

Orchestrating data flows throughout their whole life cycle

Key stages and partners for success

Konogan BOURHY¹, Laurent BOURI¹, Christophe BRULEY², Olivier COLLIN³, Frédéric de LAMOTTE^{1,4}, Thomas DENECKER¹, Marie-Dominique DEVIGNES⁵, Jean-François DUFAYARD^{1,6}, Alban GAINARD⁷, Nadia GOUÉ⁸, Gildas LE CORGUILLE^{1,9}, Paulette LIEBY¹, Hervé MENAGER^{1,10}, Imane MESSAK¹, Hamid OUAHIOUNE¹, Claire RIOUALEN¹, Thomas ROSNET¹, Baptiste ROUSSEAU¹, Julien SEILER^{1,11}, Jacques VAN HELDEN¹

¹ Institut Français de Bioinformatique, IFB-core, UAR CNRS 3601, Paris, France; ² Laboratoire Biosciences et bioingénierie pour la santé, UA13 INSERM/CEA/UGA, 17 Avenue des martyrs, 38054 Grenoble Cedex 9, France; ³ GenOuest, University of Rennes, INRIA, CNRS, IRISA, Rennes, France; ⁴ UMR AGAP Institut (1334) Avenue Agropolis - TA A-108/03 34398 Montpellier Cedex 5 France; ⁵ Université de Lorraine, CNRS, Inria, LORIA, Nancy F-54000, France; ⁶ UMR AGAP Institut (1334) Univ Montpellier, CIRAD, INRAE, Institut Agro 34398 Montpellier Cedex 5 France; ⁷ Nantes Université, CNRS, INSERM, l'Institut du thorax, Nantes F-44000, France; ⁸ Université Clermont Auvergne, Plateforme AuBi and Mésocentre Clermont-Auvergne, F-63000 Clermont-Ferrand, France; ⁹ Sorbonne Université, CNRS, FR2424, ABiMS, Station Biologique, 29680, Roscoff, France; ¹⁰ Institut Pasteur, Université Paris Cité, Bioinformatics and Biostatistics Hub, 75015, Paris, France; ¹¹ IGBMC, 1 Rue Laurent Fries, 93800, Illkirch, France, CNRS UMS7104

Corresponding Authors: julien.seiler@cnrs.fr, frederic.de-lamotte@france-bioinformatique.fr

Scientific project conception and planning

Metadata : Data :

Success criteria: planning through a Data Mgmt Plan
 Partner for success: data stewards
 Tools:

Sample collection and preparation

Metadata : Data :

Success criteria: adoption of standards
 Partners in success: platforms
 Tools:

Primary data production

Metadata : Data :

Success criteria: description of the production context, enrichment of metadata

Data integration and analysis

Metadata : Data :

Success criteria: long-term storage, collaborative access to data, identification of analysis tools, adoption of standards (data format).
 Partners in success: experts in scientific computing, experts in data analysis

Tools:

Partners in success: platforms, research teams
 Tools: companion files, Excel spreadsheets

Curation, Preservation, Publication, indexation

Metadata : Data :

Success criteria: identification of relevant and sustainable warehouses

recherche.data.gouv.fr

Partners in success: data workshops
 Tools:

FAIR

IFB ecosystem

INSTITUT FRANÇAIS DE BIOINFORMATIQUE

supported by MUDIS4LS

Mutualized Digital Space for FAIR Data in Life and Health Science

National Network of Computing Resources

Clouds and clusters for all bioinformatics needs



Tools:

Coming out in Autumn 2024

MADBOT

A web application to help research teams track their data and metadata, and publish to numerous repositories

FAIR checker

Assess the FAIRness of your data and advance in the FAIRification journey



The Institut Français de Bioinformatique (IFB) is funded by the Programme d'Investissements d'Avenir (PIA), grants Agence Nationale de la Recherche ANR-11-INBS-0013 (PIA1 INBS RENABI-IFB) and ANR-21-ESRE-0048 (PIA3 Equipex+ MUDIS4LS).