

# DeiC HPC-Forum

## Meeting 2022-4

28/09/22 @ 10 – 12

Zoom: <https://deic.zoom.us/j/2909030409>

### Invited members and support:

- Members, present: Hans Jørgen Aagaard Jensen (SDU), Eske Christiansen (DeiC), Sven Karlson (DTU), Thomas Schrøder (RUC), Claudio Pica (SDU), Martin Amüller (ITU), Thomas Bligaard (DTU), Lars Nondal (CBS), Erik B Dam (KU), Lars Sørensen (AAU), Søren Bessenbacher (AU), Piotr Chmura (KU), Sven Karlson (DTU), Kåre Lehmann Nielsen (AAU).
- Members, absent (announced): Dan Ariel Søndergaard (AU), Carsten Sørensen (CBS).
- Members, absent (not announced): -
- Support: Eske Christiansen (DeiC)
- Support: Adam Stahl (DeiC)

### Guests:

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- ...

Minutes by: Adam Stahl <[adam.stahl@deic.dk](mailto:adam.stahl@deic.dk)>.

Item	Issue	Comments   Actions
1	<b>Information and approval of minutes from last meeting</b> Approval: A. Minutes from meeting 2022-3 was sent via email. Needs to be approved.  Information items: B. LUMI-g pilots and EuroHPC extreme scale call.	→ A: Minutes got approved.  B: A new time plan for the LUMI GPU integration has been made. In relation to this we must be better at forwarding realistic estimates to our pilot projects about when they can expect the GPU's to be functional.  The new EuroHPC extreme scale call is open on the Leonardo, LUMI-C and LUMI-G facilities. Researchers can apply for 1-to-2-year projects. If you apply for less than the minimum call your application will be rejected. Please inform your universities.  The first two years of HPC Forum is over and all universities have been asked to appoint members for the next 2 years period. The deadline is in November.
2	<b>Strategy for digital research infrastructure (HPC).</b> See attached PDF with name: "Strategi for National Samarbejde om Digital Forskningsinfrastruktur". Each of the 11 recommendations will be discussed and comments are needed from the working group.	→ REC2: We have seen research groups sending proposals for calls where they cannot get co-funding because it was not e-infrastructure calls but research calls. There is a bit of confusion, and we need to be better to clarify whether a call is co-funded and to what extent.  The recommendation for digital sovereignty was approved by the Forum.  REC3: Recommendations agreed upon.  REC 4 DeiC should be supportive towards initiatives that will bring forth European beyond exascale facilities. These beyond exascale facilities should not be seen as instead of, but in addition to what we already have in Denmark.  <b>Note from chairman:</b> The document at the HPC Forum meeting contained by mistake the word petascale, which is less than exascale. This was corrected in the document forwarded to DeiC board.  The Forum agreed upon, that the topic of Security is better handled in other Forums.  REC 5

		<p>Agreed upon</p> <p>REC 6 Agreed upon</p> <p>REC 7 Kåre: The word intensive use is very technical and can be misinterpreted. The point is that an application for HPC resources should justify their resource use.</p> <p>Eske: The main point of evaluation for e-resources is the quality of the science.</p> <p>Erik: There need to be a balance. Especially there should be an assessment of justified estimates of energy use for big projects. Also, some HPC facility now have the possibility to track energy use through sensors. We could recommend having facilities record energy use.</p> <p>Kåre: Any application should justify their use of resources. The challenge is whether the researchers are good at predicting their use.</p> <p>Claudio: We need a balance, when you ask for a lot of resources, but you also need to try to push your code. Sometimes it takes 10 years to write a good code, but you should try. The recommendation is about sustainability not about quality of research.</p> <p>Hans Jørgen: most PI's do not have deep knowledge about energy consumption of HPC use. Instead, the forum will recommend that the facilities begin to record energy consumption an provide information on efficient energy use.</p> <p>Svend: Efficient/justified use of computing resources is not always the same as energy efficiency. Energy efficiency here comes down to what hardware, software and code is being used. If researchers plan to do excellent science but with an outdated setup, it should still be questioned because of the high energy consumption.</p> <p>Claudio: There is the question on how much energy we use, and that should be measured by the HPC centers. But also, if you use the resources in the best possible way (for instance the right software). Also, we should only assess this for large applications for instance for 12 million core hours when researchers naively want to upscale projects. We cannot define "large" right now.</p> <p>Hans Jørgen: It has been the same for PRACE and scaling where you had to demonstrate efficient scaling.</p> <p>REC8 Kåre: Comments on AI and potential biased could be added to the recommendation.</p> <p>Erik: It can be challenging to point out trends for all research topics. All research field would have to say that they do good science. We could ask if for instance energy research should be valued in applications. We should be careful not to add to many considerations.</p> <p>Kåre: DeiC should expect that research live up to the Danish code of conduct for ethical research. That is our expectations.</p> <p>The recommendation agreed upon.</p> <p>REC9</p>
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3	<p><b>Recommendations for HPC investments in 2023.</b> See attached PDF with name "Recommendations HPC investments 2023". The working group needs comments of the recommendations.</p>	<p>→</p> <p>Eske: Which HPC center should receive less funding if we invest more money in GPU's?</p> <p>Hans Jørgen: This is a request for additional funding.</p> <p>Eske: The only real way to raise budgets now, is if the universities pay more.</p> <p>Thomas: If no one apply for the GPU's on T1 in the national calls then why buy more (we need good arguments).</p> <p>Claudio: Now there is a surplus of money in DeiC from earlier years. And there is more money than expected in the FL23. Also, we should not address funding but address the need.</p> <p>Erik: So far there is no comprehensive report of usage over time, we should have that in the future. We do not have comprehensive data. So, the size of the recommendation is based on intuition.</p> <p>Claudio: Some researchers are buying their own GPU's because they see, that DeiC do not have enough for them to apply for.</p> <p>Eske: Why would you put the GPUs into an interactive system instead of Type 2 or Type 5.</p> <p>Claudio: They can work fine and more flexible on Type 1.</p> <p>Hans Jørgen: We need an evaluation of LUMI-G before we consider integrating GPUs in Type 2.</p> <p>Erik: One of the dangerous scenarios is when departments buy there own GPUs but do not have a</p>

		<p>good system administrator. For them it would be better to have them on Type 1.</p> <p>Hans Jørgen: Type 1 is easy to use for inexperienced users.</p> <p>The document was agreed upon.</p>
4	<p><b>Key Performance Indicators – KPI</b> See the attached PDF with name: "Key Performance Indicators – KPIs".</p>	<p>→</p> <p>Eske: The presented document is not about KPI's, but about reporting, and we have already agreed upon that reporting should be done.</p> <p>Claudio: The first recommendation is for DeiC to provide more information for the universities, and it is already presented to the DeiC board. So maybe it should not be in the document. Second, what is missing is "how much to expect", what the goals are.</p> <p>Kåre: Where are the KPI metrics coming from? Should we say yes/no or just agree on what is written. How the facilities communicate and present themselves is also very important.</p> <p>Hans Jørgen: This is not about yes/no but for the Forum to discuss.</p> <p>Sven: Do we want high level KPI's (general for all centers and services)?</p> <p>Claudio: It is important that the centers can influence the KPI's and are not reliable on other organizations.</p> <p>Thomas: User satisfaction could also be a relevant KPI. For instance, that users feel out a survey after finishing their grant.</p> <p>Hans Jørgen: To sum up we have three topics:</p> <ol style="list-style-type: none"> <li>1. Pure KPI for centers to deliver on (in contracts).</li> <li>2. Indicators with information about whether the HPC resources are used/searched for.</li> <li>3. Are the resources well used from universities point of view - How much value do they get for the money.</li> </ol> <p>Eske: All projects most have a project number, and this should be done otherwise we cannot track whether the resources are used.</p> <p>Conclusion: It is too early to send the KPI's to the DeiC board. The forum will try to get the KPI's done by the December board meeting.</p> <p>Erik: It is important that the KPI measures will be put into a report, so they are available. It is not urgent, but it is overdue.</p> <p>Sven: There should be made an executive level rapport to not only the board but to managers at different level of universities. This could be a strategy recommendation.</p>
5	<b>AOB.</b>	<p>→ Nothing</p>

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