

IOTWeek

Dublin — June 20-23, 2022

Marketplace for agri-data

Prototype and user feedback

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AgriDISCRETE project

GLOBAL VISION:

IoT TODAY AND BEYOND

IoTForum

Where this work comes from

- AgriDISCRETE project
- Two years (2020-22)
- Funded by Irish Department of Agriculture, Food, and the Marine (DAFM)
- Coordinated by Walton Institute

Explore challenges for data use through increasing digitalisation of agriculture

Where this work comes from



ICT and data science



Social science and rural development

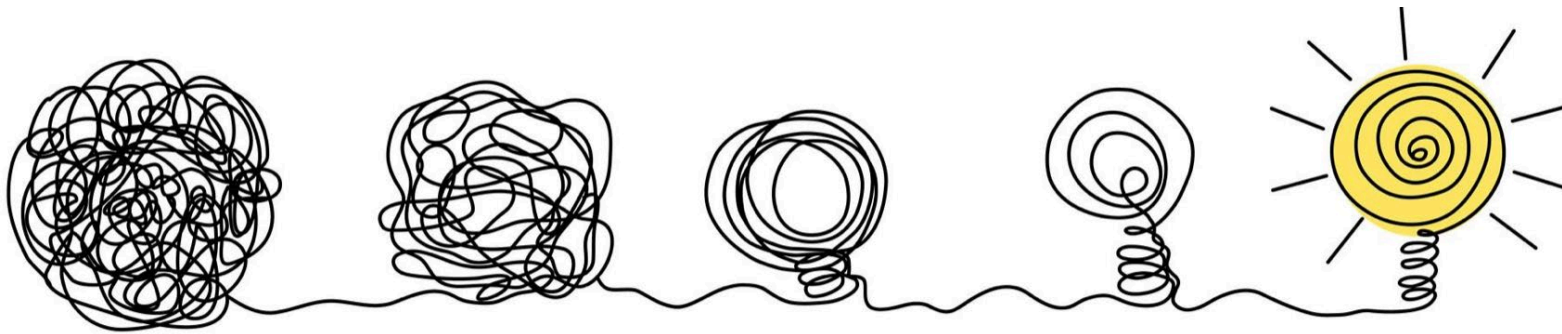


Business modelling and markets

What you will see

Process...

...more important than any technology or software



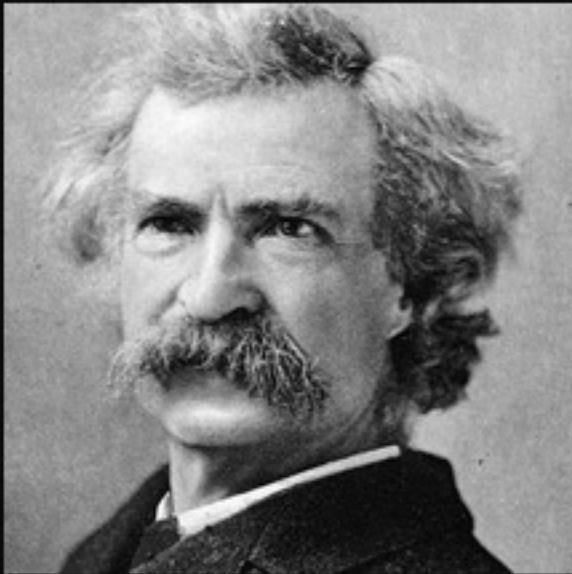
Technology and data
are easy.

People and
relationships are
hard!



...so we started with frogs

Mark Twain



If it's your job to eat a frog, it's best to do it first thing in the morning. And If it's your job to eat two frogs, it's best to eat the biggest one first.

Basic approach

Requirements gathered via

- * partner expertise
- * desk-based research
- * multi-actor workshops

- *farmers*
- *tech companies*
- *food processors*
- *policy officials*
- *etc.*

* Social sciences – e.g. level playing field for farmer when dealing with multinational companies, trust between actors, etc.

* Business modelling – e.g. enable non-academic/commercial aspects, multi-sided marketplaces, etc.

...codified into models first, and then later into software building blocks (*ICT and data science*)

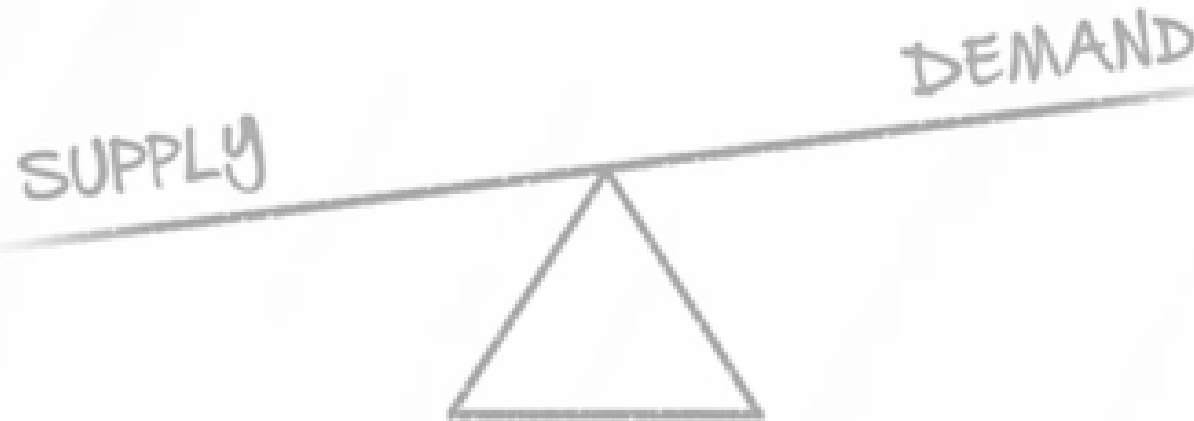
People (data actors)

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



People (data actors)

Data Aggregators

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

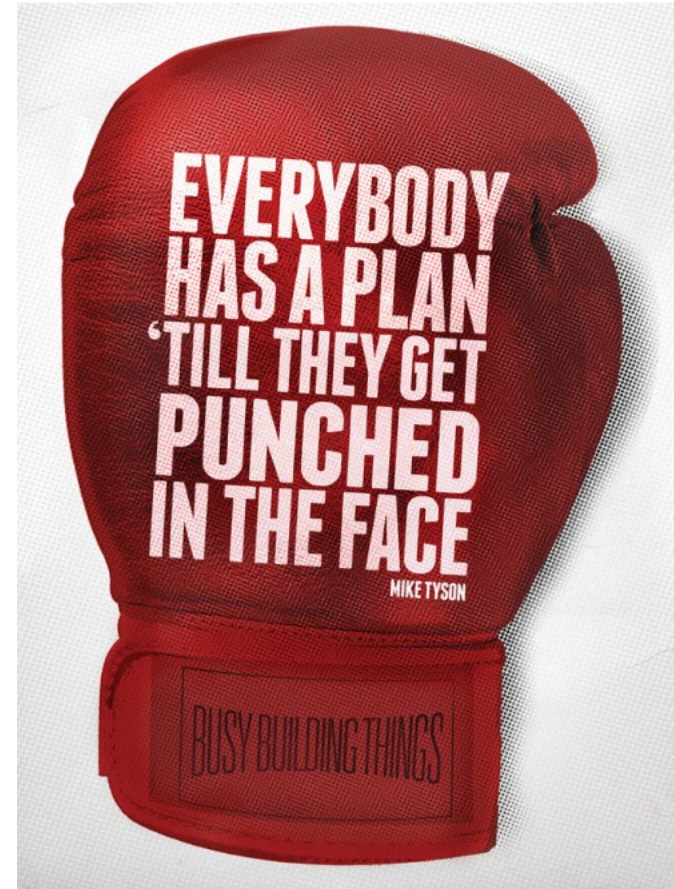


What did the software need to do?

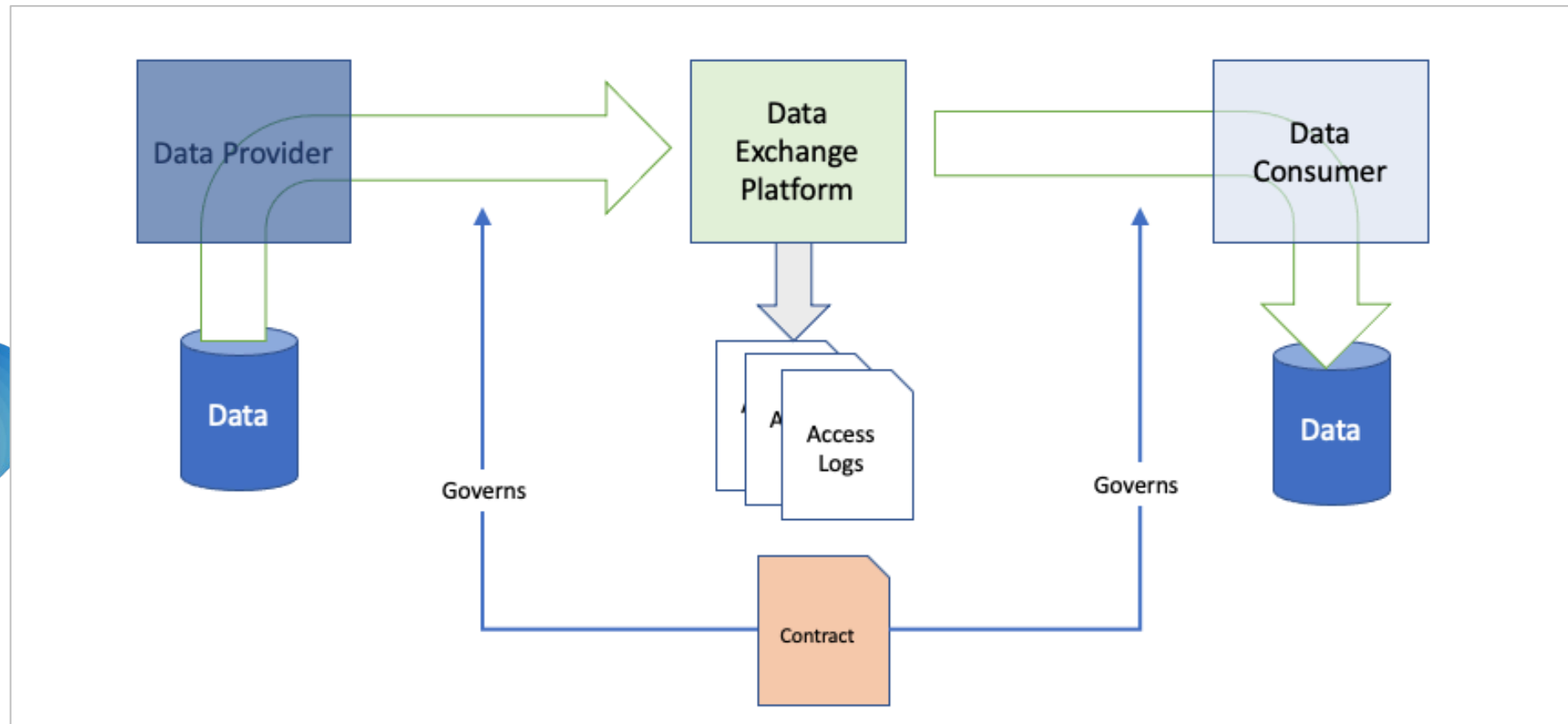
Theory: build in all requirements from social science and business point-of-view, taking best practice and examples from existing (non-existent?) systems

Reality: compromise, build something and get it in front of users

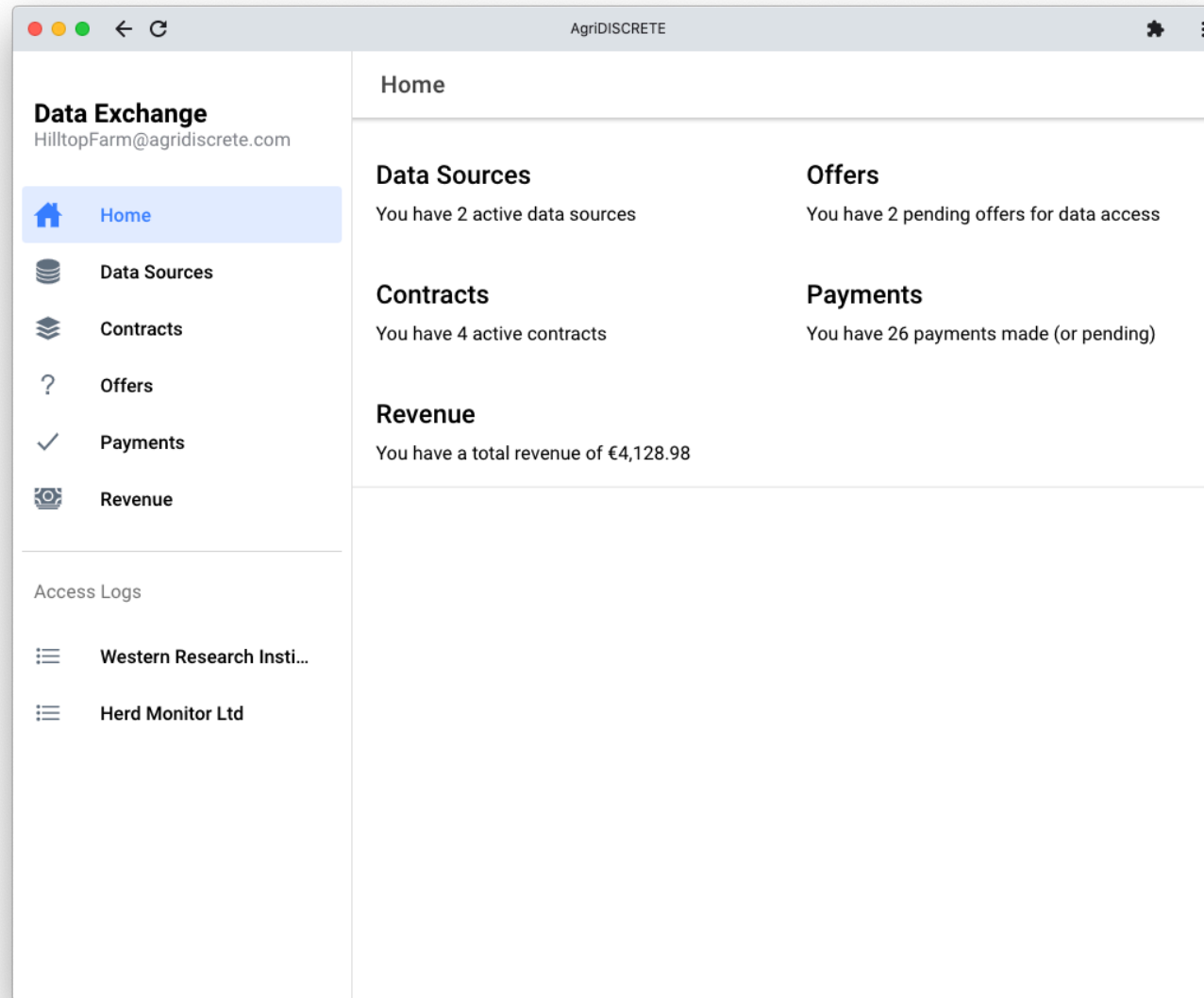
*Python, MySQL, ...
...no graphic design or JavaScript
yet*



First model and wireframe

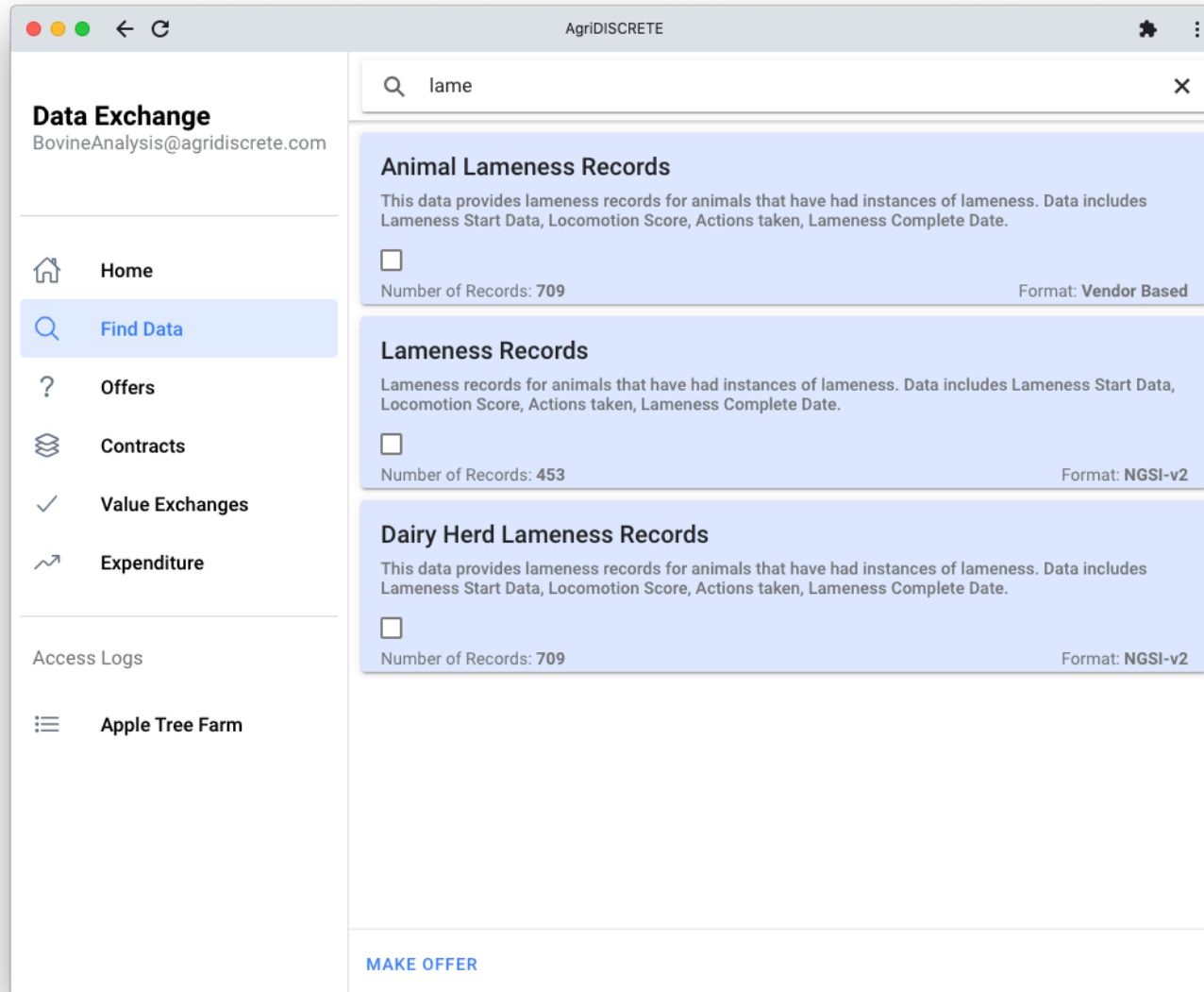


First model and wireframe



Provider home screen

First model and wireframe



Consumer search results

Enter basic details (meta data)

Name (build relationship with system and consumers)

Sector – drop-down menu

e.g. dairy, beef, crops, fruits, etc.

Keywords – free text

e.g. lameness, diet, animal health, grass, anthelmintic, wormer, winter feed plan, etc.

Data sample size

e.g. 10 rows of spreadsheet file

Enter basic details (meta data)

Name (build relationship with system and providers)

‘Find data’ – free text search

View sample

Contact provider

Repository:

Can the provider's full data set be uploaded to the platform, rather than just a sample? This would help the provider track the data they have shared and would offer them a back-up option for data that might currently be stored locally on a laptop.

Data accuracy/integrity:

Is it within the scope of the platform to provide assurances to consumers that the data they are buying is accurate and of sufficient integrity?

Monetary exchange:

Farmers who used the platform suggested that a monetary exchange would be the most preferable form of value exchange.

They said it is not so much about the money, which they assumed would be relatively small, but more about keeping the exchange as simple as possible.

This would avoid the need for new discussions on what constitutes value (free services?) whenever a new data-for-value exchange is being negotiated. It would also allow both providers and consumers to compare the value being placed on different data sets.

User trials and feedback

Other issues:

Instructions

Contracts

App for phone
etc.



Conclusion

Start by eating the biggest frog:
people and their relationships

...build the technology later

Goods and services have been
traded in agriculture for
hundreds of years... data will be
no different



Next steps

Horizon-Europe: DIVINE

Kick-off: 1-Oct-2022

Coordinated by: ICCS



“Demonstrating the value of data sharing to boost the agri-data economy”



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Thank you!

Find more:

www.waltoninstitute.ie

iotweek.org