Minutes from the meeting with RITMO's Scientific Advisory Board 23 March 2022

Present from the Scientific Advisory Board: Georgina Born, Eric Clarke, Nicola Dibben, Rebecca Fiebrink, Robert Knight, Danica Kragic, Serge Lacasse, Marc Leman, Xavier Serra, Jonathan Sterne, Peter Vuust

Present from RITMO: Ragnhild Brøvig-Hanssen, Anne Danielsen, Tor Endestad, Kyrre Glette, Rolf Inge Godøy, Alexander Refsum Jensenius, Bruno Laeng, Nanette Nielsen, Anne-Kristin Solbakk, Jim Tørresen, Jonna Vuoskoski, Ancha Wesnes

Present from RITMO's board (for discussion on Strategy and plans for phase 2): Mathilde Skoie, Bjørn Lau, Stephan Oepen, Zafer Özgen

Midterm evaluation

Selection of results

Questions to SAB:
- What do you believe are the best results so far?
- What are the most important results given RITMO's research aims?
- Which results are most interesting to follow up in phase 2?

Presentation by Anne Danielsen and Alexander Refsum Jensenius .

Comments and feedback

Structure and cognition cluster
- The link to rhythm should be better described in the different results you choose for the midterm evaluation report. This link has to be obvious to the reader. It is also important to state how the results will contribute/fit to RITMO's overall mission.
- The links between neurocognitive research and the humanities must be clearer. How are you going to develop these links and the more humanistic sides of the program?

Interaction and pleasure cluster
- The content of this cluster is impressive, it is very interdisciplinary. Alexander Jensenius' book could be made very relevant in terms of sound and action. It's less easy to see the Phenomenology of Musical Absorption book and how it came from the same motivation. The same goes for Bruno's article on facial movements.

- The collaboration between neuroscience and robotics should be highlighted.

General comments and feedback

- What is the new contribution to knowledge? This is an important question to answer. In the midterm evaluation report you must identify more clearly where the advance is.
- The links between the different parts of the centre must be clear. This is a matter of presentation. The report must not be too internal. A question is how do we narrate the holistic connections between the different parts.
- When working on the report, you should develop the plans for phase two first and then connect the results you have from phase one to this. Coherence is the most important thing for the reader.
- The relationship between themes and clusters are confusing. It is unclear whether themes do or don't cut across clusters. It is further unclear whether the clusters are intellectual structures or a way of organizing people, meetings and work.
- What is your theoretical framework and your core methodologies? A suggestion could be to make a list of how the different publications in the centre have contributed to the core theoretical or methodological framework of RITMO. It can be easier to grasp than the structure of clusters and/or themes.
- It would be great to see how the different publications help understand other parts of the research. Again, it is important to try and find links and connections between the themes and clusters.
- Could the themes be framed as questions, all contributing to the overarching questions?
- It can be very useful to visualize the links/themes as figures/visuals. Then it is easier to notice the things that are missing.
- When it comes to the question of whether it is a problem that RITMO doesn't have the overarching/key publications that represents the whole in place, the answer is RITMO reflects a multitude of traditions so that it is a problem for some parts of the centre and not for others.
- One of the great strengths of the centre is that RITMO is more than the sum of its part, that extends beyond things to do with individual papers/result, but it has a career development function for the people who have been part of the centre. This should be seen as one of the main achievements, to train people and benefit from people, and help them out into the world.
- Open research should be highlighted. It flattens hierarchy. Narrating output such as datasets, which is useful for other researchers as well, is important.
- You might want to think about how diversity is part of your processes for selecting when writing this midterm evaluation report. Make explicit the diversity side of the reporting.
- There are certain affinities between some of the clusters, while there are tensions between others. It would be wrong to meld everything together, it is necessary to recognise this tension.
- Rather than going with themes and organization, you can attach keywords and build the narrative around them (eks. song titles). In this way you can build the narrative around these keywords and then show how different clusters contribute. By using the

keyword approach, you can avoid hierarchy and isolation and you give a better impression of interaction.
- The diversity statement and code of conduct are valuable and good, but it could be more active in seeking diversity.
- The question of diversity and inclusion does not come down to what you say, but to what you do. Especially for the next phase, you might think about including programmatic things instead of statements of desire. This can be connected to research topics, recruitment strategies, and to paths for bringing people through the organization

- Confusing with clusters and themes, choices have to be made.
- The map can be simplified, can highlight some words (for example pleasure, motion, rhythm, time)

What should definitely be part of the midterm evaluation report?
- Jonathan: Groups 2 and 3 best exemplify the interdisciplinary goals of the original application. It shows that the centre is working.
- Eric: JEP paper has a combination of quantitatively and humanistic focus, Alexander's book is a great book in terms of sound and action.
- Marc: You should look at it from a strategic point of view, there should be papers that show interaction between the groups. The papers should reflect your structure and goal. Don't look only at impact factor.
- Peter: Two papers in the first cluster: the first one is easy/good to bring in (Maja's), second one (Alejandro's) is more controversial and doesn't focus so much on rhythm.
- Georgina: You need a realistic knowledge of what the council values in terms of outputs. A judicious mix is a good idea; the three books should definitely be in there, they have serious weight, in addition you need top prestigious journals, some of them interdisciplinary and humanistic.

Phase 2

Presentation by Anne Danielsen

Feedback and comments
- The most important words in the figure seem to be entrainment, rhythm, motion, poly, pleasure, time and audiovisual vs auditory, which aren't the ones that are emphasized visually.
- When it comes to the future direction of the centre, think about how you are going to succeed this time if you didn't succeed with it in the first phase, as well as how you are going to expand to new fields. You must explain what you want to do, based on what you did in phase 1.
- My experience when I wrote my self-evaluation in the midterm evaluation report was that I had to delete 50 %. It was necessary to cut it down to more simplistic ways.

- When it comes to entrainment, it is important to say in what way your approach is different from or complementary to or consistent with other work that is done in this field.
- Test batteries can be problematic. They can smell of categorizing people into different types. Can you use a different terminology?
- Use the map to show what you have been doing in phase one and then show a "simpler" map over what you are planning to do in phase two. This would make it easier to write out your plans. Remember that other people are also working on the different themes that you are working on, but you have the interdisciplinary take on it which makes it different.
- How you create relationships and synergies is the big challenge for the next five years. When you show the slide on hirings, the interdisciplinarity seems to be of a specific kind (scientistic). Humanistic musicology seems to be less in the vision for the next phase.
- It seems humanities is integrated well in the structure and time cluster, but it looks more like the humanists are integrating scientific and social science methods than the other way around.
- In the PIRC project interaction with humans is important, it has a focus on how humans perceive robots.
- One of the challenges being an interdisciplinary centre is for our recruits to get jobs after they are done. We want to work interdisciplinary, but still our PhDs need to follow disciplinary PhD programs. A question is how to develop their profile so they get work afterwards. One can see the same challenge when it comes to interdisciplinarity and publications. It's easier to publish in high-ranked journals when it isn't as interdisciplinary.
- It can be good to relativize the issues when it comes to interdisciplinarity and research training, publications and the disciplinary structures. If RITMO, as a research centre with funding for ten years, can't challenge these structures, who can? Interdisciplinarity helps disciplines to evolve.
- This scheme you present is interesting, it mainly shows an incremental thing. Work has been done one these topics/themes before. The question is what would be new in the RITMO project? What is the breakthrough? What is high risk/high gain in phase two? It would be interesting to identify them.
- It would be good to know how you are planning to foster interdisciplinarity. It would be useful to see those interdisciplinary links and how the interdisciplinary is in the core of your approach.

Strategy and plans for phase 2

Department of Informatics (IFI), introduction by Stephan Oepen

The Department of Informatics is the largest of the three departments that own RITMO, but has the smallest part of the centre. Both IFI and the University of Oslo benefit from RITMO. The bold ambition to realize interdisciplinarity is at the core of RITMO and this is something that is already happening.This is also beneficial for IFI, especially for the robotics group. RITMO was built on prior cooperation between the robotics group and researchers working with motion capture/musicology at the Department of Musicology. Infrastructure is a necessary enabling factor. The shared cooperation is one we are hoping will persist. There is

unrealized potential in further cooperation with psychology, especially within machine learning. Method development is important. Eye-tracking and fMRI can be useful for other research groups and our hope is that the cooperation will spread across the department.

Department of Psychology (PSI), introduction by Bjørn Lau

It is essential that we look into the legacy of RITMO and of what the centre can bring back to the departments. This should also be matched with PSI's strategy. Teaching is important for the department, but there is a concern that interdisciplinarity isn't present there. One of the goals is to continue the collaboration between the different fields within RITMO also when it comes to teaching. Music therapy is especially interesting for the department. Building up and improving infrastructure is an important goal for PSI as well. The departments have a lot of things in common and there is a good collaboration between the three.

Department of Musicology (IMV), introduction by Zafer Özgen

It is important to have an exit strategy and ensure that RITMO has an afterlife. The three faculties need RITMO, but given the structures of the university, there is a risk of us not managing to implement a legacy. The departments are more limited by more rigid structures. For IMV it is important that the interdisciplinary approach is integrated in the department and that it is reflected in the teaching. It is also a wish that the different research projects within RITMO live on after the centre has ended. RITMO should continue as a legacy in teaching, research and in the people.

Feedback and comments
- Teaching is a less dynamic structure, it takes time to develop, new infrastructure is not built up in a day, therefore it is important to start planning now.
- RITMO and the departments should consider regional or industrial partnerships, partnerships with people that build relationships with cultural or technical industry. There are areas that are closer to applications, and a legacy can be to form a spin-off or consultancy or a social enterprise, in addition to the teaching and research legacy.
- Infrastructure should be a priority. It is a window of opportunity and infrastructure needed is time critical. This is a window of opportunity to realize big infrastructure. The maintenance of a lab requires staff that can do this. Also in a European context this is important to realize.
- There is a question of what happens to the infrastructure after RITMO. It has both a benefit and a cost, but some department research will benefit from this. How will the relationships be maintained after RITMO? University resources may be needed to keep these going. The knowledge exchange: the ideas coming from the centre will last longer than the centre. There needs to be a thought on how these ideas can live on. Resources, such as datasets, must live on after RITMO, through the university library or a web page. There needs to be some kind of budget allocation to make all this work, but the benefits for the university are big.
- It is important that the university finds out if they want to keep RITMO. It has a fantastic opportunity to build on something here. One thing I would suggest is to develop a RITMO education on bachelor or master's level. There has been a very

good experience with this in Århus. Also it is important to make sure there is funding for research after RITMO.

- One obvious route is to develop a master's and/or PhD program between the three departments. Interdisciplinarity is how the sciences evolve. Think carefully about infrastructure, it can also eat up a lot of resources. Interdisciplinarity is vital to the intellectual future, it's how the sciences evolve, so you should worry less about career profile because in the end the disciplines will develop. RITMO must have courage and be bold.

- There is awareness about the opportunities and challenges when it comes to interdisciplinarity, there are risks involved for training, teaching, publishing etc. It is not just about developing a master's or PhD program, but on how you can take on these risks and push research, students and knowledge exchange forward. The lessons and structure you have learnt from RITMO can contribute to change the departments.

- The idea of a master's programme is great, an ongoing conference can give you long term contacts in the field. How you exit is dependent on what you accomplish and there are two topics you might want to consider: 1) the role of context and prediction in human behaviour and internal attention, 2) translational musicology: neuropsychiatric disorders can be treated by music therapy and can be developed together with industry and start-ups.

- Unless you have to stick with the term exit, you should get rid of it and instead have an embedding strategy. You should embed what RITMO has done in the rest of the University. One example is the Human sciences program at Oxford that combines anthropology, psychology and biology.

- RITMO could develop the idea of writing or producing a PhD thesis in collaboration. After their PhD they are asked to collaborate, but they are not allowed to do this during their thesis work. You could have a project with students from different disciplines working from different points of view and ending up with a joint result. A common space is also an important aspect of how to work together successfully and is something that can be prolonged after RITMO is done.