First meeting of the workgroup infrastructure and HPC

<u>Date and location:</u> March 21-22, 2016 at Gregor-Mendel-Institute, 1030 Vienna

<u>Participants:</u>
Andras Aszodi, Vienna Biocenter Core Facilities VBCF
Erich Birngruber, GMI, Vienna
Stefan Ciaghi, University of Innsbruck
Michael Fink, Zentraler Informatik-Dienst, University of Innsbruck
Florian Goldenberg, CUBE, University of Vienna
Attila Gyenesei, Vienna Biocenter Core Facilities VBCF
Robert Happel, CIBIV, University of Vienna
Heribert Insam, University of Innsbruck
Markus Kiess, GMI, Vienna
Günter Klambauer, Institute of Bioinformatics, Johannes Kepler University Linz
Carolin Kosiol VetMed University of Vienna
David Kreil, BOKU University Vienna
Borries Luberacki, GMI, Vienna
Joerg Menche CeMM, Vienna
Jose Molero CeMM, Vienna
Stefan Pabinger, Austrian Institute of Technology
Michael Pilz CeMM, Vienna
Thomas Rattei, CUBE, University of Vienna
Wolfgang Schreiner, Medical University of Vienna
Christoph Sensen, TU Graz
Stephan Stadlbauer, IST Austria, Maria Gugging
Slave Trajanoski, Medical University of Graz
Arndt von Haeseler, CIBIV, University of Vienna
Susanne Zeilinger, University of Innsbruck

<u>Excused:</u>
Alexandra Graf, FH Vienna
Oliver Mayer, bmwfw
Zlatko Trajanoski, MU Innsbruck

March 21, 2016

Discussion about the state-of-the-art after presentations of individual groups and institutions:

- There is an issue on medical data: Patient data can probably not be given to central data storage. However, IT is actually less save in local hospitals
- A steering committee for operation of central infrastructure will be needed: Scientific groups and Uni politics have to agree
- The Ministry has complex funding system, for instance money fixed to a place
- The same situation exists for the federal states - therefore, funding agencies have

to be considered
- Not everyone has to collaborate, but those that are interested
- One single location for hardware is unlikely, but at least a concentration to a few
- HRSM: no real chance for staff (?) – has to come from a university
- A realistic timeframe >= 2 years; this makes urgent replacements problematic
- Central management and operation, but local clusters; as data is created decentralised, several hubs are better
- Problem: different types of technology & different types of scientific questions
- Hardware & data are of limited use without know-how, so things should be where the know-how is
- User-centric approach needed → user training → increases the user base, which can increase funding
- Redundancy in data and software should be reduced
- German example: big grant creates central headquarter and funds only useful parts of the various proposals
- Finnish example: same infrastructure setup for all nodes and centralised help desk
- Some sort of self-organisation is needed: "organisation" with some money, for example membership fees; or at least an unfunded club
- Legal entity is not clear, but for funding a single applicant is needed
- The progress has to take funding calls into account

Day 2

Collection (see pinboard photos):
- Scientific expertise
- Scientific needs
- Technical expertise
- Technical needs

There is lots of overlap, therefor hardware & expertise should be more centralised, which in turn frees up personnel for central jobs.

High-Rollers (with their own grants) and other users (usually students) should be handled separately.

The group needs to adapt to the infrastructure call.

Alternative Hardware strategies:
- nodes installed in an existing system (like Mendel)
- VSC 3e → but lacks access for non-university facilities

The various requirements need to be ranked.

Personnel is in fact more important than Hardware.

A vision and strategy is needed for proper tactics to handle funding; ELIXIR could be part of that.

Current hardware needs:
- GPU Machines (maybe together with the VSC)
- Storage
- HighMemory Machines > 10TB RAM
- FPGA Machines
- Compute nodes

The financial needs will be reported by the institutions.

Further meetings of the workgroup will be organized every half a year at different locations in Austria (two days from noon to noon). Each meeting will focus on a specific topic, for which we will invite external speakers.