AgriDISCRETE

Agri-tech data sharing and interoperability proof-of-concept

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What you are going to see

1. Data actors and conceptual model
2. Prototype
3. Proof-of-concept

1. Data actors and conceptual model

Note…

- Terms used for illustration and demonstration purposes – not definitive or legal
- Overlap between some categories
- Every situation will have its own nuances (no two farms alike)
- Consider the action more than the actor

Data actors

- **Data Providers**
  - Data owners, generators, producers
  - Offer data to consumers
  - Require transparency on how, when, and by whom their data is accessed
- **Data Consumers**
  - Need to be able to search for relevant data
  - Need facility to negotiate terms for data access

Data actors

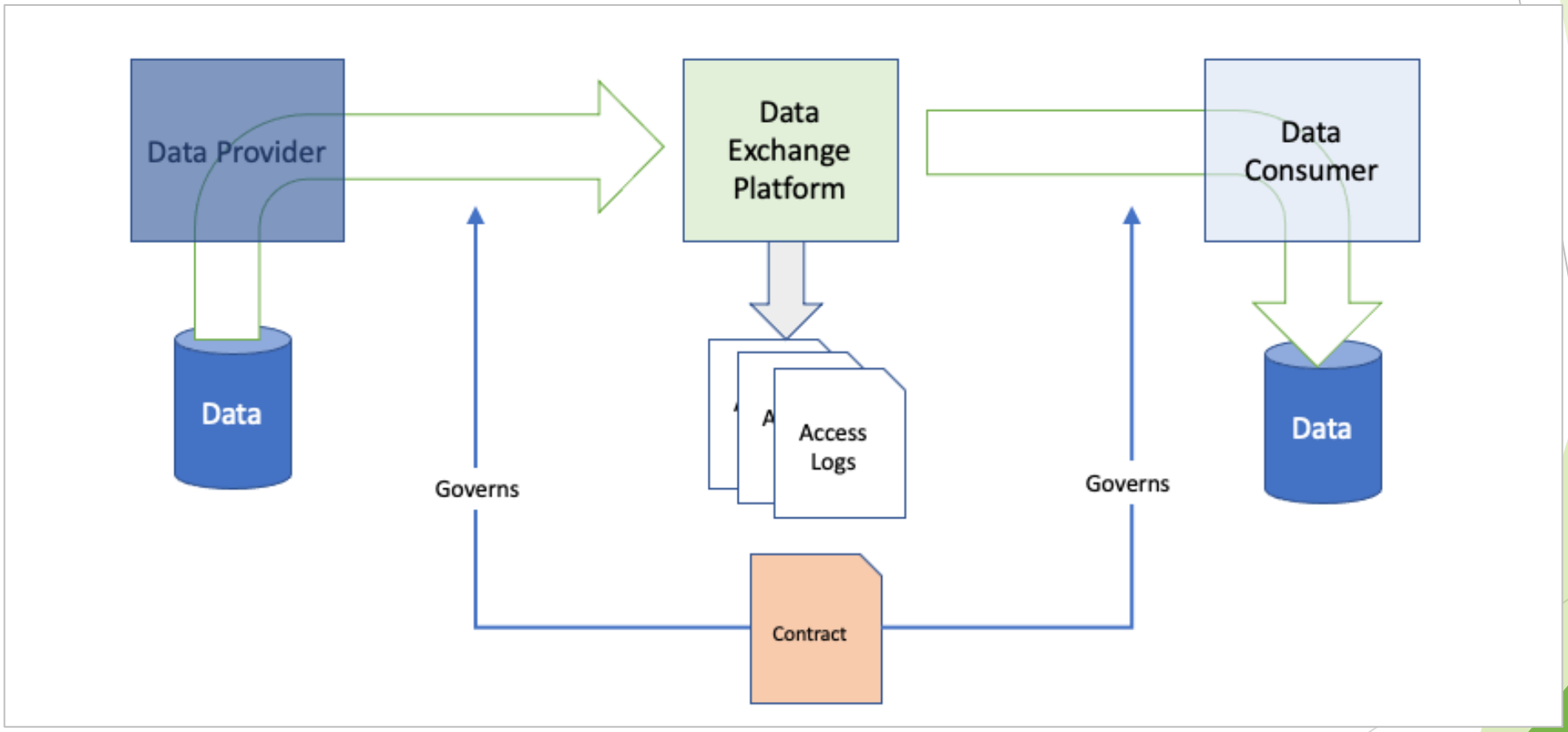
- **Data Aggregators**
  - Combine data from different providers and offer to consumers
  - Can act as both data consumers and as data providers

Conceptual model

- Create **data exchange platform** to facilitate providers and consumers
- Step-by-step details in *D2.4: Data Sharing, Governance and Business Models*

- Stages:
  - registration
  - discovery
  - negotiation
  - request
  - access and governance

Conceptual model



2. Prototype

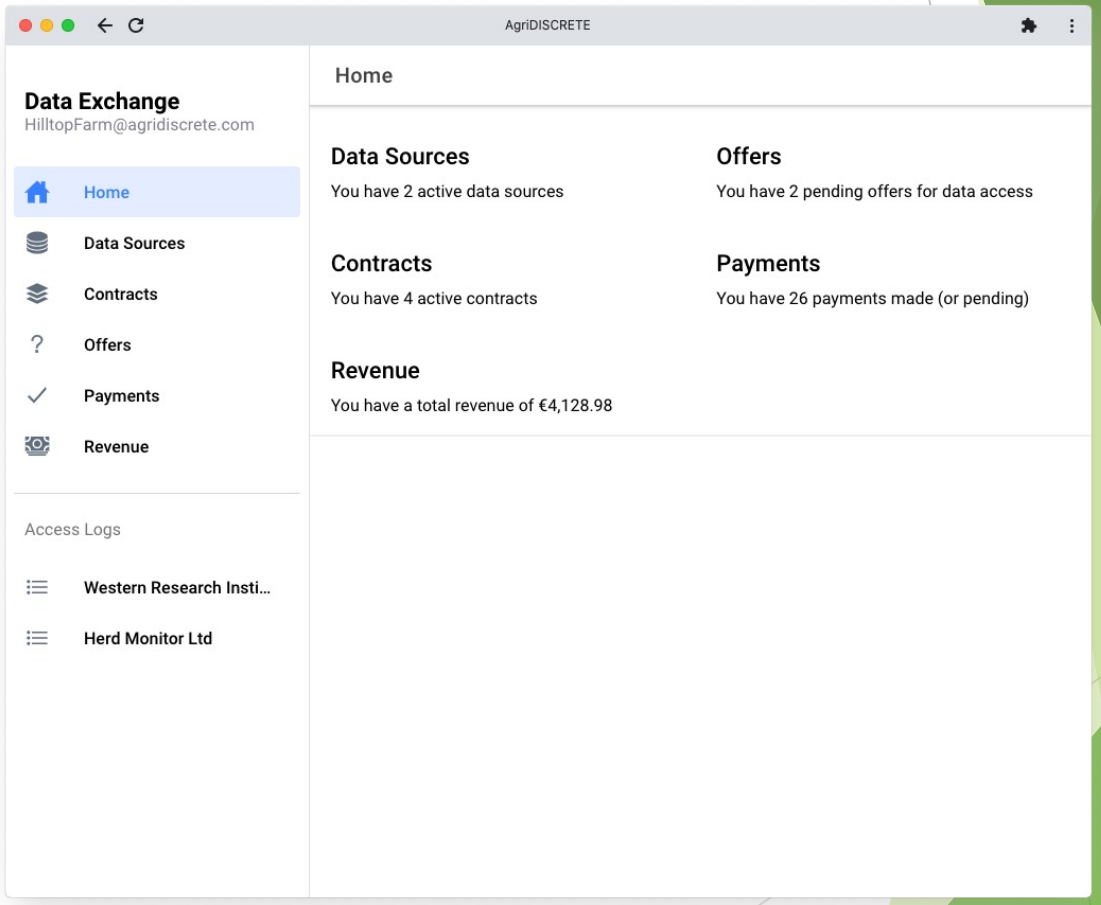
Note…

- There are separate views for Data Providers and Data Consumers: they log into the same system, but they have access to different parts

- We use “monetary exchange” to represent value exchange
- It is shorthand to demonstrate how value exchange could relate to contracts and data sources
- **It is not the intention that that this should be the only form of value exchange**

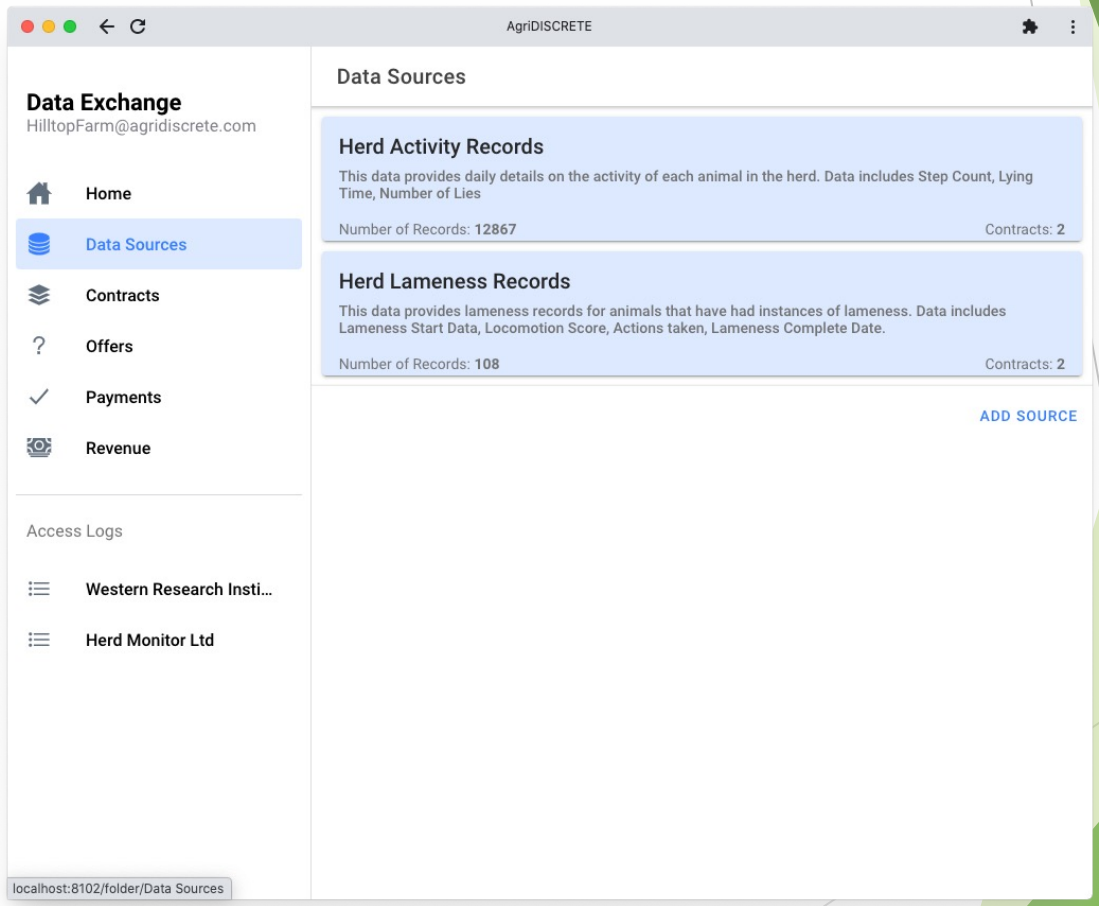
Data Provider – *home screen*

- Overview of the user's status on the platform showing:
  - Registered data sources
  - Current offers being negotiated
  - Active contracts
  - Details around value exchange



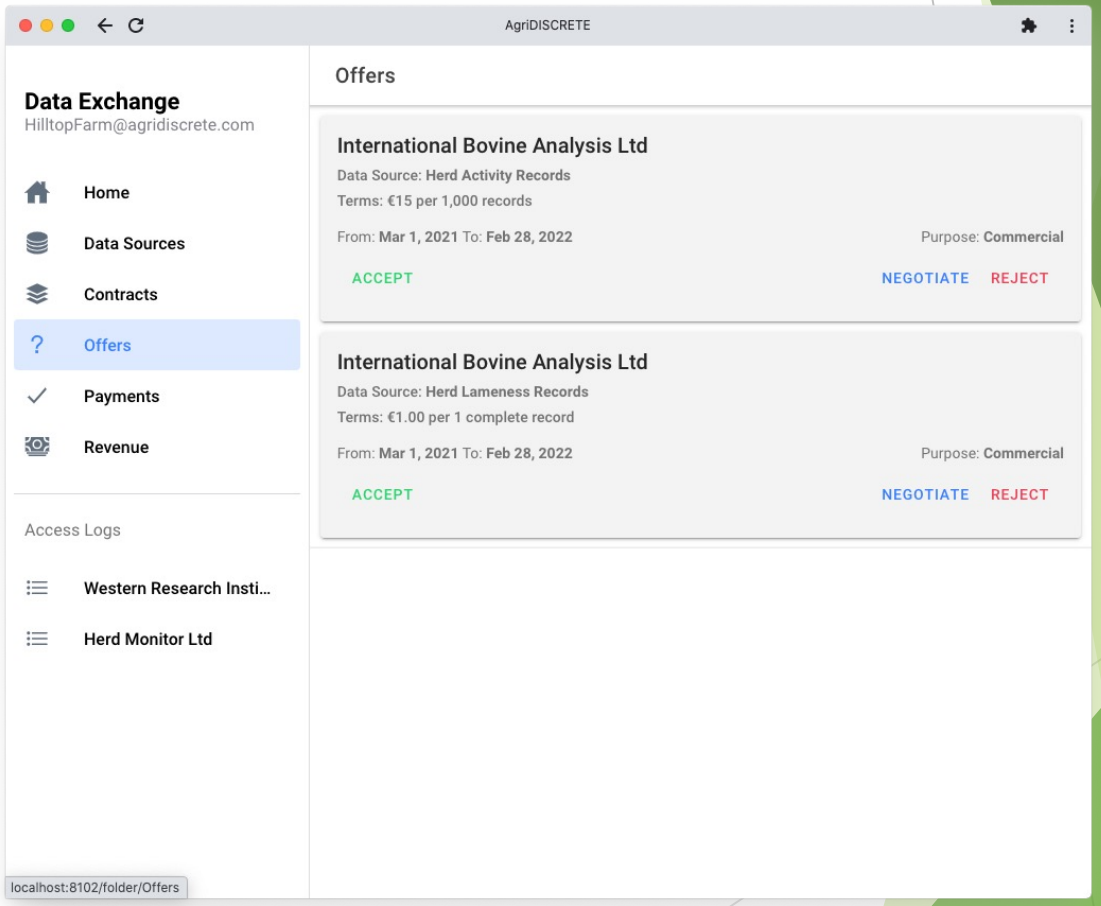
Data Provider – *data sources*

- Summary of the data sources the user has made available to the platform:
  - Source name
  - Description
  - Number of records
  - Number of contracts agreed for access to that data source



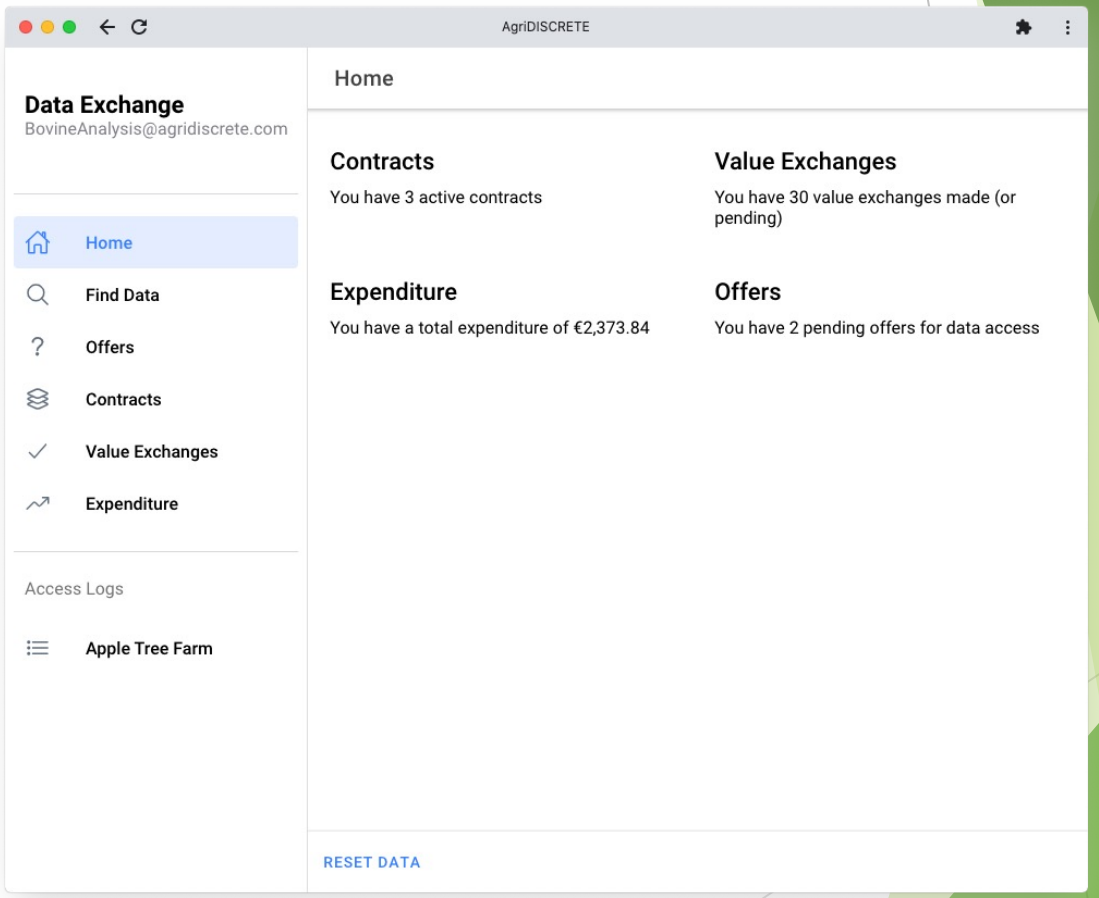
Data Provider – *offers*

- Overview of offers coming in for data:
  - Data source
  - Terms of offer
  - Options to accept, reject or further negotiate



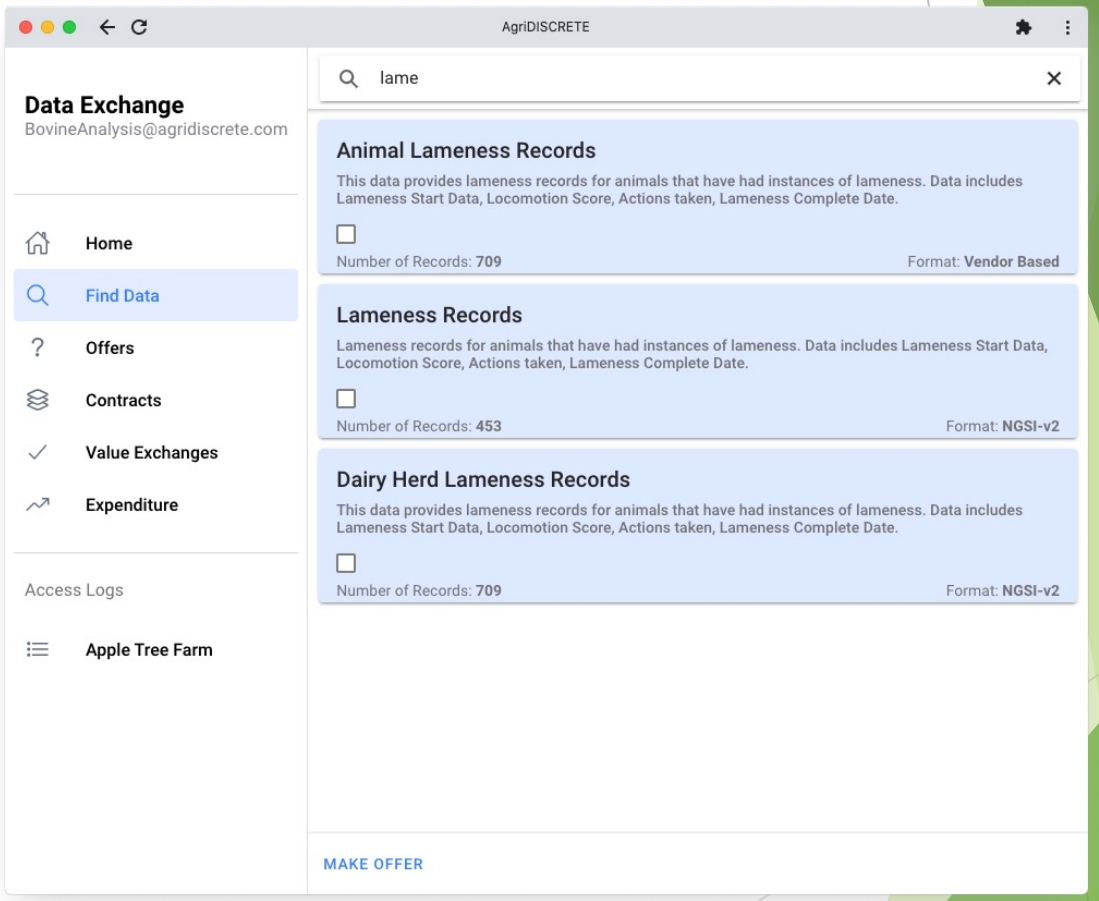
Data Consumer – *home screen*

- Status of the user's:
  - Contracts
  - Value exchanges
  - Offers
  - Expenditure overview
- *Find Data* allows consumers to search for keywords (e.g. dairy, barley, lameness, fertiliser, etc.)



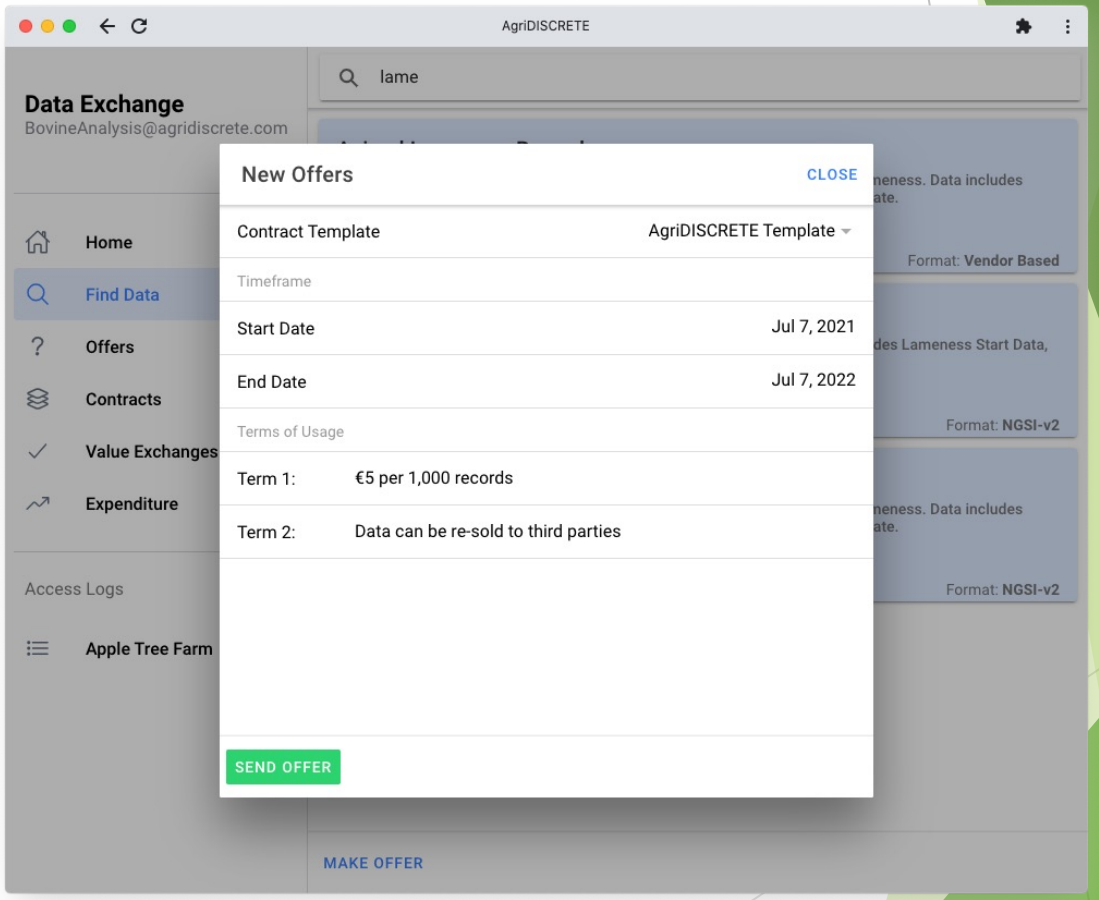
Data Consumer – *data discovery view*

- Search for *lame*



Data Consumer – *data discovery view*

- Consumer selects from a set of contract templates; e.g.
  - Start and end date for access
  - Number of records
  - Price/value
  - Re-sale option
  - etc.



3. Proof-of-concept

Note…

- Prototype = front end of the platform
  - exterior and interior of a car
- Proof-of-concept = back end of the platform
  - the engine under the bonnet

Proof-of-concept

- Interoperable building blocks:
  - Enable different requirements in the prototype
  - Expand/reduce any aspects
- Combination of Python and Javascript, plus relevant libraries
- Documentation for third-party use
- Early trials for usability by providers and consumers

```
py27Package = SoftwarePackage(name="python", version="2.7.6",
    sourceUrl="http://www.python.org/ftp/python/2.7.6/Python-2.7.6.tgz")
py27Package.addRuntimeDependency(pkgConfigPackage)
py27Package.setBuildScript("""
    cd {source_directory}
    mkdir -p {install_prefix}/lib
    ./configure --enable-shared -prefix {install_prefix}
    make -j{num_cores}
    make install
    """)
py27Package.setPreexecutionScript("""
    addbin {install_prefix_variable}/bin
""")
py27Package.setTestScript("""
    if [ "x`python --version 2>&1`" == "xPython {version}" ]; then
        exit 0
    fi
    exit 1
""")
```

What did you see

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