

## Biobank-in-a-box

Checklist for setting up a collection (materials, data, images) with the purpose to make this collection available for scientific research. Please also check [www.bbmri.nl](http://www.bbmri.nl) and [www.health-ri.org](http://www.health-ri.org).

### PREPARATION

Formulate the answer to the following questions:

- Why is it important to set up this collection/biobank?
- What is the purpose of the collection?
- Is there already something similar available, also check:
  - <https://catalogue.bbmri.nl/menu/main/app-molgenis-app-biobank-explorer/biobankexplorer>
  - <https://directory.bbmri-eric.eu/menu/main/app-molgenis-app-biobank-explorer/biobankexplorer>
- What will be collected exactly?
- How will it be collected?
- Who will collect and who will be responsible (governance)?
- How will the collection be funded, sustainably? (please [check](#))
- What is the procedure for request and use of the material, data and/or images (who can apply, what are the conditions, who will grant the requests)? Also check the catalogues for biobanks that already have these procedures in place.
- How will you communicate about the collection (towards donors, possible users, funders, institutes and public)?

### BIOMATERIALS

- The Parelsnoer Instituut has developed “het Biobank Document” to collect samples multicenter and standardized: <https://parelsnoer.org/page/nl/Standandaardprocedures>
- BBMRI-ERIC has developed guidelines for quality management of biomaterials: <http://www.bbmri-eric.eu/services/standardisation/>
- To make samples and data findable and exchangeable, please use the MIABIS standards: <https://github.com/MIABIS/miabis/wiki>
- A Biobank Management Systems (BIMS) can be used to “check-in”, “check-out”, and sample tracking of collected biomaterials. The following BIMS are used in the Netherlands:
  - Labvantage
  - Samplnavigator
  - Labware
  - Quaero systems
  - BIS Maastricht
  - Omicum Biotracker
  - LMS
  - OpenSpecimen
  - Itemtracker

For more information contact [Erik van Iperen](#), Durrer Center.

### DATA

- For collecting data is useful to translate the clinical protocol into an information model using international standards like SNOMED, LOINC, GMDN, and use the “zorginformatie bouwstenen” (<https://www.nictiz.nl/standaardisatie/zib-centrum/>).
- Medical information described in “zorginformatie bouwstenen” can be made accessible through the electronic patientfile to avoid double registration. The “Registratie a/d bron project” supports this where possible: <https://www.registratieaandebbron.nl>.

- An electronic data capture form (eCRF) can be used to register specific, clinical (fenotype) data. For this, the open source system, OpenClinical can be used: <https://trait.health-ri.nl/trait-tools/OpenClinica>

### **MEDICAL IMAGES**

- Standardized and automated analysis tools for images can be found here: <https://www.bbmri.nl/services/research-tools/image-analysis-platform> and <http://populationimaging.eu/>
- XNAT is an open source image archive that can be used to collect images multicenter: <http://www.ctmm-trait.nl/trait-domains/work-package-2-biomedical-imaging>.
- Please check <https://www.bbmri.nl/services/research-tools/image-analysis-platform> for image analysis tools.
- TransSMART can be used to link imaging data to fenotype and omics <http://www.ctmm-trait.nl/trait-domains/work-package-5-data-integration-analysis>.

### **FIND AND ACCESS**

- Please register the collection in the BBMRI Catalogue: <https://catalogue.bbmri.nl/menu/main/app-molgenis-app-biobank-explorerer/biobankexplorer>
- Please make the collection available through Podium: <https://www.bbmri.nl/services/samples-images-data/request-portal>

### **ETHICAL, LEGAL, SOCIETAL**

- To comply to the GDPR/uAVG the DPIA & Compliance Tool was developed <https://www.bbmri.nl/services/ethical-legal-social-implications/privacy-tools>
- The ELSI Service Desk was developed to provide extensive ELSI information, for example regarding patient information, consent, incidental findings, privacy, data, patient engagement.
- The Patient & Public Advisory Council can be consulted for advice or societal perspective: <https://www.bbmri.nl/services/ethical-legal-social-implications/patient-public-advisory-council>