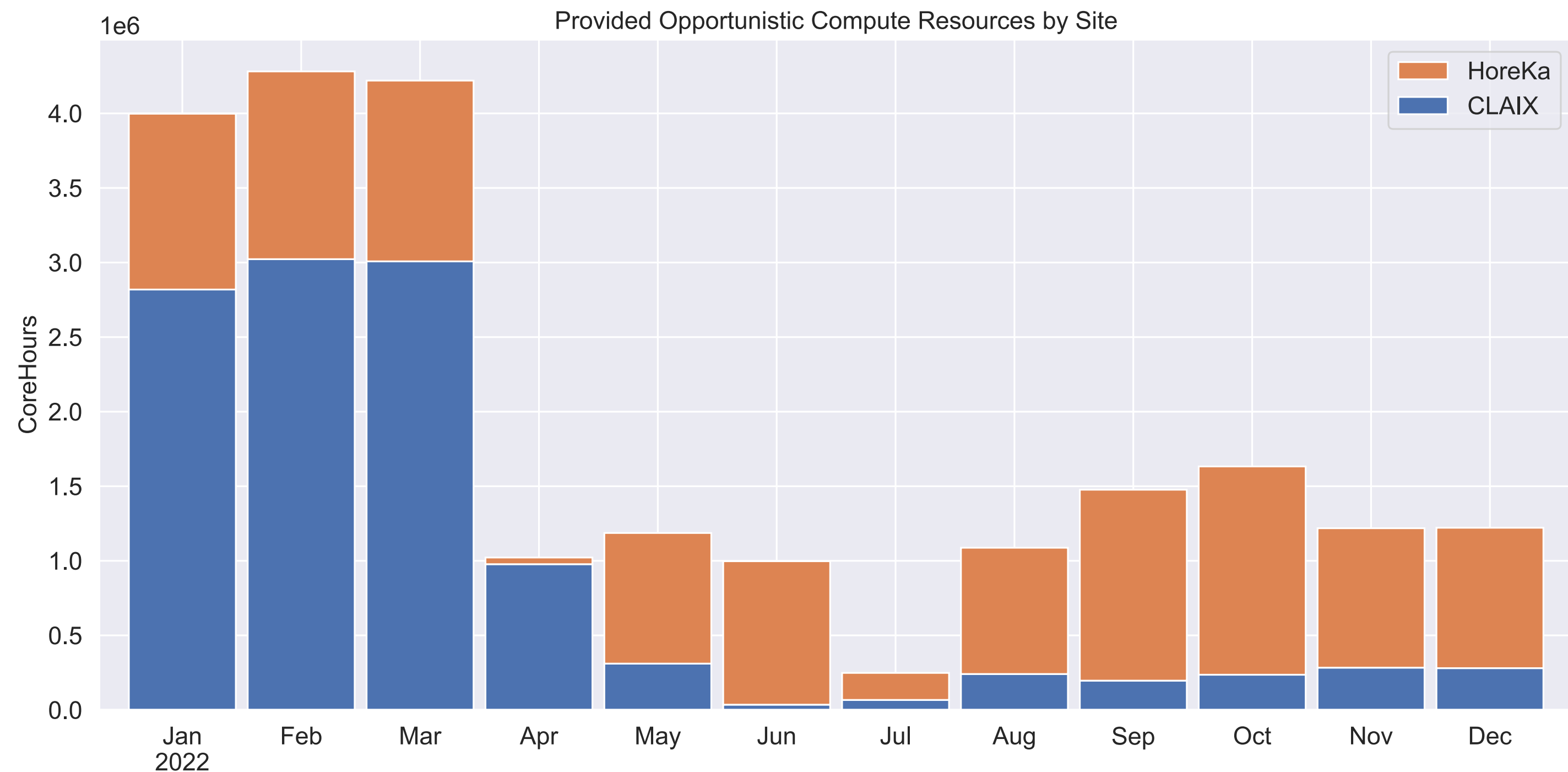FIDIUM

- Successful opportunistic use of Aachen HPC (CLAIX) as Tier-2 extension for CMS

- Use of Jülich HPC (JURECA) more challenging

Follow-up project:

- Further development of WLCG @ CLAIX

- Focus on large scale tests and inclusion of NHR resources

- Continue development of WLCG @ JURECA

Provided Opportunistic Compute Resources by Site

Martin

- Develop measures to sustainably use of significant and diverse computing resources together with benchmarks of their usefulness

- Concrete measures will evolve from DIG-UM workshop:

  Sustainability in the Digital Transformation of Basic Research on Universe & Matter

  https://indico.desy.de/event/37480 (May 30 - June 2, 2023)

- Please feel invited to join!

V/SPA

The creative workshop develops **Strategic concepts for sustainability in the digital transformation of basic research on universe & matter** - from the funding applications on. The workshop program focuses on working sessions with below-mentioned guiding questions. The 6 sub-groups of ca. 5 participants will gather relevant information for the final report which will be published timely after the workshop. Keynote presentations by high-profile experts will inform participants and stimulate discussions. Key measures will concern education, research and innovation, in line with the BMBF's sustainability goals.

Carbon Tracking and Transparency

- Provide job CO_2 footprint to users

- As realistic as possible ($\rightarrow$ users can optimize)

  - Energy consumption on worker

  - Real-time (local) energy source (prediction)

  - Hardware production footprint

  - Memory usage

  - …

- Build on existing tools à la

  experiment-impact-tracker

German Energy Sources (smard.de)

- Biomasse
- Wasserkraft
- Sonstige Erneuerbare
- Kernenergie
- Pumpspeicher
- Sonstige Konventio...
- Wind Offshore
- Wind Onshore
- Photovoltaik
- Braunkohle
- Steinkohle
- Erdgas