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## DeepOmics, a Digital Environnemental Engineering Platform for Omics data

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INRAE



Deep  
Omics

PROSE

PRocédés biOtechnologiques  
au Service de l'Environnement

## DeepOmics, a Digital Environmental Engineering Platform for Omics data

**Context:** DeepOmics is an Information System (IS) that meets the needs for 1) storing and querying data from environmental biotechnology processes (such as anaerobic digestion, activated sludge etc... ) at the scale of laboratory reactors, pilots or full-scale plants, 2) comparing and cross-referencing these operational data (or metadata) with data characterizing the microbial communities involved and their dynamics, to produce knowledge and 3) promoting the production of FAIR data and the interoperability with EnviBIS (ENVironmental Biorefinery Information System).

### DeepOmics users:

All French academics  
& their partners upon  
request

### From prototype to today

### In progress

Upload project metadata  
from **EnviBIS** to integrate  
all metaomics data in the  
repository



FAIR

FAIR

Visualize and analyze  
metagenomics data  
with **easy16S**



Additional process  
categories, such as  
**bioelectrochemical  
processes**



Documentation, user  
guide and use cases

FAIR

Inter-operability through an  
open API rest & "semantization"  
of Symfony entities

### Some figures:

28 projects,  
45 experiments,  
7 measurement campaigns,  
446 fastq files,  
686 Biosample results

### In the future

**SOON:** Uploading  
project metadata and  
fastq sequence files in  
**ENA** with associated DOI  
(an IFB collaboration)

FAIR



Intra- and inter-project  
**data query module**, to  
adress biological  
questions

### The system's underlying tech.:



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