
National Bioinformatics Infrastructure Sweden, NBIS

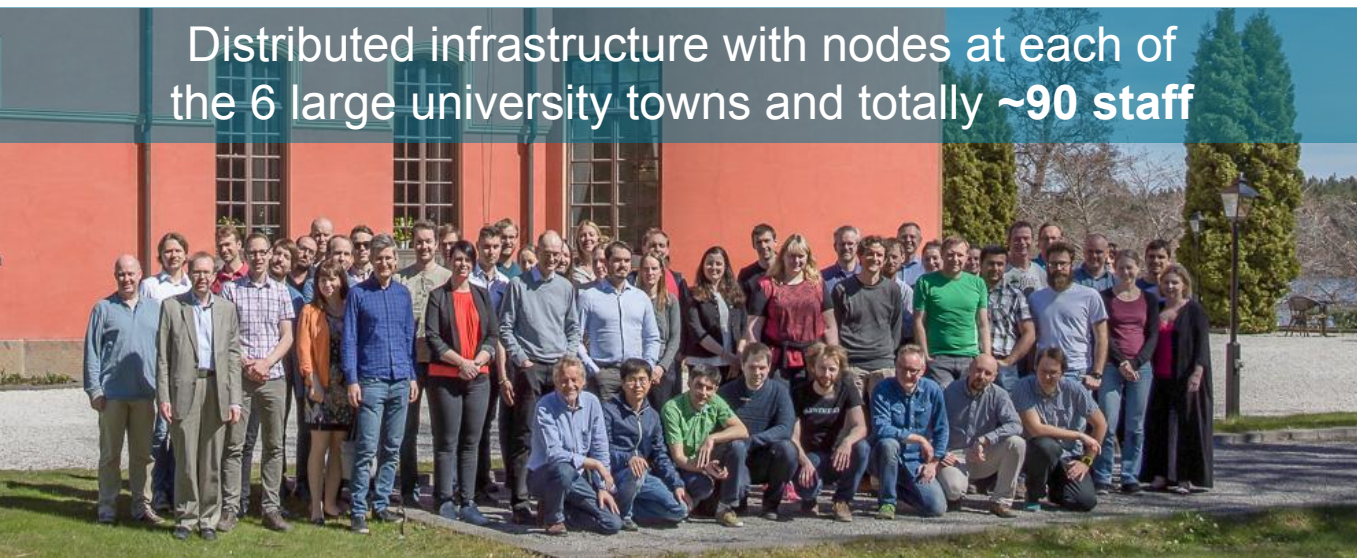
8 September 2021

Analysis of biological data

- Support
- Infrastructure
- Training



Distributed infrastructure with nodes at each of the 6 large university towns and totally ~90 staff



Enable world-class life science research and maximise scientific and societal impact of collected data by:

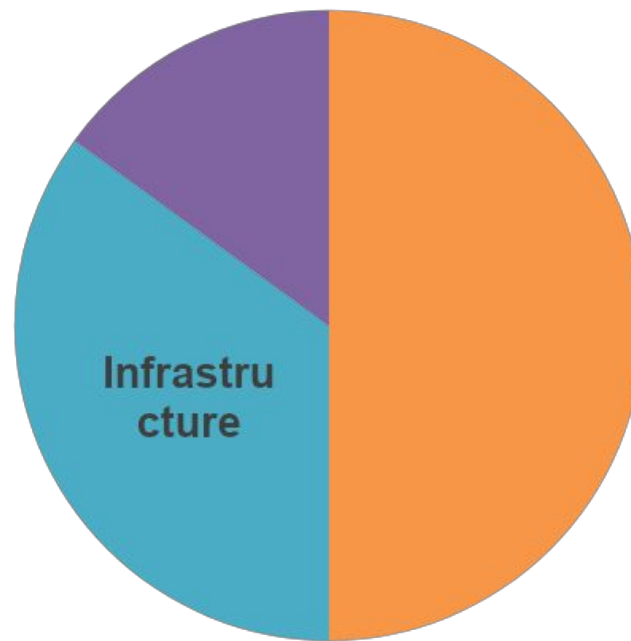
- Providing expert knowledge, innovative data integration, advanced training, efficient data publication for open science, and access to high-performance data analysis methods
- Coordinating bioinformatics support within Sweden and **making bioinformatics easily accessible** for life science researchers
- Responding swiftly to changes in support needs as new techniques are developed and utilised
- Forming the Swedish ELIXIR node and participating in relevant international



20 national courses
5 international courses
625 students
30 PhD:s in mentor program



Development for sensitive data
Coordination of e.g. 1M Genomes Initiative
Guidance to FAIR data
Maintaining selected Swedish tools



Resources 2019



245 unique PI:s
170 active support projects
100 new projects
70 publications
120 booked consultations
250 drop-in sessions

Overview of NBIS units



- **Study design consultation**
 - provided for free (up to 3 hours)
 - help our users to order the right type of data for their analysis
 - consider bioinformatics and data management issues at an early stage
 - extra drop-in sessions at VR grant application periods
- **Short- & Medium-term support**
 - academic user fee 800 SEK (~80 EUR) per hour
 - short waiting times
 - 50% support between universities, most suitable expert
- **Long-term support**
 - KAW funding, up to 500 hours for free
 - scientific evaluation; application rounds 3 times per year
- **Partner Projects (PP)**
 - intended for projects with a large bioinformatics component
 - NBIS support ≥ 12 person months over the project life-time, running 2–5 years calendar time
 - user fee to cover staff costs



Training events and programs

- Courses, teacher-dense for good networking
- Mentor program, boosting PhD skills

Rapid knowledge-transfer

- Drop-in sessions (Currently online)
- Catalyse rapid knowledge-transfer across projects/research areas
- Portable tools and workflows to empower users



Infrastructure development

- International repositories (e.g. Federated EGA)
- Hosting/interoperability of national resources of major interest (e.g. Human Protein Atlas, SweFreq, Metabolic Atlas)



Data management (close collaboration with Data Centre)

- Representing Sweden in international data initiatives
- Data Stewards to guide users in data management and FAIR data publishing

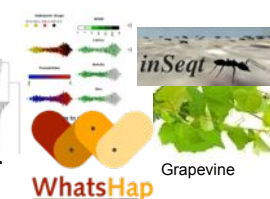


Tools

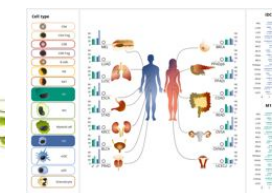
- Maintaining a few selected major Swedish software
- Continuous development of software, workflows and services



Mr Bayes
Bayesian Inference
of Phylogeny



Grapevine



ENCAM

About 6 staff members

A **bridge** between NBIS and SNIC-funded UPPMAX

- SNIC — **free to use** national infrastructure for computing, funded by Swedish Research Council
- UPPMAX — Uppsala high-performance computing centre

Provides a **digital research environment** serving 700+ PIs with over 1000 projects

Focus on HPC systems provided by UPPMAX



Thank you!

Questions? Comments?