| No. | Category Criteria  |   | How to measure  |                             | Description  |                       | Required value for |  |
|-----|--------------------|---|---|-----------------------------|--|-----------------------|--------------------|--|
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    |   | Description   | Answer possibilities        |  | Pilot service         | Fully Integrated   |  |
|     |                    |   |   |                             |  |                       | service            |  |
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    |   | Basic service (frame conditions are to be                                       |                             |  |                       |                    |  |
|     |                    |   | defined for each service when describing  |                             |  |                       |                    |  |
|     |                    |   | the service in detail, cannot be defined  |                             |  |                       |                    |  |
|     |                    |   | for all) can be provided for free   |                             |  |                       |                    |  |
|     |                    |   | No profit gain, e.g. for the use, provision                                     |                             |  |                       |                    |  |
|     |                    |   | or operation of the service;  |                             |  |                       |                    |  |
|     |                    |   | self declaration given by service provider                                      |                             |  |                       |                    |  |
| 1   | Overhead criteria  | Society is provided for free                                    | Service is free of advertisement;   | Vac/No                      | Within Helmholtz cloud, services shall be provided to interested centers for free while offering the initial Service Portfolio   | Voc                   | Voc                |  |
| 1   |                    | Service is provided for free                                    | Service is free of advertisement;<br>Service provider is a Helmholtz center /no | Yes/No                      | (3-5 years)<br>Exclude services if only provided by external service providers   | Yes                   | Yes                |  |
| 2   | Overhead criteria  | Service is provided by a Helmholtz center                       | external service provider   | Yes/No                      | (DFN is also an external service provider)   | Yes                   | Yes                |  |
| _   |                    |   |   |                             | (  |                       |                    |  |
|     |                    |   |   |                             | Service Readiness Requirements are:  |                       |                    |  |
|     |                    |   |   |                             | > ability to accommodate additional users  |                       |                    |  |
|     |                    |   |   |                             | > clarity about current limitations  |                       |                    |  |
|     |                    |   |   |                             | <ul> <li>&gt; conditions for offering the service to external users are clarified (especially data protection &amp; IT security aspects)</li> <li>&gt; Helmholtz Legal Framework signed (as soon as possible)</li> </ul> |                       |                    |  |
|     |                    |   |   |                             | <ul> <li>Helmholtz Legar Framework signed (as soon as possible)</li> <li>Helmholtz AAI policies have been accepted by Service Provider</li> </ul>  |                       |                    |  |
|     |                    |   | Service Readiness for Helmholtz cloud   |                             | Multi-tenant capability or ability to manage access rights according to different user groups  |                       |                    |  |
|     |                    | Service is ready to be integrated in less than 1                |   |                             |  |                       |                    |  |
| 3   | Overhead criteria  | month   | span)   | Yes/No                      | Service requiring more time should come back to us as soon as they are ready   | Yes                   | Yes                |  |
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    | The Service provider ensures the support for                    |   |                             | Including the processing of service disruptions as well as the correction of errors in the service (or underlying software) -  |                       |                    |  |
| 4   | Overhead criteria  |   | Self declaration given by service provider                                      | Yes/No                      | and including the clear definition of the support interface (end point of support) and HIFIS Helpdesk interface  | Yes                   | Yes                |  |
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    | Regular measurement (Service Operation KPI)                     |   |                             |  |                       |                    |  |
|     | Overhead criteria  | regarding the service usage and the number of users is provided | basis   | Yes/No                      | In order to keep track of KPIs such as the number & growth of users over time, HIFIS collects Service Operation KPIs for each service (and also cumulates them to overall Portfolio KPIs)                                | Yes/No                | Voc                |  |
| 2   | Overnead criteria  |   |   | 165/100                     | The service needs to be able to be technically integrated into Helmholtz Cloud.  | 165/100               | Yes                |  |
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    |   |   |                             | Quality Standards in service provisioning are:   |                       |                    |  |
|     |                    |   |   |                             | > Session Management is implemented  |                       |                    |  |
|     |                    |   |   |                             | > On-demand self-service<br>(still fulfilled if preceding application process for authorization are necessary, as long as these application processes are  |                       |                    |  |
|     |                    |   |   |                             | easily accessible and intuitive in handling for users)   |                       |                    |  |
|     |                    |   |   |                             | > Broad network access   |                       |                    |  |
|     |                    |   |   |                             | (which means accessibility from the internet, regardless of access regulations due to safety mechanisms)   |                       |                    |  |
|     |                    |   |   |                             | > Resource pooling   |                       |                    |  |
|     |                    |   |   |                             | > Rapid elasticity   |                       |                    |  |
|     |                    |   |   |                             | (does not only include the physical scalability of resources but also the proactive and prompt management of available   |                       |                    |  |
|     |                    |   |   |                             | resources, thus resulting in resources being released for further usage as soon as not required anymore by previous users) > Monitored service   |                       |                    |  |
|     |                    | Service Provider commits to fulfill quality                     |   |                             |  |                       |                    |  |
| 6   | Technical criteria | standards in service provisioning                               |   | Yes/No                      |  | Yes/No                | Yes                |  |
|     |                    |   |   |                             |  |                       |                    |  |
|     |                    |   |   |                             | Service generally supports automated user provisioning via Helmholtz AAI, independent from whether this is already   |                       |                    |  |
|     |                    |   | No other authentication/authorization   |                             | technically implemented or not. "Automated user provisioning" means automated creation of user accounts and their  |                       |                    |  |
|     |                    |   | infrastructure accepted (besides  |                             | quota in the service after successful Login via Helmholtz AAI and authorization. Possibly manual steps in course of the  | Yes/No/No Login       | -                  |  |
| 7   |                    | (if Login is necessary to use service)                          | Helmholtz AAI)  | Yes/ No/ No Login necessary | authorization or preceding application processes are not included here. This only applies for services with Login.   | necessary             | necessary          |  |
| ~   |                    | Service has a procedure for user                                |   | Vac/No                      | Independent from the degree of automation, there needs to be a procedure for user deprovisioning in place (e.g. via mail   |                       | Vez                |  |
| Q   | echnical criteria  | deprovisioning in place   |   | Yes/ No                     | to Helpdesk, via self-service, via Cloud Portal)   | Yes/No<br>Backup well | Yes<br>Backup well |  |
| 0   |                    | Service provider has a backup                                   |   |                             |  | Packup well           |                    |  |