

SAB report

Hybrid Intelligence

The members of our Scientific Advisory Board

The Scientific Advisory Board are our “critical friends”. They are not evaluators and are not asked to score or rank anything, but are encouraged to speak freely and critically. We turn to them for suggestions on how to improve and further strengthen the Hybrid Intelligence Centre and its programme.

Social Sciences

- Prof. Petra Ahrweiler (Johannes Gutenberg University Mainz), expert on social consequences of technologies and innovations
- Prof. Roni Reiter-Palmon (Univ. of Nebraska at Omaha), organisational psychology, creativity in teams

Computers and People

- Dr. Wendy MacKay (INRIA and the Université Paris-Saclay), expert on mixed human-machine systems AI from Europe, US and China
- Prof. Ana Paiva, (University of Lisbon), expert on social agents
- Prof. Paul Lukowicz (DFKI), leader of the European Humane AI Net
- Prof. Yolanda Gil (ISI, Univ. of Southern California), intelligent interfaces for knowledge capture and discovery
- Prof. Juanzi Li (Tsinghua University), knowledge engineering

Report on Advisory Board meeting of April 2021

A summary of the recommendations The SAB praised the quality, coherence and ambition of the programme, and the progress with starting up both the science and the organisation in year 1. Below we don't report on their praise for our achievements but concentrate on their suggestions for improvements.

Exploit foundational science perspective Exploit our foundational and long-term science perspective. Don't only ask "how to build" (many EU projects do this, as well as much work in the US), but ask "what does it mean", "what are the limits". Exploit your luxury position that your answers do not have to come in immediately applicable form.

For example: understanding what AI can/can't do, what humans can/can't do, what is required for both parties to be aware of the others capabilities and limitations and how to exploit this complementarity. Another example: foundational work on a computational theory of mind ("mind reading") was mentioned as one of the foundational topics.

Exploit your unique organisational aspects Besides unique content, also continue to emphasise your organisational approach: the collaborative approach is very strong (and very different from many other consortia which are much more loosely coupled), and your emphasis on early career researchers is important, and your emphasis on interdisciplinary work and for ethical awareness. Research lines should not become silo's On the four research lines. Of course you needed to start somewhere, and the current CARE lines certainly make sense, but remain open to the idea that you may want to rehash the current CARE lines at some point. Take care not to get "silo'd" into the research lines, much of the interesting stuff will happen across the boundaries of the research lines. Exploit how each of the individual project descriptions already refers to other research lines.

Choice of the demonstrators The current choice of "demonstrators" (social healthcare/prevention and debating coach) was seen as not particularly exciting/distinctive. Demonstrators as shared experimental testbeds Avoid the "curse of the demonstrator" that so many EU projects suffer from (where the demonstrator turns into a goal, instead of a means). The value of the demonstrators as a collaboration-vehicle was acknowledged, but multiple members suggested reframing the "demonstrators" as "shared experimental testbeds". That doesn't necessarily change what people do (certainly in this early stage), but it does change the frame of mind to a shared experimental setting, also to be used to measure joint progress across PhD projects (complementary to PhD-project specific ways of measuring individual progress).

Human participants Make sure to involve real human participants in your experiments from a very early stage on.

Hackathons Exploit instruments such as hackathons as soon as it will be possible again.

Identify unique selling point Keep rethinking your unique identity that contrasts with other competing projects. The proposal was certainly unique when it was submitted but since then many related and similar initiatives.

Suggestions: 1) we are one of the few who do "AI and humans as (i) equal collaborators and (ii) in a team". Many other projects interpret "human-centered AI" as (a) 1-on-1 and (b) with asymmetric collaboration (AI supports humans, but not the other way around). In other words: many investigate AI systems as a tool, we see AI systems as companions/collaborators 2) Building

personalised relationships between humans and AI-systems could also be a unique differentiating feature. 3) Taking national leadership on setting ethical guidelines/standards could be another unique differentiating feature.

Note: there was lively discussion between SAB members on whether the “equal collaborator” perspective was preferable to the “asymmetric” perspective or not.

Report on Advisory Board meeting of June 2022

Agenda

Questions to the SAB

1. How to be more than a collection of N PhD theses?
2. How to increase the commitment of later arrivals?
3. How to operationalize “mid-careers”?

Summary

1. Coherence does not occur spontaneously by putting people in clusters. An active role of the management should be consider to analyse, synthesis of new strategy and collaboration elements, forwarding these elements to the agenda's of several meetings and nudge the group with elements in presentations, exercises, lab-visits etc. . . **ask how other work might be:**
 - used
 - by inspiring
 - synergistic
2. Rewriting the original perspectives, redraw the capability tables in a workshop Purpose of the workshop would be the coherent way of thinking and opening opportunities to implement the way of thinking
3. Analyse the current PhD/post-doc training program and educate by recognising the different career stages and their needs, map what is educated now! Including the COVID limitations in the education of the current PD/PhD's (e.g. presentation skills at conferences etc..). Make an imprint on their career
4. Analyse the current PhD/post-doc training program and educate by recognising the different career stages and their needs, map what is educated now! Including the COVID limitations in the education of the current PD/PhD's (e.g. presentation skills at conferences etc..). Make an imprint on their career
 - Summer school on career development practicality on research
 - Reconsider mentoring
 - Define a career path and show opportunities provide paths and events for industries
Secondments, academic and industrial internships cohorts are not in series, so you need to guide them to the next phase outside the consortium
5. Do evangelisation towards industry - what type of engineers would the industry hire?

Report on Advisory Board meeting of March 2023

Feedback Mid-term Self-Evaluation report and questions to the SAB

1. Could you provide us with a general impression and overall feedback on the report?
2. If you were in the review committee, what critical questions would you ask?
3. Executive Board composition has been enriched with mid-career positions, should we even have PhD representatives?
4. Your opinion on mentoring/sponsoring?

1. General comments

- It's very "sober". But undersel is better than oversel. You can emphasise some bits more.
- SWOT: address Weakness and Threats by corresponding actions.
- Unclear interrelation between SIGs, Challenges, and the general themes.
- More interdisciplinary collaboration, ethics of technology/philosopher ethics/affective (e.g. Erik Rietveld and Julian Kiverstein).
- Emphasise Theory of Mind
- Emphasise COVID difficulties, emphasise 2nd cohort, emphasise investment
- Find collaborations in management, organisation psychology, HCI/design, ask for US people who "Think of AI as a team member".
- Because your Unique Selling Point (USP) is the human part of AI, you should do more than lip service.

2. What critical questions would you ask? Measurements can be done in so many different ways, so how to measure HI is a research question in itself. How do we measure HI? Impact should be socially relevant and how do we define the success of the HI programme?

We have been struggling this from the start and tried to address this. The suggestion of co-creation from the start is very welcome should be followed up by meetings with focus groups like artists, social organisations and scientists. . .

Future statements and vision towards modelling strategies and scenario's, how will you measure these and relate them to e.g. regulations and guidelines. Where is the uptake of the results and which challenges are addressed?

More research on the overarching questions, try to motivate the levels above PhDs and PDs, mid-career stimulation like getting senior people together from the different disciplines. Reflection has to come from the seniors and the energy from the PhD/PD. So have the projects being pitched to the knowledge of the seniors. Install the user board!

3. Executive Board composition and mid-career perspective?

Exec board open to mid/early career: great stepping stone for mid-career, for grad students/early careers: great to have that voice, but be careful about time commitment. PhD student as a representative, should not just be a token. Sometimes some discussions are too sensitive. Make sure to

pick the right person (one who also knows their limits).

4. Mentoring/sponsoring? In the career we can see that people need sponsoring. People can have multiple mentors and sponsors. Question whether that is the role of the institute or the consortium? Women tend to be asked more for help, it should be on a voluntary base and it tends to be invisible. It should also be appreciated the effort put into this, give back some recognition. Sponsoring might be difficult on the consortium level and needs a lot of attention to do it right, stick to mentoring. Gender balance: the field turns out to be attractive to females, feel free to capitalize on that.