

**HUMAN TECHNOPOLE
NATIONAL FACILITY FOR DATA HANDLING AND
ANALYSIS
CALL FOR ACCESS
24-DHA-PILOT**

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1. INTRODUCTION

The Access of Researchers affiliated with Universities, *Istituti di Ricovero e Cura a Carattere Scientifico* (IRCCS), and Public Research Entities to Fondazione Human Technopole (HT) National Facilities (NFs) is regulated by the NF Access rules available on the NFs dedicated webpage ([link](#)).

Services offered by NFs are available through regular open calls for Access that are published yearly on the HT website ([link](#)) and are free of charge for the project (or aspects of the project) approved for Access.

The open call for Access is aimed at supporting Access to the technologies offered by the NFs and it is not meant to provide direct funding to the User. The costs for the activities to be performed at the NFs will be fully covered, including shipment of relevant material from and to the User's laboratory as well as travel and accommodation for the User while accessing the NF. Project-related costs (personnel, consumables, and other costs) at the User laboratory are not funded.

The User Access workflow comprises different steps, spanning from the initial submission of the application to evaluation and Access approval, Access to the performance of the service(s) and Access conclusion. A detailed description of the workflow is available on the NFs dedicated webpage ([link](#)).

1.1 Access modalities

Three different Access modalities can be requested. Their availability will vary, based on the service specifics of each NF:

- **“Simple” Access to NF or individual instruments thereof:** this modality is intended for Users involved in projects requiring technologies that are available at the NF for direct Access by User. This Access modality requires prior expertise with the technology of interest. After an initial introductory training aimed at defining the level of expertise of the User, the use of the instrument with limited supervision by NF staff is authorised. For defined NFs/ instruments/ services this Access modality may be restricted or not available.
- **Access to NF services:** This procedure entails the provision of services performed by NF staff on behalf of the User. NF services may include both standard services as well as, when foreseen by the technology development specifics of each NF, bespoke services conceived and discussed with the User. To allow the NF staff to best align the experimental activity to the research objective, the User may be invited, if needed, to assist the NF staff while performing the project or aspects of it.
- **Access to NF services including training:** This procedure entails training by NF staff to provide Users, in addition to or alternatively to the services described in the previous modality, with training courses and/or programs, aimed at transferring the expertise necessary for the independent use of the specific technology. In this case, technical and/or experimental activities are conducted with the active participation of the User. This type of Access is also aimed at researchers who want to acquire expertise for subsequent independent use of a specific technology in other laboratories.

2. TERMS AND DEFINITIONS

2.1 Access

“Access” refers to the authorized use of the NF and of the services offered. Such Access can be granted for sample preparation, set-up, execution and dismantling of experiments, education and training, expert support and analytical services, among others. Access to the NFs includes all infrastructural, logistical, technical and scientific support (including training) that is necessary to perform the aspects of the project approved for Access.

2.2 Researcher

“Researcher” is a professional engaged in the conception or creation of scientific knowledge. They conduct research and improve or develop concepts, theories, models, techniques, instrumentation, software or operational methods.

2.3 Principal Investigator

“Principal Investigator” (PI) is the Researcher affiliated with an eligible Institution with the role of independent Group Leader, who is responsible for coordinating the research activities conducted within the framework of the submitted project.

The PI shall hold a primary appointment as Group Leader at an eligible Institution, with the following requisites:

- Coordinate an independent research team.
- Have a supervisory role towards junior and/ or senior Researchers.
- Their Group has an autonomous budget sufficient to cover their current research expenses.
- Be the recipient of independent research funding as PI or co-PI.

Junior PI: Up to 6 years from their first appointment in an independent Group Leader position. The period specified above may be extended beyond 6 years in the event of adequately documented career breaks, occurring before the submission of the application and resulting from:

- i.* Maternity leave: The time limit is increased by 18 months for each child born after their first appointment in an independent Group Leader position; if the Applicant is able to document a longer total maternity leave, the period of eligibility will be extended by a period equal to the documented leave, taken before the submission of the application. Maternity status must be documented by submitting the birth certificate of the child or children;
- ii.* Paternity leave: The time limit is increased by the actual amount of paternity leave taken before the application submission deadline for each child born after their first appointment in an independent Group Leader position. Paternity status must be documented by submitting the birth certificate of the child or children;
- iii.* Long-term illness of more than 90 days, or national service: The time limit is increased, for each eligible event occurring after their first appointment in an independent Group Leader position, by the actual amount of leave from which the Applicant has benefited prior to the application submission deadline.

Established PI: More than 6 years from their first appointment in an independent Group Leader position.

2.4 Applicant

“Applicant” is the Principal Investigator who applies to a NF open call for Access and who is responsible for the submitted project. They can be of any nationality and must be affiliated with an eligible Italian Institution, as detailed in [section 4](#).

2.5 User

A “User” is intended as a Researcher affiliated with an eligible Institution who accesses the NFs to perform the approved activities or to support the National Facility staff while performing the approved service.

If requested by the Applicant, the User of the NF can also be a separate member of their research team.

3. APPLICATION TYPE

Applicants shall select the type of application they want to submit, choosing between two options:

- a. **Standard** application for projects that are technically mature.
- b. **Proof-of-concept** application for:
 - i.* Projects with high scientific potential but with insufficient technical maturity or preliminary data.
 - ii.* Projects aimed at setting up the experimental conditions required for a standard project, including methods or technology development projects.
 - iii.* Time-limited Access projects (e.g., to acquire data to complete a manuscript, or preliminary data needed for a grant application, or single microscopy session).

4. ELIGIBILITY AND ADMISSIBILITY

PIs, as defined in [section 2.3](#) of this call, affiliated with an eligible Institution are eligible to apply. The Applicant’s role as a PI shall be confirmed by their Institution in a mandatory letter of Institutional endorsement.

Applications from Researchers who are not independent should be submitted by their Group Leader. Applicants are strongly encouraged to support NF Access by young Researchers (R1 and R2 profiles of the European Framework for Research Careers, [link](#)) who are part of their group. In this case, the Applicant shall indicate in the application form that the NF User is a member of their group, specifying User’s career stage.

Below are the links to the relevant lists of eligible Institutions:

Universities: This category includes Institutions recognized by the Ministry of University and Research ([link](#)). In detail:

- i.* State funded public universities, listed under the following [link](#).

- ii. Specialized superior graduate schools or Institutions, listed under the following [link](#).
- iii. Legally recognized non-public universities, listed under the following [link](#).
- iv. On-line universities, listed under the following [link](#).

Istituti di Ricerca e Cura a Carattere Scientifico (IRCCS): this category includes Institutions recognized by the Ministry of Health and listed at the following [link](#).

Public research entities: this category includes:

- a) Institutions recognized by the Ministry of University and Research and listed at the following [link](#).
- b) Area di Ricerca Scientifica e Tecnologica di Trieste - Area Science Park;
- c) Agenzia Spaziale Italiana - ASI;
- d) Consiglio Nazionale delle Ricerche - CNR;
- e) Istituto Italiano di Studi Germanici;
- f) Istituto Nazionale di Astrofisica - INAF;
- g) Istituto Nazionale di Alta Matematica "Francesco Severi" - INDAM;
- h) Istituto Nazionale di Fisica Nucleare - INFN;
- i) Istituto Nazionale di Geofisica e Vulcanologia - INGV;
- j) Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS;
- k) Istituto Nazionale di Ricerca Metrologica - INRIM;
- l) Museo Storico della Fisica e Centro Studi e Ricerche "Enrico Fermi";
- m) Stazione Zoologica "Anton Dohrn";
- n) Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione - INVALSI;
- p) Istituto Nazionale di Documentazione, Innovazione e Ricerca Educativa - INDIRE;
- q) Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria - CREA;
- r) Agenzia Nazionale per le Nuove Tecnologie, l'energia e lo Sviluppo Sostenibile - ENEA;
- s) Istituto per lo Sviluppo della Formazione Professionale dei Lavoratori - ISFOL (a decorrere dal 1° dicembre 2016 denominato Istituto nazionale per l'analisi delle politiche pubbliche - INAPP);
- t) Istituto Nazionale di Statistica - ISTAT;
- u) Istituto Superiore di Sanità - ISS;
- v) Istituto Superiore per la Protezione e la Ricerca Ambientale - ISPRA, ferme restando le disposizioni di cui alla [legge 28 giugno 2016 n. 132](#);
- w) Istituto nazionale per l'assicurazione contro gli infortuni sul lavoro – INAIL.

Eligible Institutions/ Institutes are strongly encouraged to limit the number of applications submitted during one evaluation window to the very best two for each NF, with at least 50% coming from Junior PIs.

Applicants shall declare that they have not received funding to perform the submitted project (limited to the aspects included for Access to the NF) in their own laboratory, home Institution or elsewhere. Applicants shall confirm the economic and scientific feasibility for the aspects of the project to be performed outside the NFs.

Applicants cannot request Access for the same service if an approved Access is ongoing. Before submitting a new application for the same service, Applicant shall consult with the NF staff and confirm that the ongoing Access will be completed before the end of the next evaluation round. A clear motivation for the request must be provided.

During the same application window, a PI can submit only one application to the NFs (i.e., participate to only one call for Access). If more than one application is submitted, all will be rejected during administrative review. Applicants who have an application under evaluation are not allowed to submit another application before receiving notification of the results.

Applications must be written in English and must be complete (i.e., consist of all the requested elements and information) and respect all administrative and technical requirements (e.g., proposal or CV format, declarations, technical requirements of the services, sample requirements). Incomplete applications or applications that do not meet the requirements will be considered not admissible and will be rejected at the administrative review stage.

The application form consists of six components:

1. Applicant's general information.
2. Justification for requesting Access to the NF.
3. Abstract.
4. Project proposal, including:
 - a. *Significance.*
 - b. *Innovation.*
 - c. *Approach, including aims, preliminary data in support of the proposed experiments, experimental design and anticipated results.*
 - d. *Environment, including facilities and resources available to support the aspects of the project to be performed elsewhere (i.e., outside the NF).*
5. Applicant's CV in NIH biosketch format.
6. Letter of Institutional Endorsement, addressing the following points:
 - a. *Confirmation of the Applicant's role at their Institution, and their eligibility under the category of PI (see section 2.3).*
 - b. *Confirmation that relevant authorisations, declarations and accreditation from the competent authority(ies) have been obtained in order to process samples and data through the NFs.*
 - c. *Justification of the request for Access – including a statement on why the project cannot be performed at the Applicant's Institution.*
 - d. *Confirmation that the Applicant has not received funding for performing the submitted project, for the aspects to be performed at the NFs, in their own laboratory, home Institution, or elsewhere.*
 - e. *Confirmation of the project's economic and scientific feasibility for the aspects to be performed at the host Institution.*
 - f. *Acceptance of NF Access terms and conditions.*

The facsimile available as [Annex II](#) of this call shall be used as template.

7. Technical information, including:
 - a. *Requested service(s), as described in [Annex I](#) of this call.*

- b. *Sample technical information.*
- c. *Requested preliminary data for technical feasibility analysis (if applicable).*
- d. *Whether the entire sample set is already available (otherwise indicate the date of availability of the entire sample set).*
- e. *Resources and expertise to receive and process the products – data (e.g. Cryo-EM micrographs) or reagents (e.g. human iPSCs) – generated by the NF.*
- f. *Research data management plan and bioinformatics support for data analysis, specifying:*
 - i. *How the bioinformatics analysis of the data generated by the NF will be performed (if such analysis is not provided by the NF for Data Handling and Analysis).*
 - ii. *How the data generated by the NF will be handled during and after the end of the project.*
 - iii. *Whether and how the data will be shared/ made Open Access.*
 - iv. *How data will be curated and preserved, including after the end of the project.*

Information provided in sections 1 and 6 are used for the eligibility and admissibility check.

Information provided in section 7 is used for assessing the technical feasibility of the aspects of the project to be performed at the NF.

The entire application is evaluated by the Standing Independent Evaluation Committee (SIEC) for assessing scientific merit.

5. APPLICATION SUBMISSION METHODS, CALL DEADLINE AND EVALUATION PERIODS

Applications shall be submitted exclusively through the web-based procedure managed by CINECA and accessible at the [link](#), according to the terms and methods there indicated.

Applications are accepted throughout the year and assessed in three evaluation rounds per year. The time between one evaluation round and the next one is considered an application window.

- Evaluation round 1: applications submitted between the 1st of January and the 30th of April will enter the first evaluation round (May/ June).
- Evaluation round 2: applications submitted between the 1st of May and the 31st of August will enter the second evaluation round (September/ October).
- Evaluation round 3: applications submitted between the 1st of September and the 31st of December will enter the third evaluation round (January/ February).

This first call for Access (Call ID: 2024-DHA-Pilot) will be **open from the 10th of June 2024 (1 pm) to the 31st of December 2024 (1 pm)** and will involve 2 rounds of evaluation (September 2024 and January 2025).

A comprehensive list of services, available equipment and the technical requirements for Access as well as terms and conditions are available on the dedicated NFs webpage ([link](#)).

The complete list of offered services and technical requirements are available in the [Annex I](#) of this call.

6. EVALUATION OF APPLICATION

The evaluation procedure is conducted by the SIEC that is supported by a Panel of independent external Reviewers (Review Panel) selected by the SIEC on the basis of their scientific expertise.

Each Review Panel is composed of 2 SIEC members, who will act as Chairs, plus 10 appointed external Reviewers, with the relevant expertise.

Below is a scheme describing evaluation steps and timeline.



There are four application categories that are evaluated and ranked separately:

- Junior PI – Standard application
- Established PI – Standard application
- Junior PI – Proof of Concept application
- Established PI – Proof of Concept application

The NF User Access Office first performs an administrative review of the application to ensure that all the requested components have been provided, and that all eligibility criteria have been met. Incomplete applications or applications that do not meet the requirements will be considered not admissible and will be rejected at the administrative review stage.

The application is then sent to the Review Panel for assessing scientific merit and technical feasibility.

If the number of applications exceeds by a factor of 4 the estimated capacity of the NF, a triage will be applied within each application category by the relevant Review Panel.

Triage criteria will include:

- a. Justification for requesting Access to the NF.
- b. Field-Weighted Citation Impact (FWCI).
- c. Track record in securing research funding.

The application will remain confidential throughout the entire evaluation process. Reviewers will be asked to declare that they do not have any conflict of interest and will be bound by a Confidentiality Agreement.

The application will be individually evaluated by three Reviewers who are part of the relevant Review Panel.

Proposals will be evaluated and ranked based on their average score, within each category.

An on-line meeting of the Review Panel may be requested by the Chairs if deemed necessary (for example to discuss proposals with highly discrepant scores).

At least 50% of the available Access will be allocated to applications from the two Junior PI categories.

6.1 Evaluation criteria

The scientific merit of the project is assessed based on the following criteria:

- **Significance:** Overall scientific merit of the proposed research. If all the experiments proposed are successful, how will the resulting knowledge advance the field?
- **Innovation:** Degree of innovation (conceptual and/ or technological), and ambition of the proposed study compared to the state-of-the-art in the relevant field.
- **Approach:** Appropriateness of proposed methodology, preliminary data in support of proposed experiments, and project feasibility.
- **Environment:** Facilities and resources available to support the aspects of the project to be performed elsewhere (i.e., outside the NF).
- **Justification for requesting Access to the NF:** Explanation on why the service cannot be performed at the host Institution, at a cost which is deemed affordable for the applicant.
- **Applicant:** PI's scientific background and expertise.

6.2 Scoring system

A numeric score between 1 (exceptional) and 9 (poor) is provided for each of the six evaluation criteria. Moreover, an overall project score including a short descriptive comment is provided as feedback to the Applicant.

- **HIGH:**
 - **Score 1 (Outstanding)** – The proposal successfully addresses all relevant aspects of the criterion. There are no weaknesses.
 - **Score 2-3 (Excellent - Very Good)** – The proposal addresses the criterion exceptionally well, aside from a small number of minor weaknesses.
- **MEDIUM:**
 - **Score 4-6 (Very good - Good)** – The proposal addresses the criterion well, but a number of weaknesses are present.
- **LOW:**
 - **Score 7-8 (Fair - Poor)** – The proposal broadly addresses the criterion, but there are significant weaknesses.

- **Score 9 (Poor)** – The criterion is inadequately addressed, or there are serious inherent weaknesses.

6.3 Technical feasibility analysis

During the evaluation, the relevant experts from SIEC will receive a report from NF staff who will perform a comprehensive analysis of the proposed project's technical feasibility. Technical feasibility also includes an evaluation of the fulfilment of the technical requirements in terms of capacity to receive and process the research data generated by the NF, as described in the research data management plan. This latter evaluation is performed in consultation with the NF for Data Handling and Analysis.

Based on the technical maturity of the project, the application can be assessed as Feasible/ Not Feasible/ Pilot study required (switch from Standard to "Proof-of-Concept application track).

6.4 Evaluation results and Access approval

NF staff provides the SIEC with information on the resources needed (cost and time) to perform the highest ranked projects. The most positively evaluated applications that fulfil all technical requirements are approved for Access by SIEC, based on the capacity of the NF. NF staff schedules Access. A selected number of applications may be placed on a waiting list (in case of cancellations).

Evaluation results – Access approved, Access waitlisted, Access not approved – are communicated to the Applicant through the Access portal.

Applicants whose applications are placed on the waiting list will receive additional information advising whether the project can be Access approved or should be resubmitted within the subsequent application window.

7. AFTER ACCESS HAS BEEN APPROVED

After Access approval, a kick-off meeting is organized by the NF User Access Office and the Applicant is invited to meet NF staff to discuss the experimental design of the project and to finalize the project plan.

Once the project plan has been agreed, the NF User Access Office coordinates the signature of the required formal Agreements (e.g., Access Agreement, Collaboration Agreement, other) and the project can start.

8. AFTER ACCESS HAS BEEN COMPLETED

At the end of the activities carried out at the NF, and not later than 3 months thereafter if not differently agreed with the NF User Access Office, the User must submit a short report on the results obtained and the impact of the service on their research. Moreover, a final report to be published on the NFs website and describing the impact of the Access to the NF on the research project for which the service has been requested shall be provided upon publication of the relevant results. Users who will not be able to demonstrate the consistency and relevance of the activities carried out at the NF with the research project for which Access was requested will be considered not eligible to participate in the subsequent calls for Access.

Moreover, the User will be asked to fill in a brief, mandatory survey regarding their experience, providing feedback and suggestions for further service improvement.

The User must communicate to the NF User Access Office (via email to national.facilities@fht.org) any publication acknowledging the NF.

Research data obtained during Access shall be made available to the scientific community following the FAIR principles. User must inform the NF User Access Office (via email to national.facilities@fht.org) when and how the data are made public.

9. CONTACTS

Requests for information and/or clarifications concerning the application procedure may be sent to the dedicated e-mail address national.facilities@fht.org, indicating the call ID in the subject line.

10. REFERENCES

NF Access workflow_Convenzione ([link](#))

NF Access rules_Convenzione ([link](#))

NF Access Agreement_Convenzione ([link](#))

11. CHANGES TO THE CALL

Any changes or additions to this notice will be communicated through publication on the NFs website ([link](#)).

**ANNEX I: NATIONAL FACILITY FOR DATA HANDLING AND
ANALYSIS: SERVICES LIST**

**HUMAN TECHNOPOLE
NATIONAL FACILITY FOR DATA HANDLING AND
ANALYSIS
CALL FOR ACCESS
24-DHA-PILOT
SERVICE LIST**

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1. INTRODUCTION

The mission of the NF for Data Handling and Analysis is to support the research community by providing state-of-the-art analysis of the data generated by other NF or external sources and deliver the results to the external project owner. The main objective of the NF for Data Handling and Analysis is to provide bioinformatics and bioimage analysis expertise in the analysis of complex, large-scale biomedical datasets.

The NF for Data Handling and Analysis includes three Infrastructural Units:

- IU1 – Bioimage Analysis
- IU2 – Omics Analysis
- IU3 – Technology Development – DevOps and Web Dev

The mission of the Bioimage Analysis infrastructure unit is to provide state-of-the-art analysis of biomedical imaging data, to develop, maintain and release open-source tools to expand our service portfolio and for use by the broader bioimage analysis community, and to share its current expertise with the rest of Italy.

The NF operationalizes this mission by recruiting and retaining world class scientists and engineers for our image analysis and research software engineering teams, and by providing this expertise to the external community via the NF Access scheme, described below. Our goal is to help our Users extract biologically relevant and scientifically informative data from their imaging experiments, across a wide range of modalities.

In the 24-DHA-Pilot call, the IU2 - Omics Analysis services will be offered only in combination with the NF for Genomics services. Please refer to the call 24-G-Pilot ([link](#)) for more information.

2. SERVICE LIST

(IU1) Bioimage Analysis

SID: NF-60-001 – Light Microscopy Analysis

Services description: The services we provide include, but are not necessarily limited to, the following use-cases:

- **Image restoration and denoising:** Removing pixel-independent noise from images to increase SNR.
- **Semantic and Instance segmentation:** Identifying and segmenting objects in an image, generating image masks.
- **Quantitative Image Analysis:** Quantification of intensity levels in images or segmented objects.
- **Morphometric Analysis:** Analysis of shape and morphology of segmented objects
- **Custom pipeline development:** Construction of an analysis pipeline combining two or more individual steps.

While these are examples of the services we can provide, we anticipate that most projects will require some combination of tools and services and so we will work with successful Applicants

to craft pipelines that fulfil their analysis needs, as well as provide training and support in their future use. Our ethos is to work openly and transparently with our Users in the spirit of scientific collaboration. During the application phase, it will be necessary only to describe the data and the desired form of the analysis result; the precise details of the analysis will be discussed with the Applicants upon selection of the project.

Technical requirements: Applicants must ensure that the dataset is available at sufficient quantity and quality (for example resolution and signal-to-noise ratio) before the closing date of the application period. This will be assessed on example data submitted during the application phase. Applicants are responsible for uploading their image data to Human Technopole file servers at the initiation of the project, and for downloading the final results at the conclusion of the project.

Information to be provided in the application:

- Describe your image data (e.g., 2D/3D, number of channels, pixel dimensions, stitched/tiled, timeseries). If multi-channel, please indicate what each channel represents.
- How many (total) images do you have?
- How large (on average) is each image, in megabytes?
- Do you have an existing analysis pipeline? If so, describe it briefly, including **tools used and description of the analysis output**.
- Do you have any manually generated ground-truth results? If so, please describe them.

*Ground truth data is manually curated examples of the desired analysis output. For example, hand-drawn segmentation masks **or regions of interests**, manual object tracking, manually drawn regions of interest, image classifications (i.e., phenotype 1, phenotype 2). **Mention whether your images are completely or partially annotated.***

- Please describe your Institution's capacity to receive and store the generated data.
- For the feasibility assessment, uploading a set of sample images as part of the application process is required. It is important that these images accurately reflect the diversity of the data in the dataset (i.e., not the best set of possible images). For small datasets (< 100), a sample of approximately 10% should be sufficient, with a minimum of 5 images. For larger datasets, please construct a sample dataset of reasonable size (i.e., no more than 1 GB). To reduce image size, please consider cropping in XY or in Z rather than scaling. Any ground truth data shall be uploaded if available.

Delivery of results: Upon successful completion of the selected project, results will be delivered in a format of the Users choosing and depending on the project needs. In addition, we will provide whatever software, code, and support is required for the User to reproduce the analysis at their home institute. The form will depend on the specifics of the project and the needs of the Users, but we anticipate delivery in the form of Python scripts and/or ImageJ macros. To reduce the burden of Access for our Users, we will use open-source software tools during the NF projects.

Access modality available: Access to NF services, Access with training

SID: NF-60-002 – CryoEM Analysis

Services description: The services we provide include, but are not necessarily limited to, the following use-cases:

- **Single-particle analysis (SPA):** Development of image processing pipelines for the reconstruction of single particle 3D density maps, starting from cryoEM raw datasets or pre-processed micrographs/particles. Map validation.
- **Atomic Model Building:** *De novo* model building from reconstructed 3D density maps, fitting of existing atomic structures and refining of atomic models. Model validation.
- **Analysis of Flexibility and Heterogeneity:** Development of image processing pipelines for local reconstruction and refinement of flexible regions and evaluation of the conformational heterogeneity landscape of the macromolecules.
- **Tomography reconstruction:** Development of image processing pipelines for the reconstruction and analysis of tomograms, starting from tilt-series containing fiducial markers or fiducial less. Segmentation of the tomograms and sub tomogram averaging (STA).
- **Custom pipeline development:** Construction of a pipeline combining two or more individual steps.

While these are examples of the services we can provide, we anticipate that most projects will require some combination of tools and services and so we will work with successful Applicants to craft pipelines that fulfil their analysis needs, as well as provide training and support in their future use. Our ethos is to work openly and transparently with our Users in the spirit of scientific collaboration. During the application phase, it will be necessary only to describe the data and the desired form of the analysis result; the precise details of the analysis will be discussed with the Applicants upon selection of the project.

Technical requirements: Applicants must ensure that the dataset is available at sufficient quantity and quality (for example resolution, contrast and signal-to-noise ratio) before the closing date of the application period. This will be assessed on example data submitted during the application phase. Applicants are responsible for uploading their image data to Human Technopole file servers at the initiation of the project, and for downloading the final results at the conclusion of the project.

Information to be provided in the application:

- General Project Information (ie sample description, experimental goals)
- Microscopy and Detector Details (ie model, voltage, magnification, pixel size etc)
- Data collection information (Total number of movies and exposure time per frame)
- Sample preparation (description of sample preparation procedures)
- Information about the target protein (ie symmetry, shape, size, existing atomic models, protein sequence)
- Preprocessing details (describe any image processing that has been done during or after collection, if any)

- Processing preferences (Software preferences, ie Relion, Cryospark, etc, resolution target)
- Data information (data size, formats, available metadata)
- Additional details –not mandatory -- (known artifacts ie drift, contamination, orientation bias)
- For the feasibility assessment, uploading a set of at least 10 movies/micrographs as part of the application process is required. It is important that these images accurately reflect the diversity of the data in the dataset (i.e., not the best set of possible images). Please ensure to include any applicable metadata. If CTF estimation is available, please include this as part of the application. To reduce the burden of Access for our Users, we will use, wherever possible, open-source software tools during the NF projects.

Delivery of results: Upon successful completion of the selected project, results will be delivered in a format of the Users choosing and depending on the project needs (typically .mrc or .pdb, but other formats or intermediate files may be delivered depending on User preferences). In addition, we will provide whatever software, code, and support is required for the User to reproduce the analysis at their home institute.

Access modality available: Access to NF services, Access with training

ANNEX II: LETTER OF INSTITUTIONAL ENDORSEMENT TEMPLATE

(Print on paper bearing the official letterhead of the host Institution)

Endorsement letter of the host Institution

To whom it may concern:

I, the undersigned, (*name of legal representative or special attorney*), born in (*city*) on(*date*), as legal representative (*or special attorney, by means of special power of attorney identified by*) and on behalf of(*name of the host Institution*), legal residence in (*referred to the host Institution*)(*city*), address, regarding the project (*title*)....., presented by(*Applicants's first name and surname*), as Principal Investigator on the call for Access to Human Technopole National Facilities.....(*ID of the call*),

Declare

- That the host Institution is among those eligible to participate in the call for Access as it belongs to the following eligible category: (select among University, IRCSS, Public Research Entities);
- That the Applicant, Dr (*Applicant's first name and surname*) is an independent Group Leader (Principal Investigator) affiliated with a primary appointment at the host Institution and that they meet the eligibility criteria as indicated in the call;
- That the Applicant has not received funding for performing elsewhere, the aspects of the project for which they are seeking here support from or Access to Human Technopole National Facilities;
- That the services requested here cannot be performed by the Applicant at the host Institution, at a cost which is deemed affordable for them.
- That relevant authorisations, declarations and accreditation from the competent authority(ies) have been obtained in order to process samples and data through Human Technopole;
- That, if applicable, biological specimens have been obtained with the corresponding approval of the Bioethics Committee and appropriately signed 'informed consent', both for their collection and their use, including conservation, manipulation, derivation and processing to be carried out by Human Technopole National Facilities;

- That, if samples were obtained from subjects who signed an 'informed consent', said informed consent allows that sequencing data and results are included in secure controlled Access databases and accessed/ used by authorized third parties;

and is committed

- To accept the terms and conditions to Access Human Technopole National Facilities as described in the National Facilities Access rules ([link](#));
- To sign the Access Agreement should the project be approved ([link](#))

For the host Institution (Applicant legal entity/beneficiary):

Date

Name and Title ;

Email and Signature of legal representative or delegated person

..... ;