking opportunities at local and regional conferences (we don't have travel money to support that, so EC and Council needs to support) Collaboration with other international organizations, including ILO, WHO, ISQUA— how to integrate into program Strategy for social media. Link to website - FSs Scientific committee suggestions and additional ideas for meeting enhancement Keynote speakers Ideas to enhance the ergonomics of the meeting itself Happy to answer questions: KM: We can set up a skype/zoom meeting to discuss distribution of seed funds
0930 15. President' s report	**KM** **YF**	KM presented the President's Report. (*Ref*: *President's Report March 2019* IEA/ILO collaboration Future of HFE Education ad hoc committee. YF presented the guidance for HFE educational programs 3-year plan Time to revisit discussions from yesterday—we want to see if this method might work at the Council meeting (to have a workshop). We are learning as we go. When I ran for president, I wanted to take more control of the Congress model — viable, controllable, sustainable; relationships with other organizations; strengthening internal

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| | | financial capabilities and capacity; new sponsors and sustaining members.; strengthen infrastructure and institutional memory.

These things are happening and taking place as part of the team. This PowerPoint integrates activities as far as I knew them.

7 policies and strategies. Slightly revised (see italics on IEA Policies/ Priorities slide.] New 7th priority

MG: Identify roles of IEA - to whom?

YF: We were not playing roles that we should play.

MG: "Clarify"

AT: "Implement"

KM Standards, guidelines, etc. I'm focusing on what we are doing now.

Engage stakeholders:
        SURA, Tsinghua, Kingfar, IEA 2018 members. History book is another effort to engage stakeholders. GFM workshop will train us to engage stakeholders and identify one new stakeholder per year (NES, FEES). Model can help us.

Collaborate with and reinforce IEA Member Societies and Networks
        CIEHF/HFES Collaboration with networks
[See other items on list.]
One that's ongoing is ULAERGO outreach—their legal registration reinforces the networks. It's important that the societies know that we are not working with the networks instead of them, but with them through the networks. It's much more rational to think that we can communicate through networks than to the 52 societies.

Contribute to STP
Systemic (bundled, integrated) science
TCs - one of our efforts will be what to do with the TCs as system doesn't seem to be working. Adjustments, changes, facilitation's will be needed if we want to maintain structure.
ICOH, IOHA - Michelle
IEA Handbook
Awards

SA: WHO Draft guidelines for HFE in healthcare and patient safety. Similar to checkpoints. |

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KM: Lots of activity in education, certification. PhD program in Colombia. Cuba, Advance Education in IDCs. Yushi will be chair of ad hoc committee on education.
Formal recognition of CIEHF certification.

First visit to Cuba ever.

Reinforce relationships with external organizations. Increase role in ISO? Recommend new projects? It may be something that they want to do. We can increase our role in ISO. ILO — relationship may be growing. Foundational Principles in Human Centred Work Systems. ILO if funding travel; our expertise is being provided at no cost. Final meeting in November at HFES annual meeting. Drawing our larger societies in to get them involved. "Think piece" should be published by now.

WHO, WHA
KM will be on advisory committee for ICOH 2021.

New and growing relationship with ISQUA. Talking about reciprocal relationships and mutual tracks at meetings and conferences. Joint publications. Monthly calls. Joint blog being proposed, patient safety guidelines would feed in.

Reinforce infrastructure. - history book, guidelines for EC, Guidelines for EC chairs, new congress model. Standardization, organization of timeline, website recreation.

MR: You may want to add the external matrix to collaborations, ACTION ITEM FOR MICHELLE TO SEND TO KATHY

Archives are on the web. Photos are digitized. CNAM archives - very impressive.

Future focus - needs to be an essential part of strategy.

        Education - Train the trainers, educational standards/requirements task force (YF)
        How to build our institutional research capacity. Reciprocal mentorship program - only one pairing. Others may have gotten lost.

FoW - regulators/policy makers are stakeholders. Teaching interventions, organizations as stakeholders.
Workers are stakeholders for future focus—we can have a huge impact if we think of HFE in the workplace as a primary user of HFE principles, as we have demonstrated with SURA--we are engaging workers and organization

For the Congress - refine the model to ensure future success (DPC).

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Bringing universities in as affiliate members — expand our member categories to include universities and other organizations as stakeholders.

Questions?

EP: I would like to highlight policy makers. If it's only how to deal with workers. Design approach doesn't exist—we are fighting to get in the word that work needs to be designed—it's not just protecting and reacting. It's designing at the beginning.
KM Our document takes the systemic approach. I will circulate it ACTION ITEM to EC members for feedback/input as soon as it's in an appropriate form.

MR and some of you were not invited because you need to serve as reviewers.

JOG: We cannot generate a GFM and just go directly.

KM: you mean, after the guidelines are prepared

EP: In the very beginning, "work through networks" — is there a description of how this works in practice? It's welcome to NES - we need to have our activity in relationship to organizations. Role of boards is becoming more important. Need a written rationale for why/how.

KM: This is a developing process—it's a way of making them stronger. Good idea.

AT: This is what we would like to come out of workshops. Who are we, what do we know about ourselves.

YF: Would we like to have a dedicated position for ISO? Takes a lot of work and energy. Very few people know how ISO functions. Important thing is that IEA is authorized to propose new standards, which is very powerful. We can even become a convener of a working group, project leader - one who drafts standards. It's a huge thing . Our name, contribution, ISO is a good mechanism. Resources are a problem. Not many people who know what ISO is and what the value is.

MG: It's very important that our TCs know about that. They might be very interested in standardizing within areas.

JCH :Coming back to idea of promoting standards through ISO, it could be right that nobody in TC knows how to draft, but they might have ideas; e.g., "design for all," comfort for all. Maybe they don't know how.

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		YF: Are you proposing that someone be appointed to be a liaison and explains to TCs of how this works. Some time ago, DPC proposed EQUID to ISO and as a result ISO created ISO/TC 159/SC1/WG5. Published a short standard-like document—that was all we did. What happened later in the working group was that nobody knew that the original proposal was initiated by IEA. To be responsible for watching what is going on inside ISO as to ergonomics- related standardization. Lots of activities going on that we know nothing about. MR: Tom Albin knows a lot about standards. May be a good person. YF: Also responsible for communicating with TCs. KM: We can develop things that he would like to do. YF: Handbook for EC - Procedures. You don't know what to do and how to do it. I'm happy to assemble information and put it into a format. I ask every one of you to let me know what topics should be covered.(e.g., reserve policy). I can write awards, treasurer, VPSG job. Hopefully before you leave here. ACTION ITEM FOR EC One last thing, recently the ISO TC 159 plenary issued a resolution that they found IEA2018 very successful and they decided to send a delegate to IEA 2021. SIDE ACTION ITEM FOR LYNN - send list of requirements to Elina and/or contact person for NES for the Council and EC meetings in Denmark.
1000		BREAK
1030 16. WORKSHOP	**JO, YF, AT**	Workshop on General Framework Model (GFM) AT: Workshop today is to use the GFM for IEA and also to illustrate the GFM. Objectives: Explore the value of GFM Provide coordination of a plan to accomplish. See slides: Introduction of GFM Go through the steps Conclude and come up with recommendations.

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Background:

During 2015-2018, we developed a GFM for building projects for various stakeholders. This allows us to engage with Federated Societes (FSs) and and provides training on how to develop projects. It's a mental model—a way of viewing activities. Don't need to do every step. Iterative—arrive at a point and then need to go back. It's about having a model to view how/what we are doing.

Philosophical reminder (framing) - how we would like to use it? The GFM is there to support the building of local capacity. For today — how to build local capacity for educational programs and training the trainers (university academics to do in their own country and support them).

The mechanism of transfer is sociotechnical in nature—it helps it to happen; it doesn't make it happen

Stakeholders, networks, emergent economies - how do we achieve growing education programs. Part of GFM is involving stakeholders. Building networks of people with a shared purpose. Building local networks - academic and other stak holders develop into communities of practice and systems of influence.
Science and practice need to align. Going into the wild.

Steps.
1.   Identify a value-added topic. What adds value to stakeholders (e.g., in Columbia versus Nigeria versus Ghana)?
2.   Project outline — boundaries, constraints
3.   Needs - what do we need in order to achieve
4.   Identify stakeholders who can make it a realization (stakeholder analysis--there is a science around this)
5.   Identify stakeholder relationship (e.g., university wants to develop an ergo program, but needs Dept of Education relationship in order to make that happen) For each stakeholder, what are their perceptions? (E.g., in some countries, there is no value of cognitive ergo.)
6.   Identify potential benefit. Looking for multiple wins for each stakeholder. (Sometimes this leads back to the previous step to identify stakeholder relationships.)
7.   Develop strategies to get stakeholder buy-in (e.g., KM's comments about Colombian Ergo Society)
8.   Specify project proposals - here are our activities.

Then this is reiterated. Need to have the model in your head. For others, we go systematically, step by step.

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We will identify a value-added topic—asking the FSs—that step might be enough.

KM: How long does that take?

AT: It could take a whole day. (Shows Step 1 slide) — idea of using HF tools for step one. Shows that we have systemic tools available and use our own profession, we as a federated society are a sociotechnical system and we can optimize our own activities using our tools. Helps them to think systemically. Starts to elucidate their purpose. It's incredible how many societies don't know their purpose.

JOG: For example, in Croatia, they found out that neighbor countries could be helpful instead of looking to IEA.

AT: Maybe you don't exist to have conferences—it helps to show the power and usefulness of using systemic HFE tools.
It is not enough to be busy. So are the ants. "The question is: What are we busy about?" —-Henry David Thoreau.
When aware of purpose, it shifts activities. SImply reorienting who you engage with, it creates value and attracts more people.
The tool I have used to do this is Cognitive Work Analysis. All you need is a facilitator, and it's free and well established. Systems approaches are good at explaining things. Ergo societies are complex sociotechnical systems and when you apply cognitive work analysis, it allows stakeholders to engage with all aspects of their systems, to be both critical and creative in developing sustainable solutions.

5 Steps of CWA (Vicente 1999) - CWA slide Always start with #1 - the only one that you have to do. Ref: Read and Slmon - Cognitive Work analysis.

From NHS in UK - you have to do cognitive work analysis. Work domain analysis allows for an in-depth view including system boundaries. Constraints (boundaries)

Top down and bottom up:
What are purposes and goals?
Priorities - what do you value?
Functions - what functions need to be filled to meet the priorities?
Physical processes — (activities) what do we need to meet the goal?
Resources - what do you need in order to do the activity?

If you have goals and no resources to fulfill the goals, what do you do? You need to gain the resources (a value-added topic)

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| | | Ice-breaking diagram. Important step. If we do this with networks, we will have projects. Important starting point.

Activity 1 - What is the scope of our analysis? Start to draw the boundary.

KM: We could do this with the Council.

AT: Yes, work really done versus work that is imagined. Build that map and compare to what we really do

Purpose:

KM: To advance the science/practice

MG: Overriding purpose is to improve society by improving how work is done.

SA: To improve the quality of life.

EP: Is it possible to work as brainstorming?

AT: Yes, that's the whole purpose. Stakeholders need to understand where it fits. Find out what we value.

JOG: But before that, you train the trainers to train people in order to analyze the steps.

KM: So it's sustainability—train the trainers.

SA: Improve quality of life/work

JOG: Change work conditions

JOG: The goal is transformation

MG: Goal is improvement through transformation

MC: Culture difference about the word "change" may be good (China) or not (U.S.)

JCH: To more deeply understand the value of labor.

AT: For what purpose? Is a deeper understanding something that we value? A priority measure may be that this is how we know it's working. To have a deeper understanding is a priority measure for advancing science and practice. |

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KM: So that's how we measure?

AT: Yes, what functions do we need to fulfill?

JCH: For me, it should be other way around. First we need to consider values. To work for a deeper understanding of the concept of jobs and labor and work for all stakeholders.

KM: Work is a context.

JCH: Contribute to a deeper understanding of labor though education.

AT: Functional boundaries of IEA are different from the purpose of developing high-quality HFE programs.

EP: Do we all agree what it high quality?

AT: Very pertinent question!

EP: I feel that the discussion is going to overall making life better

MR: I would like to add the word "design."

KM: To ensure high-quality design.

AT: That is the purpose of an educational program. Why do we want to promote and develop educational programs? Can you see how it takes us a long time to come to a clear understanding of what we are trying to achieve. What is the question that we really want to answer? What makes a high-quality program? Or, do we want to promote high-quality educational programs. We want to do this to promote the profession. That is our purpose. We value high quality. Start again

To promote and grow HFE

EF: JOG said there are examples of doctors and nurses. Can people do the work if there are no ergonomists?

KM: Part of purpose is to demonstrate our value.

AT: So the purpose is to show the value we can add to the stakeholders. We need to get outcomes for Yushi. We could discuss this more and get to the nitty-gritty. How much have we thought deeply about the purpose for doing this?

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Let's pick "Grow HFE" We can then start to think of values and measures

JCH: Have enough professionals to apply HFE in the real world.

AT: So we value competence. Here is a key issue. Also, in order to promote, we need competence. Competence is a vital component. Important topic, and one that we value very highly. As we build connections, we find what is most important.

We can consider what functions we need to fulfill in order to ensure competence.

Bear in mind, this is not the content of the program, it's what we need to do to ensure progress.

SA: We also need experience in practice. Maggie was saying that competence = experience + knowledge.

Competence is something that we value.

MG: Functions are quite clear — they need education to get the knowledge, need jobs to get the experience.

AT: Certification would be a function that ensures competence.

MG: Doesn't ensure competence, it helps to demonstrate it.

AT: So IEA has activities to support certification.
So what resources does Maggie have to support certification?

MG: I also need a clear set of core competencies.

AT: For Maggie, having the resources of clear competencies is vital. Do we have this currently?

KM: No.

AT So that is a boundary--a resource that we don't have.

EP: We went back to the start. I went back to how the competencies are valued by the stakeholders. You said we can go back and get more resources (training and high-quality education). Is that now the main purpose, to provide high-quality education, or the other part of getting it into practice? We want to go back to the universities.

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		AT: This is just an illustration. You hit on an important function that needs to be fulfilled. Maybe part of IDC job is to do this for IEA. Discussion of time constraints on how to do this. AT suggests maybe doing some parts off line and then bringing it to a meeting. YUSHI Explains background of where he got the experience to work on this. Some initiating thoughts (slide) • People do not know what HFE is – especially influential stakeholders and ordinary people • People do not well understand, or they underestimate, the roles that HFE is serving • People do not know how big a role HFE can play in integrating technology • HFE specialists do not know that stereotypic views of HFE need to be renovated so that they can provide more systemic and integrating roles in HFE practices, and also in scientific activities that underlie HFE practices. • Current education in HFE is not necessarily helpful for learning systemic HFE activities. • Current education of HFE does not rest on the notion of bundling science at all. HFE is narrowly specialized. • As a leader of the HFE community, IEA should play a leadership role in HFE education. Some of these ideas are very provocative. MG: Are you talking about practice or education? AT: Both. YF: We are not researchers in this room, we are executives of IEA, and you have a different role. YF: Whenever we design a project, we have to be sure that both sides are satisfied. You intentionally add a new topic. It's useful for you so that's why you do it. We are not university professors; our role is not to specify an education program. Our role is to help university professors.

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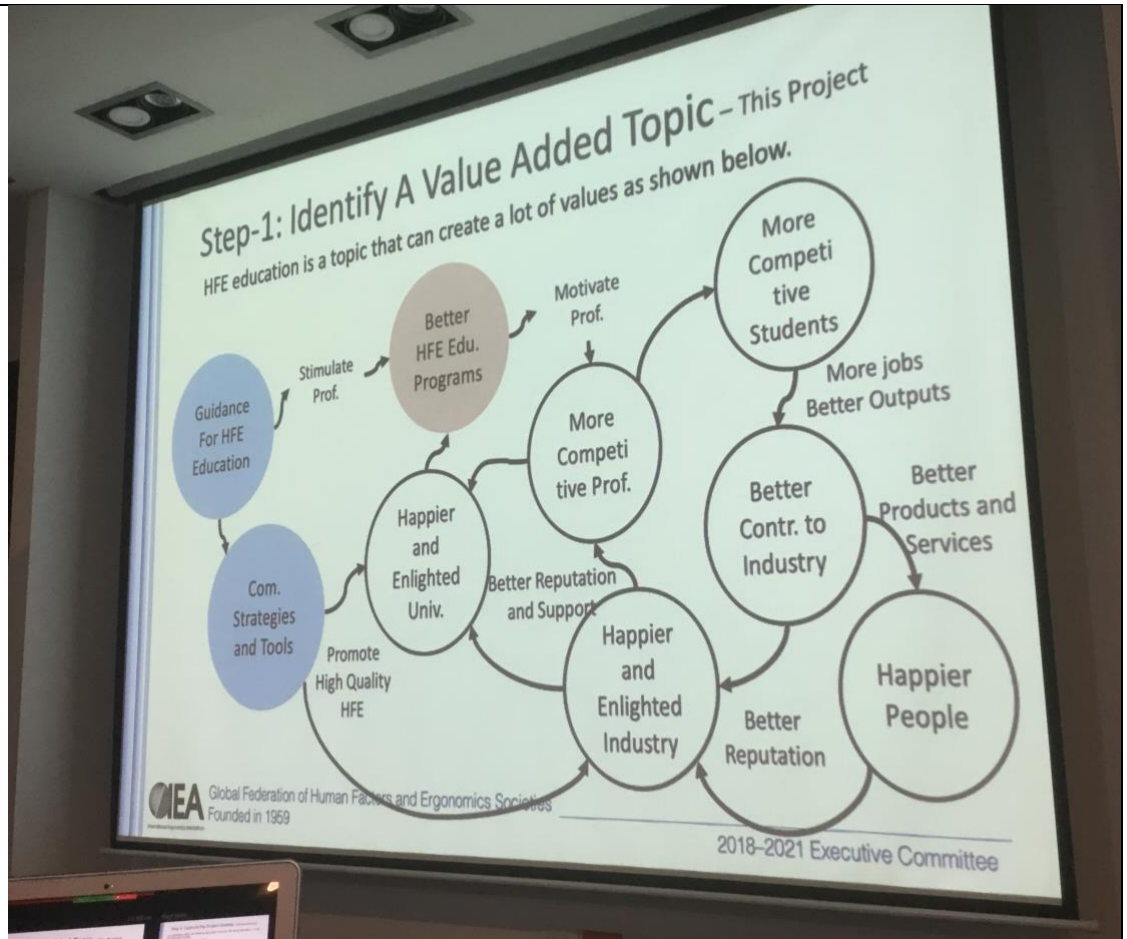
This will motivate professors and they will become more competitive (better). Will create more competent. (Correct above slide "competitive" -> "competent")

SA: I'm not sure about "Happier people"

YF: If we are interested in creating a good replication of ourselves, people in universities are stakeholders. We need to give them essential messages. It takes time—we need to reach stakeholders from both sides.

EP: Is this model meant for the idea that this is for current teachers and professors who are now the stakeholders? We have the situation that they have closed down programs/professors. Can this model help us to help them bring it back? Professors have been closed down and they are entrepreneurs or in industry. May be a value in industry, but it's a huge loss in education. We need to have a message for national ministries—the value of education.

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MG: What if we have "More" in the circle on "better HFE programs"?

AT: We need to have activities that speak to the need for resources. That's why I think that this is a useful process. "For this stream here, we are doing this" —may not speak to what you just said.

JOG: We identified stakeholders, we should meet with them.

EP: To go there to talk, we need to have something to deliver and solve.

AT: It's nearly lunchtime, we need to contextualize. We are developing guidance to have a resource to help grow HFE. This is not our only activity, our only resource. This is the purpose now, to help Yushi to get guidance on HFE education as a resource. It's really important to confine ourselves to this topic so that Yushi can go away.

KM: It's an important point when you are doing workshops to keep people on topic, because they are complex systems, and you will not be able to address them in the context of workshops.

YF: This (points to slide) each bubble is not sufficient, but when you proceed step by step, you will lead yourself naturally to think about this deeply: how to reach out to stakeholders and decide what to tell them. We need to have good things in our pocket.

AT: This is the purpose of the workshop—to help develop that.

YF: I didn't use any formal analysis, just my own mental model. I hope that Andrew will give a more formalized strategy and process as a tool.

MR: I want to emphasize sustainability, having been at a leading university where our program was shut down. It was a highly successful program where a decision maker came in and shut it down.

KM: To realize the value is part of that.
(lunch break)
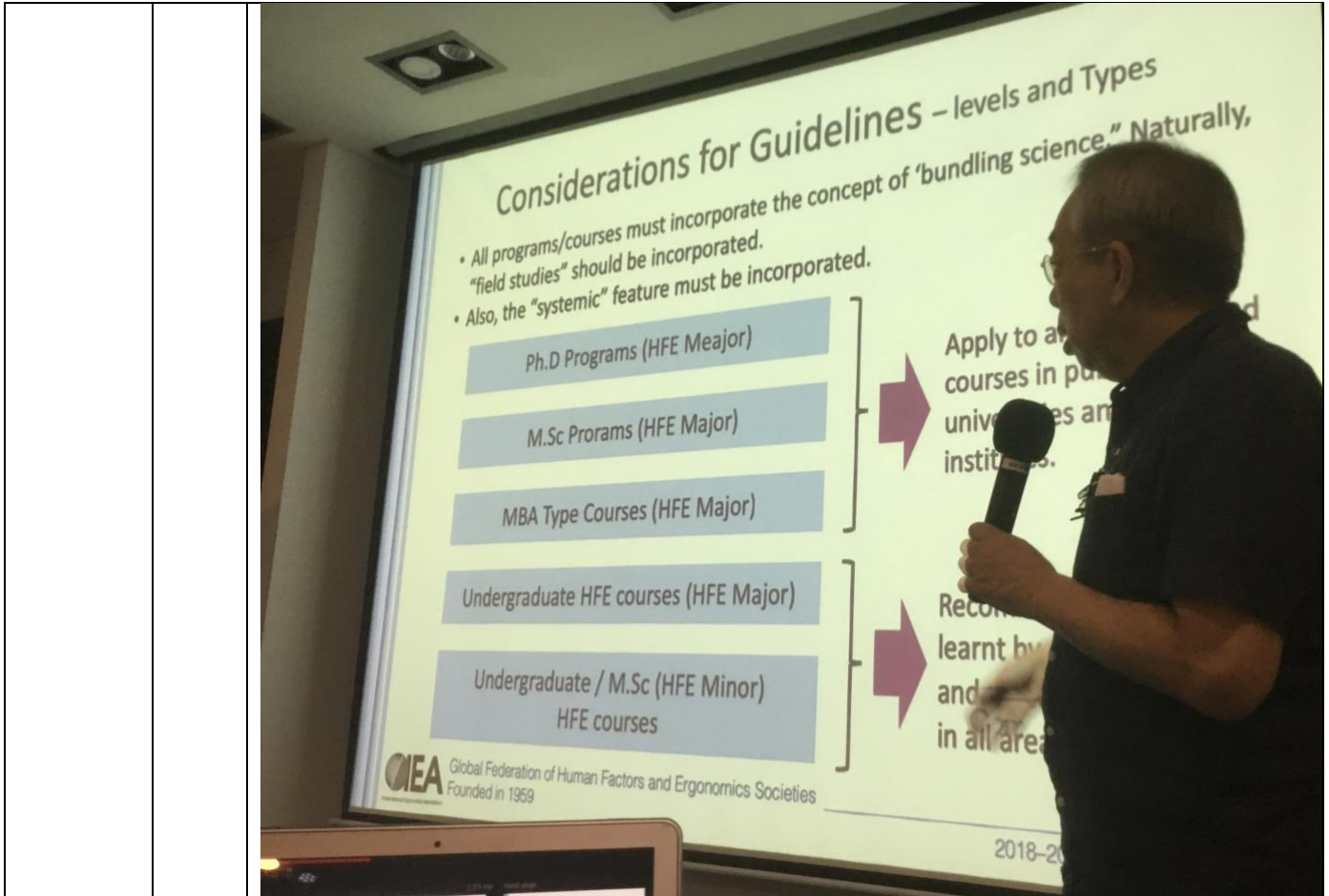
YF: We need to recognize that we need this set of educational programs as a result of the guidance.
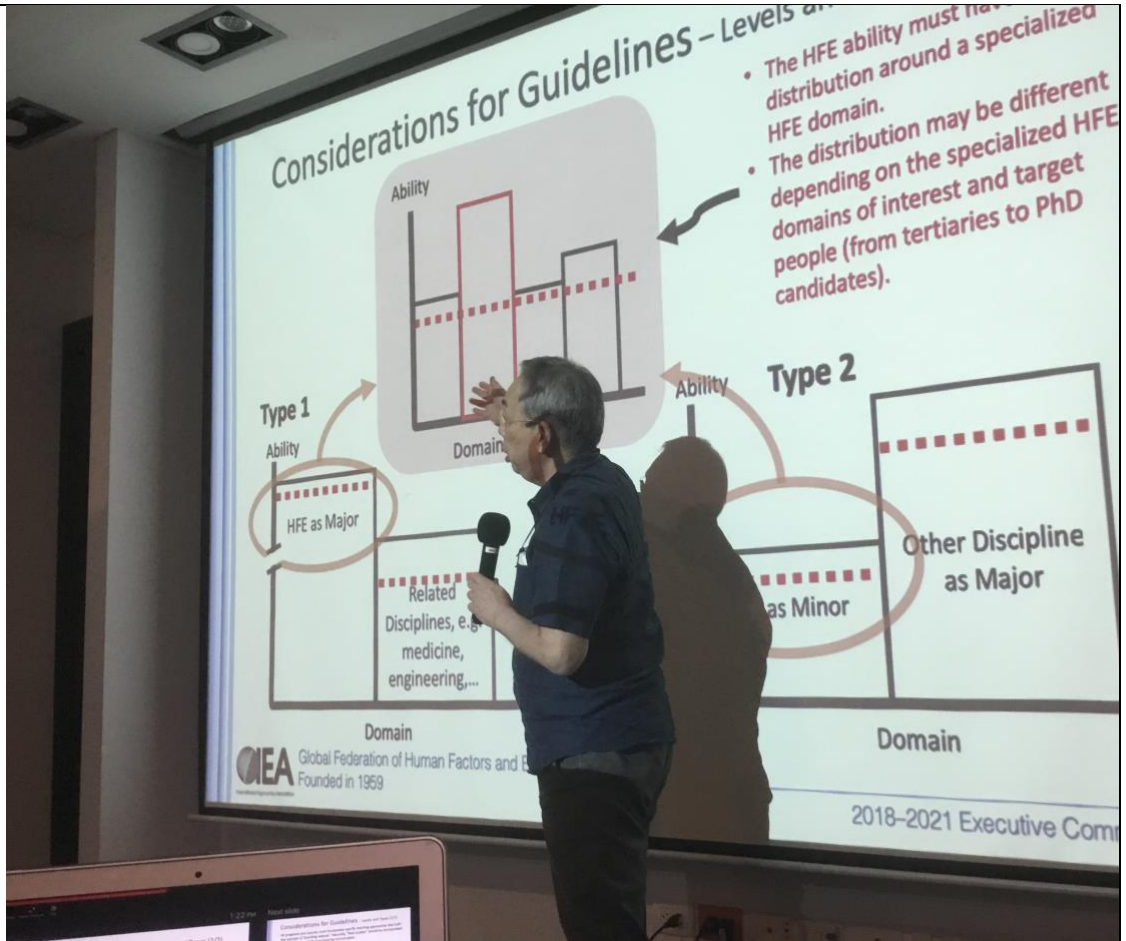
YF: We would like to establish a nice distribution and how to combine different disciplines of HFE. Depends on the target area. Even though your main discipline is physiological HFE you need to learn something else. What is the minimum competency level? This will need to be discussed and specified in terms of guidelines.

Table of contents: (see slide)
Chapter 1 (see slide)
Chapter 2 (definition of important terms/concepts
Chapter 3 Innovative images of HFE

Please make comments

Definitions of important terms and concepts. We want to stress the need to contribute to successful business. An important concept is bundling or integrated. Systemic can mean the integration of technologies or of different disciplines of HFE. We need to define it.

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Comments about the use of terms?

MG: If we are trying to explain these terms and what we mean by them to other people, having a sentence is not enough. Need references, examples. I have seen that "systemic" or "systems-oriented" is understood very differently. A "holistic" approach can mean different things to different people. We really need to explain that they have to be familiar with ergonomic tools and methods — they can't just say that they understand the whole situation.

EP: It changes every time according to the approach. If you speak about usability, productivity, etc., there are different approaches according to the context. You have to say aloud, "What is my approach?" People speak from their own context, but they don't say it aloud and distinguish them.

MG: It's very important because people don't have the same language. In CREE one of the criteria is that people have to show that they are designing solutions—we were getting nothing from the French at one stage. To them, the concept of design would only be applied to actually producing a product. Designing a solution or an intervention did not occur to them as what was required according to their language.

AT: Just to frame, we are at the second step.

KM: I'm glad to see the origin of "bundling science," but I think we need an illustration/example.

MG: My mental model is a big coaxial cable.

KM: I was thinking of bundles of hay.

YF: We don't want to cause confusion because of exotic term, but I don't think there are different meanings.

YF: I don't discriminate between HF and Ergonomics — don't discriminate.

EP: They go hand in hand, but in practice. If you are designing, you have a reference. Why have anthropometrics if you don't use them.

YF: It is IEA's role to set the norm.

JOG: Different community coined this expression. It's about identity. Now from North America comes HF. Now it's used together. We can publicize putting the names together.

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MG: Contingent dualism of ergonomics.

YF: I will welcome any comments after this workshop. Later we will try to choose terms and give appropriate definitions.

Slide: Basic Principles for HFE Education
4 examples. SEE SLIDE

SA: We don't solve problems in terms of physical/cognitive — we just solve it.

YF: It's interesting. We are still discussing those three categories on our website. We don't need to stick to this categorization.

AT: And what's coming out of this conversation is that these categories are irrelevant to actual problem solving.

YF: We need your input.

JCH: We need the slides

KM: We will have the slides for the workshops

ACTION ITEM FOR LYNN— send workshop slides.

HFE Topics and Syllabus.

YF: You come up with the syllabus by choosing and combining topics from an inventory of HFE topics. You define a specific syllabus. Is this feasible?

MG: I think there are some topics that are necessary, but we can leave to the local educators and what the needs are for students to come. That's the direction my thoughts have been going into. You could rapidly come up with 200 topics;

KM: The tools and methods are the foundation.

AT: And we need to define what the core competencies that you need wherever you are in the world.

MR: And where you can go to get information about these

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		MG: You can divide the pot into two levels—the base topics that peole have to know something about (anthopometrics, perceptual, environmental) but at the top of the list you have the skill set: How to look at things systematically How to bundle (and there is a science to the bundling) —the combination of things We have a lot of knowledge and tools that are specific to ergonomics, and somehow in these discussions, that gets lost. MC: The topic on my mind is four disciplinary. Take care of that first. The one we mentioned yesterday—physical, cognitive, organizational. MG: When you put yourself in silos, you're dead. AT: You don't need to use those terms. They can completely disappear. SA: It's not the way the world works. JOG: If you take an undergrad course, you can have these categories. Masters—you can do the same. For us, it should be for undergrad to master. If somebody goes to PhD, it's a very specific topic. We should concentrate on undergrad and professional training. AT: Just to clarify, we need to have in the guidance a distinction between education for becoming an HFE practitioner, but if you want to go to academe, you need to do this. JOG: No, don't touch Ph.D. As it's impossible to go into all of the different possibilities. Master and MBA course worldwide concentrates on professional training. YF: You made the comment that we need the five pieces. JOG: In the PhD program KM: In the PhD program, you need expected knowledge coming in. That might be part of the major in HFE or an undergraduate degree. When the person comes out of the PhD, they have all of this knowledge, but some of it was acquired in a lower level. JOG: For the PhD program we need to go slow, so we should do it in a second step. AT: Where you get the knowledge is irrelevant. MR: A hierarchy can be useful in instructional design. Taxonomy of learning, instructional hierarchy of learning.

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MG: Not valuable to me. I don't understand the difference between a masters and MBA.

JOG: After college, one or two year (MBA) then masters, then PhD (America).

MG: In southern countries they have certificates above the bachelor. Lower level. Maybe three certificate courses that make the masters.

KM: Topics—then decide minimum competency across the competency could be accomplished by using a course with a comprehensive textbook.

MG: Step 1 will be to identify topics—what is essential and nonessential, but what level of knowledge?

YF: You have to design systemic teachings.

MC: I don't know what a bundling is.

YF: Forget about bundling—how do you teach systemic HFE? Forget about existing textbooks.

MC: If I want to teach what kind of table height will be good. Then students think maybe I need anthropometry. Then I might ask what kind of loading on the joint—so I will say, maybe you need to learn modeling. Next internal force—you might need to learn about muscles.

YF: It's not a simple accumulation of pieces. You need to clarify how these pieces can be integrated, clarified, and combined.

AT: I love this approach. The lizard technique. You take them by the tail and fling them into the situation. They see the systemic factors and then they need to look for the tools.

MC: When you say "tool", it may be the problem. You may need to design the tool.

JOG: We are talking about masters' to train a future professional. Not a researcher.

EP: Professors and teachers, I want you to define the skills and competencies after they graduate? This is what is needed in practice. Where they fit after this level and that level. What is CREE certification— it doesn't help employers at all if they don't know what they can bring.

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MG: I think we do that. Undergraduate — solutions to problems that have been well researched. At a masters level you expect them to provide solutions that are not in a textbook.

EP: I don't need this answer. It's important how you provide the information to employers.

JOG: Or you customize and capture the same framework. What does the company require?

AT: Can we bring this to a close? It is clear that even amongst ourselves that we don't have a clear idea of what ergonomics education involves/includes. We have a lot of work to do. Lots for us to unpack in order to assist Yushi to get his guidance done. So we want to show you more steps:
IDENTIFICATION of Stakeholders. Two groups.
1. Clarify who stakeholders are at different levels. Who should be considered
2. When we disseminate the document, who do we disseminate them to? Distribution of the guidance once we have it.

Breakout groups:

1. Different groups are unique to the region. Very wish-washy lines. Employers are important stakeholders. How to identify the regional stakeholders. Ask the question. If they can answer the question of who makes the decision, we can then decide about the stakeholder groups. May need to refer it to an organization that looks at the national picture. IEA networks are a stakeholder.

JCH: Concerning regional organizations, there are agreements between countries that govern regional policies for problem solving. They may have HFE implications, so they may be stakeholders. Within those agreements, there are different sectors of influence. In the second level they specify problems to be solved, to which HFE can contribute.

AT: Disseminate to companies — important regionals.

MG: Certification bodies are another important influencers. Educational bodies usually try to fill the requirements.

2. Dissemination - who will do it? The people to do the disseminating/distribution.

Different levels or directness of dissemination . Universities and societies might be direct disseminators.

EP: Confederation of industries and technological industries and unions. Have a huge number of companies, so we wouldn't have to go directly to the complainers.

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JCH: Several agencies that are part of the UN system are big stakeholders, as long as they know about the product.

AT: In terms of IEA, did you break it down into smaller bundles (e.g., standing committees—PSE. The key stakeholder)?

Send the stakeholders that you put together to Yushi and me (AT) ACTION ITEM

Next step—figure out the relations.

This takes a little bit of work. Rather than doing this now, take what you have done, and take IEA as a stakeholder and decide what components — what are relationships and who should be involved from an IEA perspective. Internal relationships — can we map these?

Don't worry about blockers, etc. Figure out what are the most important relationships for success.

SA: It's difficult to operate with TCs—we discussed this criticality. Also the connection between FSs and affiliates. We were not sure of this connection. Affiliates are our community, but they could be in conflict. We don't have an individual membership. Makes it difficult to talk without main clients.

AT: Yushi wants feedback in terms of what he is doing for guidance document: ACTION ITEM

Are we happy?

MR: Systemic approach is good. Bundling may work better than multidisciplinary/interdisciplinary.

KM: Don't lose the latter terms.

AT: Really important— multi-, trans, and interdisciplinary. Distinct differences between these terms. It would be useful to integrate them.

MR: Importance of operational definitions of those terms.

EP: Take care about that. There may be a defensive reaction from stakeholders (e.g., professors, programs, departments). Don't make people feel that they are not skillful. Not all institutions have the capabilities to deliver.

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AT: University professor is a stakeholder, and we are coming with a hammer saying that "you don't teach physical."

EP: Spread in different silos. Awful stories about what happens in universities between professors. Not to force them back into their silos.

JOG: Universities are organizations like any other. Made by humans.

MC: ACED is from a different continent (Asia) Eager to have endorsements, certifications, etc. Educationally not that urgent. Could be a link. Right now, Indonesia wants a certification program. How do we help them? Otherwise, if we lose, timing-wise, if you ask them to change it could be a challenge. Don't know how to do it. We have a chance to provide a guideline for certification. After a few years, they will be in good shape.

AT: Guidelines are not enough; we need simultaneous activities going on.

MC: Education affects certification. If I know which book, tool I need to use.

AT: It's clear that this is where international development needs to happen. STP, PSE, IDC need to collaborate.

Among the different countries of ACED - Singapore, British. Malaysia — UK. What is the professor's original training?

AT: Yushi wants to finish off with more specifics.

KM: You are going to include information about ad hoc education committee?

YF: Summary of who are writers and who are users of the guidance. Slide 30 of 81. Together with FSs, committee, networks, we will draft general guidelines. Educational institutes are outside our scope—they will write their own. Influential stakeholders (users) manuscripts booklet for influential stakeholders. We need to identify who are stakeholders and what information is useful for them. It is a strategic process. This guidance will also be useful for certification bodies. Don't know how to accomplish that other than to communicate with the certification bodies.

Slide 31 - I propose an ad hoc committee. Better to keep the core group smaller. Maybe chair, someone from PS&E, supervisory function, and a few other experts appointed by the chair. At a certain time, we need to form an enlarged group (members on the slide) — representatives of all standing committees, representatives of networks, representatives of non-IEA network societies (HFES, JES, CIEHF, HFESA).

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		For promotion, we will need to work with MIchelle and Lynn. You need something you will need to disseminate.
		YF: It's up to Kathy to establish an ad hoc committee and appoint the chair.
		KM: Unofficially, I have already established the committee and appointed the chair. I would like your consensus.
		(Assent from the group)
		YF: You are taking a risk! (Laughter)
		Timeline — by the next Congress we would like to have a session, so the main body of the work should be finished (See slide 32, preliminary presentation schedule). Editing and printing can be done afterword. By the end of this year
		LYNN ACTION ITEM — Incorporate timeline from this presentation into master timeline.
		EK: I presume that Council will be informed that this is underway at some point
		KM: We have seen the basics of the GFM
		AT: Just to clarify, the GFM is not a workshop
		KM: Yushi, you should decide whether we should keep this name (GFM). We should define a name for this now. You were reluctant to use this name until we had developed it further.
		YF: Basically, it's my private tool, and I don't care.
17. President's Discussions	**KM, YF**	President's update and Strategic discussions Standardizing how to express accomplishments/annual report Ad hoc committees on education and relations with networks [REF 15b IEA Guidance on HFE Education; 15c IEA Guidance for HFE Education 3-year plan] EC Handbook (with YF) [REF 15c Handbook for EC 3-year plan 2019-2021]
18. Other Business	**KM**	Discussion on logos. #3 Global Federation. One line is enough.

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		Global Federation of Human Factors and Ergonomics Societies Action items JO Establish a reserve policy and revenue target SA Revisit the requirements for hosting meetings. Cost shares, link to activities, abutment EP Within next few months draft a model for the congress including recommendations for IEA control mechanisms TA and TK make sure guideliens for TCs are downloadable from TC page YF Follow up about extra funding for selections committees for new awards All: give feedback about web page by April 10 to LS and SA KM SA Start reworking text on the website MR Support Takashi on Advanced imaging Society contacts KM and YF find and appoint an ISO liaison ALL Respond to IAn Noy about sponsors, IDCs, etc. Suggestions for conferences where they can advertise, special sessions, collaborations.
20. Next Meeting	**KM**	Details for the EC meeting in Elsinore, Denmark were presented. Sara - details of August EC and Council meetings. LS and SA will try to find a sponsor. Please try to find sponsors for the travel.
21. Adjourn-ment		The meeting was adjourned at 16:30 p.m. local time.