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

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au Service de l'Environnement



Deep Omics

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## 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



Visualize and analyze metagenomics data with **easy16S**



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



Documentation, user guide and use cases



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)



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

### The system's underlying tech.:



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