Before data acquisition

On rig

On premise (VAST)

Cloud (AWS)

Exploration and analysis

aind-file-standards

Standards define organization

subject instrument procedures

Acquired data

Data files

acquisition
quality_control
processing

Extract metadata
aind-metadata-extractor

Upload
aind-watchdog-service

Upload buffer

Data compression
...

Data files
<modality-1>/
<modality-2>/
...

data_description
subject
acquisition
instrument
procedures
processing
quality_control

Map, Gather, Merge
aind-metadata-mapper

Upload job
aind-data-transfer-service

Data pipelines
aind-<modality>-pipeline

Copy and validate
aind-metadata-mapper

S3

Data files
<modality-1>/
<modality-2>/
<metadata>.json
...

Sync job (nightly)
aind-data-asset-indexer

DocDB

data_description
subject
acquisition
instrument
procedures
processing
quality_control

Pipelines triggered by upload job

Processing pipelines
aind-<modality>-processing
...
Aggregation pipeline
??

Derived data asset
<raw-name>_<process>_YYYY-MM-DDTHHMMSS

S3

Data files
<modality-1>/
<modality-2>/
<metadata>.json
...

Sync job (nightly)
aind-data-asset-indexer

DocDB

data_description
subject
acquisition
instrument
procedures
processing
quality_control

Data exploration

data.allenneuraldynamics.org

Exploratory analysis

codeocean.allenneuraldynamics.org

Pipeline analysis

aind-analysis-framework

Metadata exploration

metadata-portal.allenneuraldynamics.org

Quality control

qc.allenneuraldynamics.org

S3

Data/Metadata cache
zombie-squirrel

Metadata access
aind-data-access-api

Schemas define metadata requirements

Services wrap diverse back-ends

aind-data-schema

Laboratory management
Power Platform
LabTracks

aind-metadata-service

/subject
/procedures
/investigators
/funding
/instrument

Retired back-ends
(LIMS, SLIMS, etc)

aind-metadata-manager

Asset
Data
Metadata
Analysis
Tools

added
exists
optional