

de.NBI/ELIXIR-DE Guidelines for Node Services Selection Process and Quality Management

The de.NBI network is a bioinformatics service provider that serves life science research community nationally and all across Europe. The de.NBI service portfolio contains over 100 bioinformatics tools and several internationally renowned databases, two of which are ELIXIR Core Data Resources. To ensure excellence and maximum benefit to life science researchers, de.NBI services need to be dynamic, relevant, up-to-date, and reflect the ever changing needs of the users and the community they serve. To ensure these requirements, services that are a part of the existing service portfolio need to be continually assessed and maintained in order to guarantee active and satisfactory performance in compliance with excellent scientific standards.

The de.NBI network aims at establishing a set of quality assurance criteria for the assessment and maintenance of its service portfolio. The procedure is set to facilitate the monitoring and constant evaluation of the existing services, as well as help in the process of endorsing new ones.

A list of required implementations for the continuation of a certain service within the de.NBI service collection is described below. The established criteria could additionally apply to services offered by external service providers¹ in order to enable the inclusion of such services in the de.NBI service portfolio and their display on the de.NBI website.

A service offered by the de.NBI network needs to comply with the following measures:

- 1. The service needs to demonstrate an impact on the scientific community it serves. This includes that the service:**
 - 1.1 Needs to fulfil a need within the community and offers a solution to an existing research question through scientifically sound methodology. Publications supporting the impact of the service are considered positive in the assessment procedure.
 - 1.2 Must be aligned with the scientific scope of the de.NBI network and its mission in the field of bioinformatics and shall complement or enhance the existing de.NBI service portfolio.
 - 1.3 Is mature and has an active community using it. This can be assessed through the overall number of hits and downloads as well as the frequency that the service has been cited.
 - 1.4 Shows benefit to the scientific community that is quantifiable through usage indicators measured by key performance indicators (KPIs) of the respective service category.

- 2. The service must fulfill certain technical and scientific quality criteria. This includes that the service:**
 - 2.1 Must be in production state, accessible 24/7 with minimal downtime.
 - 2.2 Needs to have functioning links displayed on the de.NBI website as well as an appropriate technical support and an active maintenance.

¹ External service providers are scientists of a German university or a German research institute who are not de.NBI project partners and requested the inclusion of their services into the de.NBI service portfolio.

- 2.3 Is easily reachable and when available, displays user manual, user help page, or guiding tutorials.
 - 2.4 Needs to be subject to user evaluation through the de.NBI user satisfaction survey.
 - 2.5 Should provide up-to-date data and keep up with the scientific progress in the respective field, where appropriate.
- 3. The service needs to comply with certain ethical and privacy legalities. This includes that the service:**
- 3.1 Must have a transparent public statement on the terms of use and license policies.
 - 3.2 Must adhere to all privacy policies and requirements as well as comply with the general data protection rules within Germany and Europe.
- 4. The service needs to comply with the open science and FAIR data principles. This includes that the service:**
- 4.1 Shall encourage cross collaboration between de.NBI service centers.
 - 4.2 Should be registered in the ELIXIR Tools and Service Registry, if appropriate.
 - 4.3 Shall support data interoperability by enhancing its suitability for different user environments.

It should not be overlooked that for a certain tool to be maintained in the de.NBI service portfolio, a list of minimal requirements should apply. Services that lack the ability to fulfil the minimum quality criteria will be marked as “orphan” and eventually discontinued from the website. Therefore, it is at the decision of the de.NBI CCU based on recommendations made by the SIG 2 to endorse or dismiss certain services based on the fulfillment of the above mentioned criteria.

In order to facilitate the assessment process, the de.NBI CAU will take care of evaluating the status of the services once per year by checking the following criteria:

1. Reachability (webpage accessible, tool downloadable, contact information available).
2. Responsiveness (test e-mail).
3. Last update (news, social media, publications, datasets, release notes).
4. Active monitoring of KPIs.
5. Life cycle management indicating one of the following status: active, temporarily inactive, permanently inactive.
6. Updated entry in the de.NBI service list and on the de.NBI website.

Agreed list of SIG 2 from 29 July 2019

Decision of the CCU, 21. CCU meeting on 21 January 2020